



Annual Report

2011 – 2012

**INDIAN INSTITUTE OF INFORMATION TECHNOLOGY,
ALLAHABAD**

(A Deemed University Established under Sec.3 of UGC Act, 1956
vide Notification No. F.9-4/99-U.3 dated 4/8/2000 of Govt. of India)
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INTRODUCTION



Indian Institute of Information Technology, Allahabad has risen meteorically during its short span of life and has attained an enviable academic mark globally. Under the background of IT revolution sweeping the lives and destinies of developed nations, this Institute was established by the Govt. of India in 1999 with a lofty mission to help usher the country as a Superpower in IT and related sciences in the Twenty First Century. The Institute was established as a forerunner to expansion of IT capability and competence of the country in the comity of nations by subsequent establishment of IT Institutions throughout the country on its academic and administrative patterns.



As Chancellor of IIIT-A, I have the proud privilege to mention here that the Institute has accredited itself with unforeseen academic laurels. Its most modern academic programs, cutting edge researches, collaborative academic, research, industrial, societal and other many-faceted programs highly speak of its selective and high end societal commitments to the academia. The growth and progress rate with which the Institute has been advancing indicates its bright future.

I am happy to note that IIIT-A is bringing out its Annual Report of the year 2011-2012 for submission before the Hon'ble Parliament through the Govt. The Report reflects the academic pursuits and achievements of the present as also its promise and poise through its plans for the future years.

I am particularly delighted to see that apart from engaging itself in latest academics of international standard in IT and related sciences, the Institute has taken upon itself the onerous and unique responsibility of propagation, reorientation and upgradation of general sciences at the behest of GoI, MHRD and DST by organizing Science Conclave of Nobel Laureates and world renowned academician and scientists during the last five years 2008-2012. I wish this noble venture of the Institute to be parallel to the Lindau effect of the Nobel Laureates efforts for the cause of sciences.

I wish the Annual Report of the Institute all success and a treasurable documentation.

Prof. Goverdhan Mehta

The Institute has had its chequered account of growth from a small beginning in 1999 to its graph of excellence soaring high in 2012. Starting from a student strength of 60 for B.Tech (IT), the Institute has now on its rolls 2040 students for B.Tech (IT & EC), M.Tech (Wireless Communication & Computing, Software Engineering, Bioinformatics, Intelligent Systems, Human Computer Interaction, Microelectronics, Robotics), MBA (IT), MS(CLIS) and Ph.D. Degrees. It has more than 100% employability, some students having multiple choices of employment.



The Institute has linked its academics with internationally renowned organizations through industrial collaborations and thus has been able to reach benefits of its research outputs to the society and thereby contribute to the wellness of the people. Some of the world-famed organizations are Corinex Canada, TCS, ISRO, Zensar, IBM, Maple Leaf, ALIMCO etc. Further, centres of excellence at the Institute such as IRCB, Indo-US Centre for language technology, Indo-Swiss Centre of Microelectronics, Indo-Danish Centre for Wireless Sensors and Senses, Patent Referral Centre and S&T Discovery Park etc. have enlarged the horizons of its societal concerns and outreach programs.

Enlarging the ambit of its academic pursuits and updating and uplinking its course structure has been the prime concern of the Institute. To achieve this end, the Institute has had academic collaborations with a number of developed international Institutions such as CMU Pittsburgh, MIT, GIST Korea, EPFL Louisiana, ROSNOU, Moscow, California University USA, Aalborg University, Denmark etc. The exchange of scholarship with such accomplished Institutions has established its international recognition and repute. The Institute, alongwith its curricular academics, has been undertaking Projects covering a variety of subjects of national and international imports. By the year 2011-2012, the Institute had 35 R&D Projects as detailed in this Report having bearings on latest innovations and other academic concepts saturated with far reaching consequences. Alongwith the R&D Projects, the Institute has been seeking the best of the academic achievements of most advanced international Institutes and organization with concerted effort to make and enrich its own curriculae most modern and advanced. Particulars of these academic accomplishments are given in this Annual Report at relevant places.

The Institute has had its unique distinction to have been identified by the GoI, MHRD and the DST to propagate and pioneer the cause of retrieval of general sciences from its regressive trends by hosting Science Conclaves of Nobel Laureates and internationally renowned scientists in the year 2008 and extend the concern down to the Secondary education levels through the INSPIRE Program of the DST that were appreciated nationally and internationally.



Since then, the Institute has hosted successively five Science Conclaves and INSPIRE Programs during the years 2008, 2009, 2010, 2011 and 2012 with immense popularity among the young scientists being nurtured in the schools, colleges, universities and engineering Institutes not only in India but also in the SAARC and ASEAN Countries. With the popularity and national and international acceptance the programs have had, the Governing Bodies of the Institute have approved to broaden its ambit to African Countries as well with the promise to make it the Lindau of India and South East Asia.

In order to fulfill the essence of the mission with which the Institute was established by the Govt., it has been endeavouring to reach the benefits of IT revolution to the doorsteps of rural India where Real India is located. It has been tirelessly striving to implement and implant the outcome of IT and ICT around its RGIIT-Amethi Campus through VRCs, Diagnostic Centre, Vidya Vahini, BPL and S&T Discovery Park etc.

Through the Indo-Canadian Project 'BPL', the Institute has reached the internet connectivity to villages around IIIT-A and its RGIIT-Amethi Campus and has thus revolutionized their lives through IT & ICT revolutions.

These steps have, to a great extent, not only benefited the lot of the people around quantitatively as well as qualitatively.

M.D. Tiwari
Director

1.3 THE CHARTER & MISSION

CHARTER

- ❖ To train and educate certificate, diploma, undergraduate and postgraduate levels, engineers of outstanding ability who may become leaders in the IT industry and profession.
- ❖ To carry out advanced research and development in leading edge technology areas in Computer Hardware and Software which can be useful over comparatively on a long-term basis.
- ❖ To develop and promote national and international linkages by way of adjunct faculty, partnership in research, student exchange, academic credit transfer and joint degrees.
- ❖ To work for the creation and development of resource databases, associated software and courseware for all-important applications so as to ensure future availability of newer software technologies in English, Hindi and other Indian languages.

MISSION

- ❖ The mission of Indian Institute of Information Technology, Allahabad (IIIT-A) is to be a unique and world class nucleating “Apex Centre of Excellence” in the area of Information Technology and Allied Sciences for enhancing India's technological strength in Information Technology and for becoming a pace-setting institution for other similar institutes to be established in future.
- ❖ IIIT-A shall seek to derive its strength from its linkage with sound Indian traditions of past centuries and set out to create knowledge-based resources in regional languages of India.



1.4 THE GOVERNANCE

GOVERNING BODIES OF THE INSTITUTE

The Governing Bodies of the Institute comprise the following:

- The IIIT-A Society
- The Board of Management
- The Academic Council
- The Finance Committee
- The Building & Works Committee

These Governing Bodies derive their powers and functions from the MoA and Rules approved and promulgated vide UGC (Institutions Deemed-to-be Universities) Regulations, 2010.

In short, the functions of these Governing Bodies are given below:

The IIIT-A Society

- (a) To arrange for Instruction and training in such branches of learning as it may deem fit.
- (b) To arrange for research and for the advancement of and dissemination of knowledge.

- (c) To undertake extra-mural studies, extension programs and field outreach activities to contribute to the development of society.
- (d) To do all such other acts and things as may be necessary or desirable to further the objects of the Institute.

A List of current Members is given as **Annexure**

- 01.

The Board of Management




The Board is the principal authority responsible for academic, financial and administrative matters and has the ultimate responsibility for long term policy formulation, planning and development for growth and governance of the Institute. The Board has the power to constitute other subordinate and subsidiary groups/committees, as may be required, to discharge its functions.


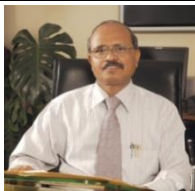

With effect from November 26, 2011, the Institute adopted the UGC (Institutions Deemed-to-be Universities) Regulations 2010 as adopted by the IIIT-A Society. The registration of Revised MoA and Rules of the IIIT-A Society under the Registration of Societies Act, 1860 was done on 26.11.2011. Henceforth, the Board of Management replaced the erstwhile Board of Governors of the Institute.



The Board of Management

(update as in March 2012 [till 5.7.12])

		
CHAIRPERSON Dr. M.D. Tiwari Director, IIIT-A	MEMBER Prof. Ganesh Pandey FNA, FNASc, FASc Head, Division of Organic Chemistry National Chemical Laboratory Pune, Maharashtra	MEMBER Prof. Manindra Agarwal Dean, Resource Planning & Generation & N Rama Rao Chair Professor Dept. of CSE, IIT Kanpur

		
MEMBER Professor R.K. Shyamasundar FIEEE, FACM Senior Professor & JC Bose National Fellow, Faculty of Technology & Computer Science Tata Institute of Fundamental Research Homi Bhabha Road, Colaba, Mumbai	MEMBER Prof. R.K. Sharma Director Senior Professor & Head Department of Nephrology Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGIMS) Raebareli Road, Lucknow	MEMBER Prof. G.C. Nandi Dean (R&D), IIIT-A

		
MEMBER Prof. R.C. Tripathi Dean (Student Affairs), IIIT-A	MEMBER Prof. B.R. Singh Dean (Academic), IIIT-A	MEMBER Dr. Anupam Agarwal Associate Professor, IIIT-A
MEMBER Prof. B.B. Tiwari Professor & Member Secretary, BOM, IIIT-A		

The Academic Council

As detailed above, w.e.f. 26.11.2011 consequent upon the adoption of UGC (Institutions Deemed-to-be Universities) Regulations 2010, the Academic Council replaced the erstwhile Senate of the Institute.

The Academic Council is the principal academic body of the Institute and is responsible for the maintenance of standards of education, teaching, evaluation, research & consultancy, training, inter-departmental co-ordination, examinations and tests within the Institute and shall exercise such other powers and perform such other duties and functions as may be prescribed or conferred upon it by the Rules and Bye-laws. It has the responsibility to lay down policy guidelines and the directions for academic growth and development of the Institute. Other powers and functions are given in detail in the MoA & Rules.

A List of current Members of Academic Council is given as **Annexure - 03**.

The Finance Committee

The Finance Committee of the Institute has the responsibility to look after resource mobilization, control of expenditure, etc. It should also stimulate resource generation from sources other than Government funding such as sponsored projects, research and consultancy and promote Industry Institute Interaction. A List of current Members is given as **Annexure - 04**.

The Building & Works Committee

- (1) It is responsible under the direction of the Board for construction of all major capital works after securing from the Board the necessary administrative approval and financial sanction.
- (2) It is responsible under the direction of the Board for construction of all major capital works after securing from the Board the necessary administrative approval and financial sanction.
- (3) It shall have the power to give the necessary administrative approval and financial sanction for all minor works and works pertaining to maintenance and repairs, within the budget placed at the disposal of the Institute for the purpose.
- (4) It shall cause to be prepared estimates of cost of building and other capital work, minor works, repair, maintenance and the like.
- (5) The Committee shall perform such other functions in the matter of construction of building and development of land for the institute as the Board may entrust to it from time to time.

The List of Members is given as **Annexure - 05**.



DEANS



Prof. R.C. Tripathi

Ph.D. in Solid State Physics

Professor, Officiating Dean (Student Affairs), Students Counselor

Research Interests:

Intellectual Property Right, Patents & Copyright, Enterprise Resource Planning

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Prof. G.C. Nandi

Ph.D. (Acad of Sc, Moscow)

Dean (Academic) and HoD (IT Section)

Research Interests:

Soft computing, Artificial Intelligence, Robotics and Industrial automation, Advanced Artificial Intelligence, Computer Controlled Systems, Humanoid robots, Machine vision and processing

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Prof. O.P. Vyas

Ph.D.

Dean (R&D) and Professor In-charge (Estate)

Research Interests:

Data Mining and Business Intelligence, Mobile Adhoc Networks and Wireless Sensor networks, Future Internet, Software Engineering

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The Institute has four distinct Divisions viz:

- (i). IT Division
- (ii). Management and Cyber Laws Division
- (iii). Electronics & Microelectronics Division
- (iv). Applied Science and IRCB Division

These Divisions plan their academic activities jointly and severally under overall guidance and direction of Dean (Academics) under administrative & academic control of the Academic Council and Board of Management through the Institutional Head, i.e. the Director of the Institute. Their growth plans and developmental activities are governed by the above authorities to ensure that the academic activities are planned and scheduled, keeping in view and incorporating the latest developments in their various fields of academics. Faculty associated with various divisions is given below:

Professors directly attached with the Director:



Prof. R.C. Tripathi

Ph.D.

Professor, Officiating Dean (Student Affairs), Students Counselor

Research Interests:

Intellectual Property Right, Patents & Copyright, Enterprise Resource Planning

E-mail: rctripathi@iiita.ac.in

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Prof. G.N. Pandey

Ph.D.

Adjunct Professor

IIIT-A & Ex-VC, JRH University, Chitrakoot

Research Interests:

Environmental Engineering, Transport Phenomena,

Unit operations, Thermodynamics, Chemical Engineering, Petroleum Refinery Engineering and Petrochemicals, advanced Fluid Mechanics, Heat Transfer, Oil Technology and Mass Transfer, and Food Technology, Information Technology, Information Systems,

System Analysis and Design, e-Governance, Enterprise Resource Planning, Data Ware House and Data Mining etc.

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Prof. (Mrs) Krishna Misra

Ph.D.

Honorary Professor

Research Interests:

Bio-Technology, Natural Products, Nucleic acid, DNA, RNA.

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INFORMATION TECHNOLOGY DIVISION



Prof. G.C. Nandi

Ph.D. (Acad. of Sc., Moscow)

Dean (Academic)

and Divisional Head (Information Technology)

Research Interests:

Soft computing, Artificial Intelligence, Robotics and Industrial automation, Advanced Artificial Intelligence, Computer Controlled Systems, Humanoid robots, Machine vision and processing

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Prof. S. Sanyal

Ph.D.

Professor

Research Interests:

Natural Language Processing, Software Engineering

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Prof. U. S. Tiwary

Ph.D.
Professor

Research Interests:

Image Processing, Computer Vision, Medical Image Processing, Pattern Recognition & Script Analysis, Digital Signal Processing, Speech and Language Processing, Wavelet Transform, Soft Computing & Fuzzy Logic, Neuro-computing and Soft-computers, Speech driven computers, Natural Language Processing, Brain Simulation, Cognitive Science

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Prof. O.P. Vyas

Ph.D.
Dean (R&D) and Professor In-charge (Estate)

Research Interests:

Data Mining and Business Intelligence, Mobile Adhoc Networks and Wireless Sensor networks, Future Internet, Software Engineering

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Prof. Anupam Agarwal

Ph.D.
Associate Professor & Chief Proctor

Research Interests:

Graphics and Visual Computing, Computer Vision, Pattern Recognition and Image Processing, AI, Artificial Neural Networks, Rough and Fuzzy Sets, Softcomputing, Multimedia Information Processing, Information Retrieval, Human-Computer Interaction, Remote Sensing and GIS, Computational Geometry and Software Engineering

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Dr. Shekhar Verma

Ph.D.
Associate Professor

Research Interests:

Wireless Networks, Cryptography, Wireless Sensor Networks, Multimedia, Networks

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Dr. Shirshu Varma

Ph.D.
Professor In-charge, Placement (B.Tech. & M.Tech.)

Research Interests:

Wireless Sensor Networks, Mobile Computing, Mobile Multimedia, Digital Signal Processing & Optical Communication Systems

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Dr. Pavan Chakraborty

Ph.D.
Assistant Professor & Warden (Boys Hostel II)

Research Interests:

Robotics, Electronics

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Dr. Manish Kumar

Ph.D.
Assistant Professor

Research Interests:

Data Management in Wireless Sensor Network,



Database Systems, Data Mining, Distributed Databases,
Mobile Data Management

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Prof. B.R. Singh

Ph.D.
Professor

Research Interests:

Microelectronics, Optoelectronic devices & circuits

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Dr. Sonali Agarwal

Ph.D.
Assistant Professor & Assistant Proctor

Research Interests:

Database, Datamining & Warehousing, E-Governance

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Dr. T. Pant

Ph.D.
Lecturer and Warden, Boys Hostel-IV

Research Interests:

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Dr. Neetesh Purohit

Faculty In-charge (Library)
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Research Interests:

Modern Wireless communication technology (CDMA, OFDMA, MIMO etc.), Digital Communication system (Wired and wireless), Development and deployment of Wireless sensor networks, Digital signal processing Techniques, Antenna engineering, Computer Networks

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Dr. Manish Goswami

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Research Interests:

VLSI Design(Analog And Digital), Digital Signal Processing, Signals And Systems, Electronic Circuits

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ELECTRONICS DIVISION



Prof. M. Radhakrishna

M.Sc.
Professor and Divisional Head (Electronics)

Research Interests:

Artificial Intelligence, Intelligent Systems, Digital Design, Embedded Systems, Machine Vision, Computer Based Instrumentation and Control, Automation, Computer and Sensor Networks, Computer Based Instructional Systems, Cognitive Sciences, Modeling and Simulation

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Dr. Kusum Lata

Ph.D.
Lecturer and Warden, Girls Hostel-I

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Lecturer

Research Interests:

Digital Communication, Data Communication and Networks, Wireless Communication, Wireless Sensor Networks, Data Routing

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Mr. Ashutosh Singh

Lecturer & Assistant Proctor
Ph.D. (pursuing)

Research Interests:

Fuzzy logic Control System, Control & Instrumentation, Artificial Neural Network, Power Electronics

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Dr. Rajat Kumar Singh

Ph.D.
Assistant Professor

Research Interests:

Photonic Packet Switch Architecture, Optical Data Storage, Optical Networks and Switching

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MANAGEMENT AND CYBER LAWS DIVISION



Dr. Anurika Vaish

Ph.D.
Associate Professor & Divisional Head (MBA & MS)

Research Interests:

Intellectual Property Rights, E-Governance
Digital Divide, Business Related Issues

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Dr. Vrijendra Singh

Ph.D.
Assistant Professor, Chief Proctor and Faculty In-charge (Ph.D. Cell)

Research Interests:

Blind Source Separation, Independent Component Analysis, Biomedical Analysis, Artificial Neural Networks, Data Mining, Image & Audio Processing, Digital Signal Processing, Computational Neuroscience



**Dr. Madhvendra Misra****D.Phil.**

Assistant Professor

Research Interests:

Sales promotion, Consumer Behavior, Information Strategy & IT enabled Services

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Assistant Professor

Research Interests:

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Assistant Professor

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Human Resource Management, Organizational Behaviour

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**Dr. Santanu Das****Ph.D.**

Lecturer and Faculty In-charge, Placement (MBA)

Research Interests:

Accrual Accounting & IFRS, Equity Valuation

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**Dr. Vijay Chaurasia****Ph.D.**

Assistant Professor & Warden (Boys Hostel III)

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Lecturer and Warden, Boys Hostel-I

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Research Interests:

Sales Promotion, Branding & Advertising, Consumer behavior

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Assistant Professor

Research Interests:

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Research Interests:

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Ph.D.
Assistant Professor

Research Interests:

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APPLIED SCIENCE AND IRCB DIVISION



Dr. C.V.S. Siva Prasad

Ph.D.
Assistant Professor and Divisional Head (Appl. Sc. & IRCB)

Research Interests:

Computational Functional Genomics, Genetic networks, miRNA predictions, Insilico Protein-Ligand interactions based protein engineering. Computational biology based predictions and analyzed data evaluation in Molecular biology and Proteomics wet lab

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Dr. K.P. Singh

Ph.D.
Lecturer

Research Interests:

Operations Research and Optimization Techniques, Genetic Algorithms, Fuzzy Set and Fuzzy logic, Linear Algebra, Numerical Methods

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1.5.1 Faculty In-charges, Wardens, Officers

FACULTY IN-CHARGES

Dr. Vrijendra Singh, Chief Proctor & Faculty In-charge, Ph.D. Cell
Dr. Sonali Agarwal, Assistant Proctor
Mr. Ashutosh Kumar Singh, Assistant Proctor
Prof. O.P. Vyas, Professor In-charge (Estate)
Prof. Anupam, Faculty In-charge (Examcell)
Dr. Neetesh Purohit, Faculty In-charge (Library)
Dr. Shirshu Verma, Faculty In-charge, Placement (B.Tech/M.Tech)
Dr. Abhishek Vaish, Faculty In-charge, Placement (MS)
Dr. Santanu Das, Faculty In-charge, Placement (MBA)

WARDENS OF BOYS' AND GIRLS' HOSTEL

Mr. Shashikant Rai (Boys' Hostel 1)
Dr. Pavan Chakravorty (Boys' Hostel 2)
Mr. Vijay K. Chaurasia (Boys' Hostel 3)
Dr. T. Pant (Boys' Hostel 4)
Dr. Kusum Lata (Girls' Hostel 1)
Mrs. Debarti Chakravorty, Coordinator (Girls' Hostel 2)
Ms. Sangita Subhash, Coordinator (Girls' Hostel 3)

OFFICERS

Dr. Seema Shah, Deputy Registrar (E)
Dr. Asheesh Kumaar, Deputy Registrar (M)
Mr. R.B. Singh, Deputy Registrar (F)
Mr. H.D. Tewari, Advisor (Finance)
Mr. S.C. Khare, Accounts Officer
Mr. K.K. Tiwari, Assistant Registrar (F)
Mr. Ranjeet Banerjee, Assistant Registrar (Exam)
Mr. Mithilesh Mishra, System Analyst
Mr. Pankaj Mishra, Sr. Information Assistant
Mr. L.N. Sharma, Security Officer
Mr. G.R. Singh, Junior Engineer
Mr. Akhilesh Mishra, Junior Engineer



General

The Indian Institute of Information Technology, Allahabad (IIIT-A) has had a meteoric rise to fame and eminence nationally and internationally ever since its inception in 1999, as a consequence of its uniqueness of governance, efficient administration, human resource management, sense of belongingness by the faculty and students and a host of other special features that contributed richly, prudently and dedicatedly.

Flexibility & decentralization

Since inception, the governance of the Institute has been very considerate, flexible yet firm to the commitment with which the Institute was established. The Board of Governors, comprising acclaimed academic administrators, technocrats and highly placed personages in public and private sectors exhibited flexibility in dispensation of the aims and objectives of the Institute and dedication to the mission and vision with which the Institute was founded. The various Governing Bodies decentralize their powers and functions to the levels of functionaries who discharge their duties honestly and diligently.

Need-based Allocation

The Government continuously maintained proper flow of funds by sanction and release of need based allocations of fund for development of the Institute. Further, the Institute has enjoyed maximum flexibility and autonomy in

respect of use of funds as per needs of the Institute that, in turn, has resulted in financial independence of the infrastructural development, needed for fast development of the Institute.

The Institute has enjoyed complete freedom in the participatory activities of its academics. The result is that as at present, the Institute has academic collaborations and cooperation with almost all major institutions and research organizations with exchange programme of talents for teachers and students. This has promoted academic excellence of the Institute. Exchange of teachers and students with the reputed Universities and Institutions across the world has helped IIIT-A to develop and sharpen its academic performance to the highest level.

Through these participatory activities, IIIT-A has been able to regularly organize workshops, symposia and other developmental programmes of academic where in, through discussions and exchange of ideas and academic thoughts, teachers and students of the Institute have gained world-class knowledge promoting excellency in researches and other academic pursuits.

Projects: Freedom of choice / functioning

One of the special features of the Institute is the bunch of choicest Projects undertaken by the faculty members of the Institute in collaboration with top-ranking Institutes/Organizations of the world having bearing on the cutting areas of R&D. The outcomes of these Projects and the findings made therein have far-reaching

consequences to revolutionize the current knowledge and knowledgeability of the subject matter and for help initiate such trends and thinking process that are apt to set in novel thoughts and measures in the same and/or allied disciplines.

Through these projects, the Institute has been able to achieve a number of landmarks in the fields of general and live sciences with the use of IT and ICT tools and methodologies. These achievements have set in motion a number of societal programmes at IIIT-A and its RGIIT-Amethi Campus that are potent means to popularize use of IT and ICT in the rural sectors.

Disposal of Grievances

IIIT-A administration has been very much alive and alert towards disposal of grievances relating to Public-Institute, Student-Student, Student-Institute, Employees-Institute and other grievances to nip into bud the unproductive, unhealthy and divisive forces as might retard the pace of progress of the Institute.

Consequently, Grievance Redressal Committee, Committee for prevention of Sexual Harrassment of Women at workplace, Anti Ragging Committees/Squads, prevention of use of Alcohol and Tobacco and its derivatives etc. have been promptly formed by the Director, having approval of top governance and equipped with powers to deal with these unseemly practices as per the directions of the Supreme Court, C.V.C. and concerning Ministries of the Government.

The Institute administration headed by the Director takes sternest possible action with utmost promptness that thwarts such tendencies.

Vigilant, prompt and responsive Administration

Complete abolition of red-tapism, vigilance, promptness and responsiveness of the Institute administration has been the keyword for the success story and ever ascending graph of the Institute.

As the Chief Executive Officer of the Institute, the Director of the Institute, by his own example and by causing strict adherence to these administrative traits, has completely eradicated these maladies from IIIT-A. There is complete decentralization of administration and even an employee at the lowest level can freely have access to the Director or any ladder of administration for vigilant, prompt and responsive dispensation of his official or personal submissions.

Red-tapism has been totally abolished in IIIT-A and there is quickest and prompt disposal of P.U.C.s at all stages / ladders of administration. This has ensured responsiveness and perfection in disposal of official business in the Institute.

Facilities and amenities for Teachers and other Employees

Efficient HR Management with job satisfaction is the core of modern successful administration. Consequently, one of the prime factors of success story of IIIT-A has been its efficient HR management from the very beginning.

The Institute has been a residential entity for the students, teachers and the employees with round-the-clock supply of electricity and water on the Campus. While water is available to all freely, electricity is highly subsidized.



All students, boys and girls, have decent hostels with cozy furniture & fixtures and computer/internet facilities to make their stay conducive to modern living. Labs are open to the students all the time at their convenience. Family apartments are available to the Research Scholars.

Members of the teaching and non-teaching Committees have been provided convenient residences on the Campus with water & electricity, computer and internet facilities available 24 hours. The license fees charged are

highly subsidized. There are top-class Guest Houses with most modern facilities where Nobel Laureates, International Scientists & Dignitaries have been staying conveniently.

Members of the teaching fraternity enjoy complete freedom of association with any academic body of repute as per their own choice, their membership fees being free/highly subsidized. They enjoy freedom to subscribe to national/international journals of repute to increase and update their knowledge.



AN OVERVIEW



2.1 THE ACADEMICS

2.1.1 The Academic Programs

The Indian Institute of Information Technology rank as one of the top-ranking institutes of IT and software sciences in the world. It was established by Govt. of India with the concerted aim to make India a superpower by harnessing the fullest benefits of IT revolution in all its manifestations and to reach the benefits thereof to the Rural India where Real India lives.

With its concerted view to promote high-end researches and sharing the global concern to arrest the regressive trends in the studies of general sciences, IIIT-A took a lead in hosting Science Conclave a congregations of Noble Laureate for promoting the pursuit towards education in science and Technology.

The Institute promises to play a crucial role to generate requisite high level technical manpower to meet national goals in critical areas like defence, weather forecasting, space programs, economic development and social transformation, to gain from emerging IT revolution. Keeping these in view, the courses of the Institute have been designed with a lot of operational flexibility of additions and subtractions according to the need of the society.

The Institute conducts UG courses in B.Tech (IT) & B.Tech (EC), PG Courses in M.Tech. (Intelligent Systems, Software Engineering, Bioinformatics, Wireless

Communication & Computing, Robotics, Human Computer Interaction, Microelectronics, Master of Business Administration [MBA (IT)] and Master of Science in Cyber Law & Information Security [MS (CLIS)]. Besides, the Doctoral Program in Information Technology and its allied areas. A 5-year integrated M.Tech Program in Biomedical Engineering and 2-year M.Tech in Communication Engineering is going to start from July 2012 Session.

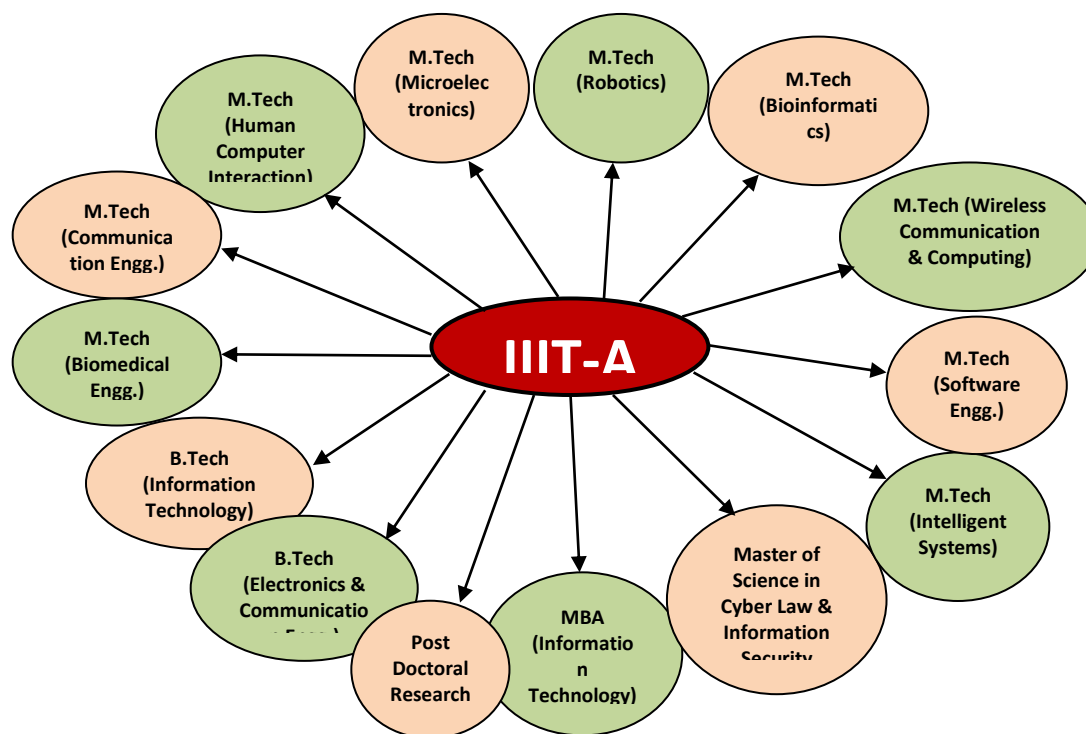
Keeping in view that students from different socio-cultural backgrounds enroll themselves at the Institute, a Communication Skills Laboratory assists them in refining their Personality and Communication Skills. Web based education and airing of courses through Gyanvani FM channel, housed inside the Institute's Campus, is another novelty of IIIT-Allahabad along with handling eight VRC's in collaboration with ISRO. Apart from these, Video Conferencing and webinar facilities are available for collaboration with other Institutes or Research Centers for online and offline interactions. It is in these contexts that this Institute promises to play a crucial role to generate requisite high level technical manpower to meet National goals in critical areas like defense, weather forecasting, space programs, economic development and social transformation, to gain from emerging IT revolution. Keeping these in view, the Courses of the Institute have been designed with a lot of operational flexibility in syllabus so as to be at par to the need of the society.

A brief summary of courses is as given below:

Sl. No.	Name of Course	Branches	Duration	Mode of Selection
1.	Bachelor of Technology	1). Information Technology 2). Electronics Communication	4 Years	AIEEE
2.	Master of Technology	1). Wireless Communication & Computing 2). Software Engineering 3). Bioinformatics 4). Intelligent Systems 5). Human computer Interaction 6). Micro-electronics 7). Robotics	2 Years	GATE
3.	Master of Business Administration (MBA)	Management	2 Years	CAT
4.	MS(CLIS)	Cyber Law	2 Years	Institute Entrance Exam
5.	Ph.D.	Various Research Areas	2 Years minimum	Advertisement



			period	+Screening +Test +Interview +Approval by RDC
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COURSE STRUCTURE

Bachelor of Technology

The B.Tech (IT & ECE) courses are arguably one of the best in the country in the fields of information technology and electronics & communications engineering. Its greatest strength is its adaptability to the changing industry requirements. A student here does not only learn the newest technologies, but is also given ample industry exposure.

The eight – Semester course in IT (Information Technology) and EC (Electronics Communication) has depth, rigor and industry oriented flexibility as its highlight. Each Semester incorporates 05 Theory and 03 Practical papers that amount to 15 Credit Hours in Theory and 08 in Laboratory work, with summer training at the end of each even Semester. The Project-based approach ensures that the students handle projects independently after the Fourth Semester. The grading system has been

designed keeping in mind the systems employed by other prestigious Institutes around the world.

ADMISSION PROCEDURE

The admission to the B.TECH (IT) Degree Course from the year 2003 and EC Degree Course starting from the year 2006 onwards is through the prestigious all India Engineering Entrance Examination conducted by the CBSE (AIEEE). This National level examination conducts the entrance for all the NITs, IIITs and various other Deemed Universities.

Based upon the merit in the written examination, Central Counseling Board (CCB) of AIEEE invites candidates for counseling at selected centres, and seats for various participating Institutions are allotted, based upon individual merit and choice. Top 1% students make in IIIT-A. A total of 240 students are selected for the B. Tech Program each year.

B.Tech (ECE) and B.Tech (IT) Course Structure

Courses for I Semester

S.No	Name of the courses in B.Tech(ECE) - I sem	Credit hours			Names of the courses in B.Tech (IT) I sem
		L	P		
1	Physics	3	2	B	All subjects to be common to both the streams
2	Mathematics 1	3	0	B	
3	Basic Electronics	3	0	B	
4	Introduction to Computers	0	2	B	
5	Introduction to Programming	3	2	B	
6	Electronics Workshop	0	2	B	
7	Environmental Engineering	3	0	HuS	
	Total	15	8		Total credits - 23

Courses for II semester

S.No	Name of the courses in B.Tech(ECE) - II sem	Credit hours			Names of the courses in B.Tech (IT)-II sem
		L	P		
1	Mathematics 2	3	2	B	All subjects to be common to both the streams
2	Discrete Mathematics	3	0	B	
3	Digital Electronics	3	2	B	
4	Data Structures	3	2	C	
5	Computer Organization and Architecture	3	0	C	
6	Communication Skills and Technical Writing	2	0	HuS	
	Total	17	6		Total credits - 23

Courses for III semester

S.No	Name of the courses in B.Tech(ECE) - III sem	Credit hours		Name of the courses in B.Tech(IT) - III sem	Credit hours	
		L	P		L	P
1	Maths 3 (Probability & Statistics)	3	2	Maths 3 (Numerical Methods & transforms)	3	2
2	Electronic devices & circuits -2	3	3	Computer Organization & Microprocessors	3	2
3	Electrical Engineering 2	3	2	Computer Programming (in C++)	3	2
4	Signals, Systems, Information Theory and coding	3	0	Digital Communication	3	2
5	Analog Communication	3	2	DBMS	3	2
	TOTAL	15	9	TOTAL	15	10

Courses for IV semester

S.No	Name of the courses in B.Tech(ECE) - IV sem	Credit hours		Name of the courses in B.Tech(IT) - IV sem	Credit hours	
		L	P		L	P
1	Technical Writing	0	2	Technical Writing	0	2
2	RF & Microwave Engg	3	2	Operating System	3	2
3	Microprocessors Prog and Interfacing	3	3	Maths 4 (Probability and Statistics)	3	2
4	Electronic Measurements	3	2	Object Oriented Methodology	3	2
5	EM Waves, Antennae Wave Propagation	3	1	Design & Analysis of Algos	3	2
6	Digital Communication & Modulation	3	2	Business Systems	2	0
	TOTAL	15	12	TOTAL	14	10

Courses for V semester

S.No	Name of the courses in B.Tech(ECE) - V sem	Credit hours		Name of the courses in B.Tech(IT) - V sem	Credit hours	
		L	P		L	P



1	Computer Networks	3	2	Computer Networking	3	2
2	Power Electronics	2	2	Computer Graphics	3	2
3	Maths 4 (Numerical methods & transforms)	3	0	FLAT	3	0
4	Microelectronics Technology	2	2	Artificial Intelligence	3	2
5	VLSI Design	3	2	SW Engineering	3	2
6	Instrumentation & Control	2	2	Mini Project	0	3
7	Project	0	3			
	TOTAL	15	13		15	11

Courses for VI semester

S.No	Name of the courses in B.Tech(ECE) VI sem	Credit hours		Name of the courses in B.Tech(IT) - VI sem	Credit hours	
		L	P		L	P
1	DSP	2	2	Compiler Design	3	2
2*	Elective -I	3	0	Advanced Database Management SystemS	3	2
3	Elective -II	3	0	Elective-I	3	0
4	Elective -III	3	0	Elective-II	3	0
5	Elective -IV	3	0	Elective-III	3	0
6	Telecommunication Switching Circuits	3	2	Mini project	0	5
6	Mini Project	0	5			
	TOTAL	17	9	TOTAL	15	9

Courses for VII semester

S.No	Name of the courses in B.Tech(ECE) VII sem	Credit hours		Name of the courses in B.Tech(IT) VII sem	Credit hours	
		L	P		L	P
1	Business Systems	2	0	Sim & Modeling	3	2
2	Elective-V	3	2	OR & OT	3	2
3	Elective-VI	3	2	Elective-IV	3	0
4	Elective-VII	3	0	Elective-V	3	0
5	Elective-VIII	3	0	Elective- VI	3	0
6	Electronic System Design	3	0	Project	0	5
7	Mini Project	0	5			
8	Lab	0	3			
	TOTAL	17	8		15	9

Courses for VIII semester

S.No	Name of the courses in B.Tech(ECE) VIII sem	Credit hours	Name of the courses in B.Tech(IT) VIII sem	Credit hours
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1	Major project	20	Major project	20
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POST GRADUATE PROGRAM

With M. Tech (BI, WCC, IS, HCI, RO, SE, CE& MI) IIIT-A has started a unique model of M. Tech education in the field of Information Technology and Electronics & Communication Engineering, with the objective of preparing quality professionals and researchers to work at high-end technologies in IT and ECE, the Institute provides very specialized courses, such as specialization in Human Computer Interaction, Bio-informatics, Wireless Communication and Computing, Microelectronics, Communication Engineering, Robotics, Software Engineering and Intelligent Systems. Many of the Specializations are the unique features of IIIT-Allahabad only. The course curricula of M. Tech includes two semester 'Thesis work' which provides an opportunity to students to create and develop new concept, techniques, methods and applications given the world class infrastructure and faculty in the Institute.

Each stream has 20 seats out of which 05 seats are reserved for NRI and Sponsored candidates from reputed industries. All the M. Tech students (other than sponsored candidates) are admitted on the basis of GATE Score and Test/Interview conducted by the Institute. The candidates having Gate Score are eligible for a monthly stipend of Rs. 8,000/- for maximum four semesters.

MASTER OF TECHNOLOGY

With M.Tech (BI, WCC, IS, HCI, Robotics, SE, CE & MI) -IIIT-A has started a unique model of M.Tech education in the field of Information Technology and Electronics & Communication Engineering, with the objective of preparing quality professionals and researchers to work at high-end technologies in IT and ECE, the Institute provides very specialized courses, such as specialization in Human Computer Interaction, Bio-Informatics, Wireless Communication and Computing, Microelectronics, Communication Engineering, Robotics, Software Engineering and Intelligent Systems. Many of the specializations are the unique features of IIIT-Allahabad only.

The course curricula of M.Tech includes two semester 'Thesis work' which provides an opportunity to students to create and develop new concept, techniques, methods and applications given the world class infrastructure and faculty in the Institute.

A short description of streams under M.Tech Program is as follows:

❖ **Wireless Communication and Computing**

This program provides a thorough knowledge of emerging fields like GSM, GPRS, EDGE, UMTS, CDMA. The course involves software development of call processing protocols in wireless network and user equipments, design, programming, optimization of software for embedded processors for mobile devices and network equipments.

❖ **Intelligent Systems**

It prepares students to excel in the fields of Artificial Intelligence, Cognitive Sciences, Natural Language Processing, Robotics and Haptics, Embedded Systems and related areas, etc.

❖ **Bioinformatics**

This program includes the study of emerging topics such as system Biology, Computational Modeling of molecules and drugs, Protein Design, Genomics and Proteomics, Biological Databases, Molecular Structure Prediction.

❖ **Software Engineering**

The students are nurtured to become future project leaders, architects and consultants, who can meet challenges, make use of technologies and understand the needs of modern software development.

❖ **Microelectronics**

Microelectronics Engineering is the area of technology associated with the design and fabrication of electronic devices/systems or subsystems using extremely small components - integrated circuits. Microelectronics is that area of science that is working to make the instruments more compact, more reliable and more efficient. A strong need for well-educated microelectronic circuits and systems test engineers is desired by the industry. Graduate-level research efforts are also called to overcome numerous micro-electronic circuits and systems test issues.

❖ **Human Computer Interaction**



Human Computer Interaction is the study of interaction between people and computers. It is an interdisciplinary subject, relating computer science with many other fields of study and research. Interaction between users and computers occurs at the user interface (or simply interface), which includes both software and hardware, for example, general purpose computer peripherals and large-scale mechanical systems, such as aircraft and power plants.

❖ Robotics

Its mission is to create an international standard, excel in the area of robotics and cognitive sciences, to produce high quality engineers having self confidence in nation, knowledge in building endeavor and a brand name for the Institute as a temple of learning. The thrust is on that the machines will do work for us and we will work to make them intelligent.

M.TECH (WIRELESS COMMUNICATION & COMPUTING) [WCC]

Sem	Subjects						
I	Wireless Communication & Computation (4 Credit)	Media Access & Wireless Network (4 Credit)	Cellular Networks (4 Credit)	Theory of Wireless Algorithm (4 Credit)	Practical (4 credit)	Practical (4 credit)	
II	TCP / IP for Wireless Networks (4 Credit)	Mobile Intelligent Networks (4 Credit)	Wireless Sensors Network** (4 Credit)	Distributed Systems ** (4 Credit)	Information & Network Security ** (4 Credit)	Practical (4 credit)	Practical (4 Credit)
III	Parallel Computing** (4 Credit)	Cryptography & Information Security** (4 Credit)	Telecommunication & Switching Networks** (4 Credit)	Mobile Database Management System ** (4 Credit)	Project & Dissertation Work (12 Credit)		
IV	Dissertation Work (20 Credit)						



M.TECH (BIOINFORMATICS) [BI]

Sem	Subjects						
I	FCI -Fundamental of Computer and Internet	DSA - Data Structure and Algorithm	IGP - Introduction to Genomics and Proteomics	BMS - Bioinformatics and Statistics (All Subjects are compulsory)			
II	BDS - Biological Databases and Structure	LAT - Language Algorithm and Tools	*CADD - Computer Aided Drug Designing	*DMBS - Data Mining in Biological Systems	*MSPV - Molecular Structure Prediction and Validation (* Electives - Any Two)		
III	*SB - System Biology	*CIF - Chemo-Informatics	*MLBS - Machine Learning for Biological Systems	Mini Project (* Electives - Any Two)			
IV	Project and Dissertation Work						

M. TECH (INTELLIGENT SYSTEMS) [IS]**Course Structure**

All students are required to take 10 courses from the following available courses. In first and second semester there will be 20 credits including 4 core subjects and one common programming lab. In third semester there will be two courses and one mini project. In final semester students have to work on their thesis.

List of Courses

Sr. No.	Subject	Credits
01	Computational Intelligence	04
02	Distributed Systems	04
03	Data Mining and Warehousing	04
04	Information & Network Security	04
05	Soft Computing	04
06	Image Processing and Computer Vision	04
07	System Software	04
08	Cognition and Cognitive Process Modelling	04
09	Advance Graphics and Animation	04
10	Mobile Intelligent Networks	04
11	Wireless Sensor Network	04



Sr. No.	Subject	Credits
12	Architecture of Intelligent Systems	04
13	Embedded Systems	04
14	Digital Systems Design	04
15	Common Programming Lab / IS LAB	04

M.TECH (ROBOTICS) [RO]

I year (First Semester)	
1: Mathematical formulation of robotics	4
2: Control System Engineering	4
3: Computational Intelligence	4
4: Computer Architecture and Embedded Systems	4
I year (Second Semester)	
1: Artificial Life Simulation	4
2: Digital System Design	4
3: Operational Research & Optimization	4
Electives 1:	
1: Wireless Sensor Network	4
2: Internet Network Security	4
3: Data Mining & Warehousing	4
II Year (First Semester)	
1: Humanoid Robots	4
2. Mini project	8
Elective 2:	
1: Nonlinear Dynamics	4
2: Computational Geometry	4
3: Advanced Algorithm	4
4: Robot Motion Planning	4
II year (Second Semester)	
M.Tech. Thesis	16

Cognition and Cognitive Process Modeling

Cognitive Science is the study of the mind and human intelligence, including computational models of human thought.

It is the interdisciplinary study of how information, e.g., concerning perception, language, reasoning, and emotion, is represented and transformed in the mind.

It consists of multiple research disciplines, including psychology, artificial intelligence, philosophy, neuroscience, learning sciences, linguistics, anthropology, sociology, and education.

- Nature of Mind and Mind Body problem.
- Mechanisms of Mind.
- Multiplicity of Mind.
- Evolution Natural and Artificial.

Principles of Interaction Design

Principles of Interaction Design include

- Design methodology for complex products, services and events: Design of integrated systems, products for future use, products to be used in groups, devices used in public places, design of multi-modal interfaces, expressive interfaces, products that enrich user experience.
- The course takes an inter-disciplinary approach drawing upon product design, visual communication, information architecture, cognitive psychology and computer science. The course involves exploration of alternatives, pushing the envelope of what is known.
- The focus is on working collaboratively in groups to solve design problems. The course will involve doing projects. Students need to build soft prototypes of proposed systems at the end of the course.



<ul style="list-style-type: none"> • The First AI Debate. • The Second AI Debate. • Representation and Third AI Debate. • Neural Networks. • Fractals. 	
Virtual Reality <ul style="list-style-type: none"> • Introduction to early VR technologies. • Input Devices: Trackers, Navigation & Gesture Interface. • Output Devices: Graphics, 3D, Sound & Haptic Displays. • Computing architecture for VR. • Modelling Techniques. • VR Programming. • Human Factors in VR. • Traditional & Emerging applications of VR. 	Image and Vision Processing <ul style="list-style-type: none"> • Digital Image Representation. • Intensity Transformations and Spatial Filtering. • Frequency Domain Processing. • Image Restoration. • Color Image Processing. • Wavelets. • Image Compression. • Morphological Image Processing. • Image Segmentation. • Object Recognition. • Stereovision.
Digital Signal Processing Topics included in Digital Signal Processing are <ul style="list-style-type: none"> • Introduction to signal processing. Properties of LTI continuous filters. The Dirac delta function. • Continuous LTI system time-domain response. Sinusoidal response of LTI continuous systems. • The Fourier series and transform. • The frequency response of a linear system defined directly from the Fourier transform. Relationship between the frequency response and the impulse response. The convolution property. • The Laplace transform. • Poles and zeros of filter classes. • Butterworth filter design example. Chebyshev filters. • The sampling theorem. The discrete Fourier transform. • The fast Fourier transform (cont.). Spectral leakage in the DFT and apodizing (windowing) functions. • Frequency response and poles and zeros. FIR low-pass filter design. 	Soft Computing Soft Computing includes <ul style="list-style-type: none"> • Development and Evaluation of Artificial Neural Network Model for Real life Applications. • Hopfield Networks. • Decision Trees. • Fuzzy Logic and its use in control engineering. • Problem solving using fuzzy techniques. • Cluster Computing. • Genetic Programming: Issues and Applications. • Hidden Markov Models. • Hybrid Systems of ANN, GA and Fuzzy systems.

M.TECH (HUMAN COMPUTER INTERACTION) [HCI]

<p>Advanced Graphics and Animation</p> <ul style="list-style-type: none"> • Simple Raster Graphics. • Graphics hardware. • Geometrical transformations. • Viewing in 3D. • Object Hierarchy and simple PHIGS. • Dialog Design. • Representing curves and surfaces. • Solid Modeling. • Achromatic and colored lights. • Visible surface determination. • Illumination and shading. • Animation Production and Techniques. • Interpolation and basic techniques. • Natural Phenomena. • Rendering Issues. 	<p>Speech and Language Technology</p> <p>Speech and Language Technology courseware include following topics</p> <ul style="list-style-type: none"> • Introduction to course. • Scope of Augmentative and Alternative Communication (AAC). • Text Entry methods. • Ambiguous keyboards. • Interface variations. • Language modeling and word prediction. • Coding and information theoretic perspectives. • Utterance-based systems. • Symbol Systems. More Symbol Systems. • Speech Transformation, Recognition and Assessment. • Natural Language Generation.
<p>Computational Intelligence</p> <ul style="list-style-type: none"> • CI Paradigms. • Artificial Neural Networks. • Supervised Learning Neural Networks. • Unsupervised Learning Neural Networks. • Radial Basis Functions. • Reinforcement Learning. • Evolutionary Computation. • Genetic Algorithms. • Fuzzy sets, logic, reasoning, controllers. 	<p>Information Retrieval</p> <ul style="list-style-type: none"> • Boolean retrieval. • The term vocabulary & postings lists. • Dictionaries and tolerant retrieval. • Index construction. • Index compression. • Scoring, term weighting & the vector space model. • Computing scores in a complete search system. • Evaluation in information retrieval. • Relevance feedback & query expansion. • XML retrieval. • Probabilistic information retrieval. • Language models for information retrieval. • Text classification & Naive Bayes. • Vector space classification. • Support vector machines & machine learning on documents. • Flat clustering. • Hierarchical clustering. • Matrix decompositions & latent semantic indexing. • Web search basics. • Web crawling and indexes.
<p>Humanoid Robotics</p> <p>Humanoid Robotics includes</p> <ul style="list-style-type: none"> • Towards Robot Theatre. • Robotic System Servo Control. • Sensors and their role in new approaches to perception. • Overview of sensors. • Digital Resistive sensors. • Analog Resistive sensors. • Introduction to Robot Vision, Cameras, Visual Servoing. • Edge detection and feature extraction algorithms. • Labeling and sequential algorithms. • Histogramming. • Walsh Transforms and butterflies. Walsh Matrix. • Spectral Transforms and Image Processing software. • Walsh and Fourier Transforms. Butterflies. Fast algorithms and their properties. Use of spectral methods in robot vision. • Hough Transforms. Hough Transform application in a mobile robot for corridor navigation. • Quad trees and Oct-trees. • Thinning algorithms. 	



M.TECH (MICROELECTRONICS) [MI]

FIRST SEMESTER		Credit
1. Modeling and Analysis of VLSI devices		[4 Cr]
2. Fundamental of VLSI design		[4 Cr]
3. VLSI Technology		[4 Cr]
4. Computer Architecture and Embedded System (Elective)		[4 Cr]
5. LAB		[4 Cr]
SECOND SEMESTER		Credit
1. Hardware Design Methodologies using HDL		[4 Cr]
2. Test and Verification		[4 Cr]
3. Advanced digital VLSI design (Elective)		[4 Cr]
4. Fabrication Technology and Optoelectronics Devices (Elective)		[4 Cr]
5. LAB		[4 Cr]
THIRD SEMESTER		Credit
1. Advanced Analog VLSI Design (Elective)		[4 Cr]
2. MEMS (Elective)		[4 Cr]
3. Mini Project		[12 Cr]
FOURTH SEMESTER		Credit
1. Major Project		[20 Cr]

M.TECH (SOFTWARE ENGINEERING) [SE]

I Semester <ul style="list-style-type: none"> Architecture of Software Systems Software Requirements and Estimation Object Oriented Software Engineering Software Metrics 	III Semester <ul style="list-style-type: none"> Elective I Elective II Thesis
II Semester <ul style="list-style-type: none"> Software Process Management Software Testing and Quality Electives I Electives II 	IV Semester <ul style="list-style-type: none"> Thesis
Tentative Electives for II Semester <ul style="list-style-type: none"> Advanced Data Base Management System Principles of Software Design Distributed System Intellectual Property Rights 	Tentative Electives for III Semester <ul style="list-style-type: none"> Parallel Computing Cryptography Component Based Software Development Data Mining Enterprise Resource Planning Agent Based System



Thesis

M.Tech is the first substantial piece of research in a student's career. Students are encouraged to publish this in a referred conference or journal. For this, going through some conference, proceedings from various software engineering conference. This gives an idea of the kind of research that can be published.

Technology Explored

- Platforms-DOS, Windows XP, Vista, Various LINUX Distributions
- Languages-C, C++, Java, HTML, Java Script, PL/SQL
- Databases-Oracle, PostgreSQL, MS-Access
- Packages-Rational Rose, Smart Draw, Net Beans, Star UML, MATLAB, Apache Tomcat, Web Server
- Technologies – J2EE (Servlets/JSP), EJB, RMI



MASTER OF BUSINESS ADMINISTRATION IN INFORMATION TECHNOLOGY

[MBA(IT)] DEGREE COURSE

MBA in Information Technology is presently being offered in a very few institutions of India, with IIT-A being at the vanguard of them all. MBA (IT) program is a trio specialization program (viz: General Management, IT & Functional Areas) in Information Technology provides graduate students with the advanced knowledge and skills necessary to assume and discharge the duties and responsibilities of managers in high technology industries.

This course envisages the evolution of managers, who manage paradoxes by focusing on sharpening the decision-making, leadership, team building and analytical skills of the students. Case studies, group discussions, videos and experience sharing by industry experts and

role-playing provide an opportunity to students to put their management theories into practice. Apart from the summer internship program, live projects are assigned to students.

The program aims at educating students for professional careers and leadership roles in the information professional. Through our specific goals and objectives in instruction, research, service and outreach we create and will continue to create a dynamic learning environment dedicated to preparing our student to respond not only to one opportunities of today, but to the challenges they will face in the 21th century.

The course structure is:

Semester-I	Semester-II
Principles of Management	Organizational Structure and Behavior
Financial Accounting & Analysis	Marketing Management
Managerial Economics	Process Management and Consultancy
Quantitative Decision Models	Cost and Management Accounting
Digital Infrastructure & ERP	Object Orient Methodology
Business Communication	Research Methodology
Data Base Management Systems	Operations and Supply Chain Management
Business Law	Elective I
	Elective II

Semester-III	Semester-IV
Computer and Telecommunication Network	Business Marketing & Key Account Management
Corporate Finance	Human Resource Management
Software Engineering	Information Security Laws & Practices
Strategic Management & Information System Strategy	Project & Viva-Voce
Cross Cultural International Management	Comprehensive Lab
Elective I	
Elective II	
Summer Training	

Criteria for Choosing Electives

A candidate can opt for specialization in any one functional area in the 2nd and 3rd Semesters, wherein they are free to opt in combination of 3:1 or 2:2 (which represents those 3 courses from one area and 1 course from the other area, in the two Semesters).

The elective basket for all the three functional areas for the last two Semesters is as under:

Semester – II Electives **Financial Management**



1. International Financial Management
2. Management of Financial Institutions
3. Security Analysis

Information Technology

1. Expert System Design and Applications
2. System Design & Integration
3. Fundamentals of Information Security

Marketing Management

1. E-tailing
2. Advertising and Brand Management
3. Telecommunication Marketing

Operations Management

1. Procurement Management & E-Logistics
2. Material Management and Inventory Control
3. Project Management

Semester – III Electives

Financial Management

1. Financial Engineering
2. Financial Auditing and Reporting
3. Environmental Analysis Accounting

Information Technology

1. BCP & DRP
2. Data Warehousing & Technologies
3. COBIT

Marketing Management

1. Marketing of Services
2. Consumer Behaviour & CRM
3. Retail Marketing

Operations Management

1. Total Quality Management and Six Sigma
2. Operation, Strategic Cost Management

ADMISSION PROCESS FOR MBA (IT) PROGRAM

For General and SC, ST, OBC Category Candidates

1. Graduates with valid CAT / MAT / XAT / ATMA (MOST RECENT) Percentile Score are only eligible for

consideration. Those appearing in their final examinations and expecting their results latest by 1st July, 2012 may however also apply.

2. Admission is made strictly on the basis of Merit ONLY, as per the following weightage:

Entrance Test: 50%

CAT/MAT/XAT/ATMA Score: 30%

Group Discussion: 10%

Interview: 10%

3. Entrance Test, Interview & Group discussion for screened in candidates only, on the basis of CAT/MAT/XAT/ATMA (MOST RECENT) Percentile Score.

Sponsored Category Candidates

1. Applicants in this category shall be required to produce a Sponsorship Certificate from Employer.
2. Only first class graduates with working experience are eligible
3. Merit list for this category is prepared following weightage:
Entrance Test: 50%
Marks in Qualifying Degree: 15%
Length of experience: 15%
Group Discussion: 10%
Interview: 10%

(In case of a tie, candidate scoring higher %age of marks in the qualifying degree exam shall be given preference). PI. Note: Candidates with Engg. Degree / Post Graduation, shall be given an additional weightage of 5% in the "Marks scored in Graduation" Category.

NRI/Foreign National

1. Graduates from Foreign Universities, duly recognized/accredited by appropriate bodies/govt. body granted Equivalence
2. Candidates shall be considered for admission only on the basis of a valid GMAT score as per the following weightage:
Entrance Test: 50%
GMAT Score: 30%
Group Discussion: 10%
Interview: 10%
3. SAARC Nation candidate criteria are same as Sponsored Candidate except work experience.

MASTER OF SCIENCE IN CYBER LAW AND INFORMATION SECURITY (MSCLIS) DEGREE COURSE

The MS-CLIS program aims at building techno-legal professionals ready to deal in issues relating to "Information Security" and "Cyber Law". Our real contribution, however, lies in the blending of these two disciplines into a single whole, thus fulfilling the need of a class of techno-legal experts. IIIT-A is the first and the

only Institute in India awarding the Masters degree in Cyber Law and Information Security.

The advent of Internet and Information Technology has given new dimensions to the present world. It is no longer the same place for individuals and corporation presenting forth a transformed society. This, transformed world is



now known as the cyber world, where the active players are lawmakers, technology builders and techno managers. Law enforcement agencies are facing significant issues like new Policies, Acts and its enforcements beyond the physical safety of citizen, whose foundation was laid for the closed economic conditions. The use and misuse of cyber space required law enforcement to take a proactive role in providing cyber safety. Cyber law has come to the rescue of such persons who are victim of cyber crime, i.e. crime perpetrated through the electronic and communication means. Moreover, the biggest contribution of cyber law has been in validation and protection of electronic commerce.

In today's highly networked business environment, information is undoubtedly among an enterprise's most valuable assets, so its protection from predators from both, within and outside has taken centerstage as an IT

Course Structure

Semester-I	Semester II
Introduction to Computer Technology and Programming	Data / Information & Cryptography
Computer and Telecommunication Networks	Network Security
Fundamentals of Information Security	Database Management & 4GLs
Communication & Soft skills	Elective I
Data Protection Act	Elective II
Quantitative Decision Models	

Semester III	Semester IV
Security Architecture	Computer Forensics & Digital Evidence
Identity and Access Management	Information Security Audit
Protocols and Systems for Internet and Web Security	Process Management and Consultancy
IP packet Analysis	Master Project
Elective I	
Elective II	
Summer Training	

Elective Semester-II

Implementation Side

Elective I

Technical risk Assessment (or) Data Integrity & Plagiarism Detection Tools

priority. Information Security refers to techniques, policies and strategies used to ensure that data stored in an organization's information system should not be accessed or processed without the consent of the organization. Information Security promotes trust and confidence achieved by applying controls, which are combination of policies, legislations, procedures, organizational structures and physical or hardware / software measures.

The field of Cyber Law and Information Security was highly desired by the industry with a huge demand of qualified professional in the area. Thus the course started off as a one-year Diploma on Cyber Law and Information Security to begin with, which was later converted into a two-year long Masters Degree Program. With the passage of time, the MS in Cyber Law and Information Security gained immense popularity among various sectors.

Elective II

Static Information & Software Protection Tools (or) BCP & DRP

Compliance Side

Elective I

SOX (or) E-Business Security (NDA, GLBA, Electronic Contract)



Elective II
HIPAA (or) PCI & DSS

Elective Semester – III
Implementation Side

Elective I
Cryptographic Protocol (or) Authentication protocol

Elective II
Modeling and Simulation (or) Pattern Recognition
Compliance Side

Elective I
Security Standards (or) Financial Risk Management and
Modeling
Elective II ISO – 15048, ISO 9001 (or) ITIL

Doctoral Program (Ph.D.)

Students may enroll in the Doctoral Program after M.Tech/MBA/MS. The objective of the program is to promote the development of futuristic IT applications and patent products, ideas, technologies. The institute intends to contribute to society through these highly qualified students, who have specialized in frontier areas of Information Technology. Research and development is now the focal point of the institute and our stress is on collaborative and interdisciplinary work. We introduce students to a research environment that contains facilities comparable to the best in the world.

2.1.2 EXAM PATTERN AND GRADING

Semester system is followed by training and project in the Institute. While the education system is broadly organized on the pattern of IIT's, a Relative Grading System pattern

with credits allotted for each course. Each course is assigned specified credits, depending upon its relative importance in the field. The Institute provides students the desired flexibility to choose courses as per their own interests, also to boost creativity in students, projects, in their chosen fields of interest, form an integrated part of the course curriculum. Normally one theory course credit hour is of 15 hours of lectures in one semester, and one laboratory course credit hour is of 30 hours of laboratory work.

•Duration of each semester is a minimum of 18 instructional weeks

• Evaluation for each Semester is based on Mid Sem Exam, Quiz, Assignment &Tutorials, Internal Assessment, Attendance & End Sem Exam Total Marks is the sum of all Marks got in Semester.

The Breakup of Marks in each semester is as follows:

Credits Hours	Mid Sem Exam Marks	Quiz Marks	Assignment & Tutorials Marks	Internal Assessment Marks	Attendance Marks	End Sem marks	Total
2	20	10	10	3	7	50	100
3	30	15	15	5	10	75	150

Students enrolled in various Programs of the Institute shall be awarded Letter Grades at the end of Each Semester, based on continuous assessment which shall include appropriate weightage for all evaluative exercises undertaken by the respective faculty during that semester, viz. Mid Semester Exams, Quiz, Assignments/Tutorials, Internal Assessment, Attendance, End Sem Exam.

Grade	Meaning	Grade Value
A+	Outstanding	10
A	Very Good	9
B+	Good	8
B	Average	7
C	Below Average	6
D	Just Passed	5
F	Failed	0



CANDIDATE ACHIEVING GREATER THAN OR EQUAL TO 8.5 CGPI, IS AWARDED HONOURS DEGREE IN B.TECH.

- The Institution follows a Relative Grading Pattern.
- No Equivalent PERCENTAGE of marks is awarded as Institute follows a Relative Grading System.

Re-evaluation of Answer Copy

- NO Recheck / Re-evaluation policy of Answer Copies.

Students are free to see their answer copies from concerned faculty on the last two days of Mid-Sem and End-Sem Break.

Back Paper

A student declared to have received more than four Back Papers i.e. F Grade, either in a single Semester or Several Semesters put together shall deemed to be not promoted to Next Semester and shall stand restricted to the semester in which he has the latest 'Backs', In each semester there is one Separate Back Paper Exam.

2.1.3 THRUST AREAS FOR RESEARCH

The broad areas of research at the Institute include:

1. Networking, Internet, E- commerce, E-Governance, Web based Education, Content design and delivery
2. AI, Intelligent/KB systems, Knowledge management, Behavioural modeling, ITS
3. Industrial Automation – Design, process, production, control, security
4. Chemical structures and modeling – Chemicals, new materials, polymers, Pharmaceuticals etc.
5. Bio systems - Genetic modeling, medical informatics, Nano technologies
6. Modeling and informatics pertaining to economic, financial and social systems
7. Eco systems, GIS, Environmental modeling, Geo systems and Geophysical systems
8. Image processing, Image restoration, Applications to art, crafts, sculpture and architecture
9. Disaster management
10. Informatics and computation in Indian languages, Informatics for rural areas, IT enabled services and IT-enabled education
11. Surveillance and security for industry and defense, safety in general and in transportation systems in particular
12. Supply Chain Management, Production & Operations Management, Human Resource Management, Marketing Management, Finance Management, Risk Management, Managerial Economics, Public Sector Management



2.2 THE ACADEMIC TUSK

2.2.1 STATISTICS OF STAFF AND STUDENTS

FACULTY STRENGTH

Sl. No.	Designation	2011-2012
1.	Director	01
2.	Professor	13
3.	Associate Professor	05
4.	Assistant Professor (+ Lecturer)	30
	TOTAL	49
6.	Guest Faculty	01
7.	TA / RF **	35
	TOTAL	85

** TA = Teaching Assistants, RF = Research Fellows (They shared the Academic Workload as per Govt. norms)

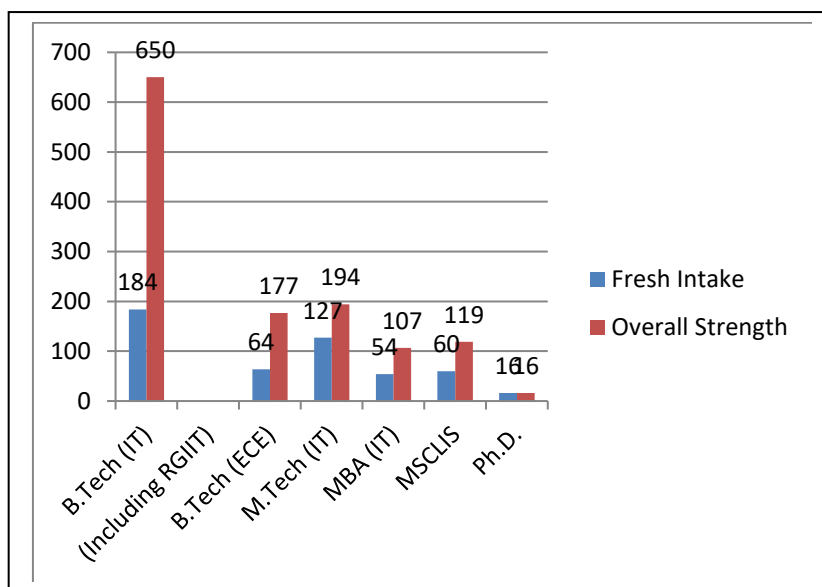
NON-FACULTY STRENGTH

Sl. No.	Year	No. of Non-teaching Staff	
		Regular	Contractual
1	2007-2008	33	41
2	2008-2009	33	40
3	2009-2010	33	40
4	2010-2011	46	61
5	2011-2012	47	63

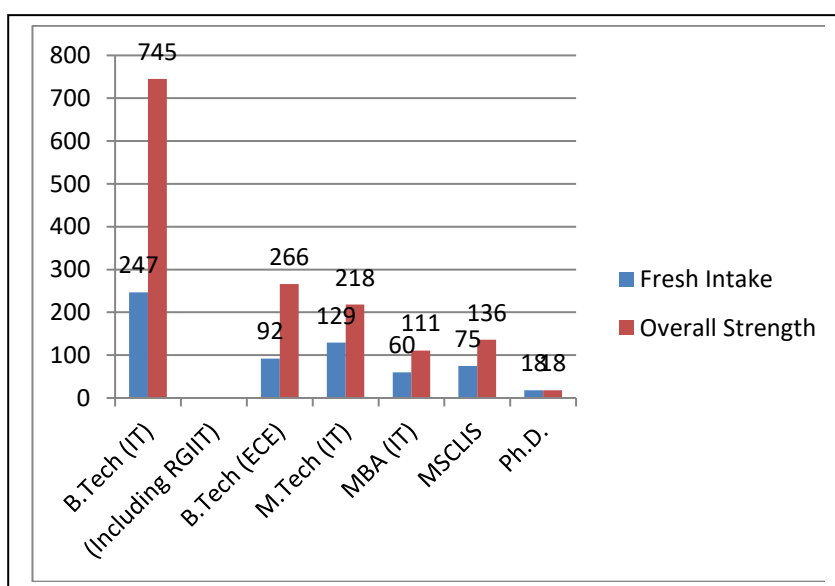
STUDENTS INTAKE AND STRENGTH

The Institute implemented the CEI Act 2006 w.e.f. the year 2008-2009 whereby the resultant intake and total student strength grew steeply. The coursewise intake and total student strength for the last four years (2009-2010 to 2011-2012) is given below:

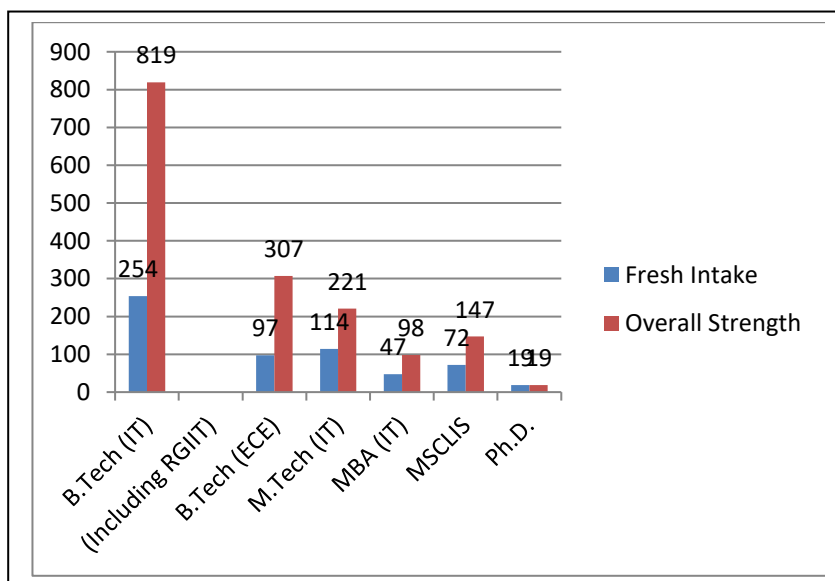
Year	Course	Fresh Intake (1 st Sem)	Overall Strength
2008-2009	B.Tech (IT) (Including RGIIT)	184	650
	B.Tech (ECE)	64	177
	M.Tech (IT)	127	194
	MBA (IT)	54	107
	MSCLIS	60	119
	Ph.D.	16	16
	TOTAL	505	1263



Year	Course	Fresh Intake (1 st Sem)	Overall Strength
2009-2010	B.Tech (IT) (Including RGIIT)	247	745
	B.Tech (ECE)	92	266
	M.Tech (IT)	129	218
	MBA (IT)	60	111
	MSCLIS	75	136
	Ph.D.	18	18
	TOTAL	621	1494

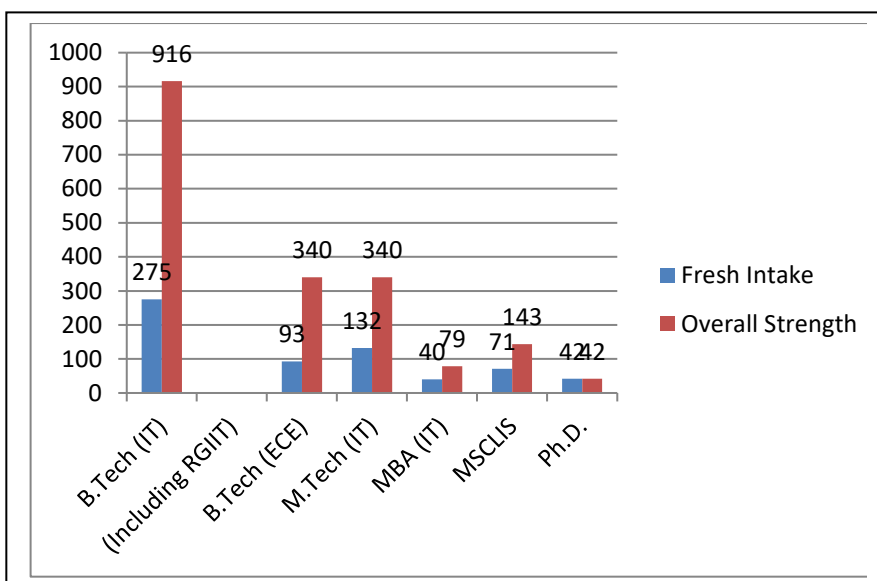


Year	Course	Fresh Intake (1 st Sem)	Overall Strength
2010-2011	B.Tech (IT) (Including RGIIT)	254	819
	B.Tech (ECE)	97	307
	M.Tech (IT)	114	221
	MBA (IT)	47	98
	MSCLIS	72	147
	Ph.D.	19	19



	TOTAL	603	1611
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Year	Course	Fresh Intake (1st Sem)	Overall Strength
2011-2012	B.Tech (IT) (Including RGIIT)	275	916
	B.Tech (ECE)	93	340
	M.Tech (IT)	132	340
	MBA (IT)	40	79
	MSCLIS	71	143
	Ph.D.	42	42
	TOTAL	653	1860



THE FACULTY UPDATE

2.3 The Faculty Update

Prof. G.C. Nandi
Professor & Divisional Head, IT Division



ACADEMIC AWARDS

- National Scholarship by Ministry of Human Resource Development (MHRD) , Govt of India, 1977.
- Doctoral Fellowship by External Scholarship Division, MHRD, Govt. of India, 1988.

EXPERIENCE

29 years of experience (as on 2013) in teaching and research in the areas of Robotics, Artificial Intelligence, Soft Computing (Fuzzy Logic, ANN, Genetic Algorithm, HMM), Artificial Life Simulations (Biologically Inspired Optimisation Algorithms), Computer Controlled Systems. From 2001 teaching and researching in the various areas of Information Technology.

MEMBERSHIP OF PROFESSIONAL ORGANISATIONS

- Senior Member of ACM
- Senior member of IEEE
- Chairman, ACM-IIIT-Allahabad Professional Chapter, (2009-2010)
- Chartered Member of Institute of Engineers (India)
- Member of DST (Department of Science and Technology, Govt. of India) Program Advisory Committee.

SOME OTHER PROMINENT PROFESSIONAL ACTIVITIES

Took intensive special training on Super Computer (Cray 90), through selection Organized by Pittsburgh Super Computer Center, Mellon Institute, USA, 1994.

Took intensive training on Applied Optics (including Holography and Machine Vision) organized by Oakland University, sponsored by NSF, USA, 1994.

Visiting Research Scientist, The Robotics Institute of Carnegie Mellon University, USA 1994-1995.

Visiting Faculty, School of Computer Sciences, Carnegie Mellon University, USA, (2010- 2011)

My Research Scholars Who Graduated during 2011-2012 and their theses titles

Title of M.Tech Theses

- Development of a Neural Network based Connectionist model for Humanoid Push Recovery (Abha)
- Development of Omni Directional Ankle Strategy for Humanoid Push Recovery Based on Interpolation (Shruti)
- Development of Hardware Software Suite for Human Robot Interactions (Jainendra)
- Development of Fuzzy Logic Based Humanoid Push Recovery using Ankle Strategy (Akash)
- Development of SMART- A Social Mobile Advanced Robot Testbed (Jitendra)
- A Cloud Based Robot Localization Technique (Faimy)

Title of Ph.D Theses

- Gesture Based Communication for Humanoid Robots (Jayshankar Prasad)
- Knowledge Discovery of Patterns in Temporal Databases for Humaooid Robot, HOAP-2 (Miss Upasna Singh)

LIST OF PUBLICATIONS

Publications during 2011-2012

A. Journal Publications

Blood sugar regularization based evolutionary algorithm for data classification, International Journal Applied Soft Computing 12 (2012) 2266–2273

Elsevier. (with S.C. Pandey)

A Central Pattern Generator Based Nonlinear Controller to Simulate the Biped Locomotion of a Stable Human Gait Oscillation. International Journal of Robotics and Automation, Vol-2 Issue-2, 2011. (with four co-authors)

B. International Conference Publications

• S Mondal, A Nandy, P Chakraborty, GC Nandi ,“**Gait Based Personal Recognition System using Rotation Sensor**” – In the proceeding of **International Journal of Emerging Trends in Computing and Information Sciences (CIS -2012)**, pp. 395-402, Vol. 3, No. 3, March 2012.

• A Nandy, S Mondal, L Rai, P Chakraborty, GC Nandi ,“**A Study on Damping Profile for Prosthetic Knee**” – In 1st International Conference on Advances in Computing, Communications and Informatics (ICACCI-2012) Chennai in the proceeding of **ACM Digital Library**, pp. 511-517

• A Nandy, S Mondal, P Chakraborty, GC Nandi ,“**Development of a Robust Microcontroller Based Intelligent Prosthetic Limb**” – In 5th International Conference on Contemporary Computing (IC3-2012), Noida, In **Springer CCIS 306**, pp. 445-455, August 2012 .

• S. Shahid, A.Nandy, S.Mondal, P. Chakraborty and G C Nandi, “**A Study on Human Gait Analysis**” – In 2nd International Conference on Computational Science, Engineering and Information Technology (CCSEIT-2012), Coimbatore in the proceeding of **ACM Digital Library**.

• Seema Mishra, G.C. Nandi, CVDP: A Tool Based on a Social Network Analysis to Combating Virus Propagation” **IEEE**, International conference on communication, information and computing technology, 18-20, October, Sardar Patel Institute of Technology, Mumbai 2012.

• Rajesh Doriya, Pavan Chakraborty, G. C Nandi, “Robot-Cloud: A Framework to assist Hetrogeneous Low Cost Robot”, **IEEE**, International conference on communication, information and computing technology, 18-20, October, Sardar Patel Institute of Technology, Mumbai 2012.

• Shashank Srivastava , Avinash Kumar Singh, G.C. Nandi, “**Inter Cipher Block Diffusion: A Novel Transformation for proposed parallel AES**”, in the proceeding of Elsevier 2nd international conference on communication, computing and security to be held at NIT Rourkela from 6-8 October 2012.

Avinash Kumar Singh, G. C. Nandi, “**Face Recognition Using Facial Symmetry**”, in the proceeding of ACM 2nd International Conference on Computational Science, Engineering and Information Technology (CCSEIT-2012), to be held at Avinashilingam University Coimbatore from 26-28 October 2012.

E. Project work done under my supervision:

- Picture Classification using Robotic Vision in the domain of chemistry lab objects.
- Self Navigating Rover – Mobile Robot Navigation in Unknown Environment.
- Carnivore Web Clusterizer – A Softbot approach to Intelligent Information Retrieval from the web.
- Algorithm Design and Implementation for Optimal Path Planning and Navigation for autonomous mobile robot. Implementation of a Real-Time Algorithm for Obstacle Avoidance.
- Stereoscopic distance calculation.
- Path Planning with Real Time Obstacle Avoidance.
- Design and implementation of a classification system based on soft computing and statistical approaches.
- System Administration Utilities – a mobile agents approach
- Use of soft computing techniques for explosive detection.
- Network Intrusion Detection System & Port Scanning.
- Connectiva – A Cross-platform Remote Desktop Connection
- . Multimodal Human Computer Interaction
- Facial Image Analysis using Soft Computing Techniques.

F. Current Research Activities:

- Development of **AMAL** (Adaptive Modular Active Leg)
- Developing technology for **gesture based communication**.
- Developing new **structures for Temporal Data Mining**

Prof. R.C. Tripathi
Officiating Dean (SA) and Students' Counselor



Academic Achievements

1. A Patent was filed on 10.04.2012 to Delhi Patent office entitled 2012 titled “A personal Human Computer Interaction System based on Eye Gaze Tracking”- Santosh Kumar Barnwal, R.C.Tripathi and M.D. Tiwari- IIIT-Allahabad. The tool has now been in regular use for making all the creativities of the IIIT-A. The Eye Gaze Tracking System will enable our M.Tech (HCI) 1st semester students acquaint themselves with this system and also to enable them do their final year project assignment using them for their further advancements.

2. Member Reviewer Board of Law, Ethics, Government, Intellectual Property Section of Scientific Journals International (www.scientificjournals.org).

Publications:

A: Regular Journal Papers

1. Morphological Pattern based Approach for Retrieval of Similar Trademarks Ranjeet Kumar, RC Tripathi and M.D. Tiwari, International Journal of Advanced Science and Technology (IJAST) USA, paper no 178 –ISSN-2005-4238, Vol.28, March 2011, page 25-34.
2. A case study of Impact of Patenting in the current developing economies in Asia- Ranjeet Kumar, R.C.Tripathi, M.D.Tiwari- Springer Scientometrics-2011- 88575-587 DOI 10.1007/s11192-011-0405-y.
3. A comprehensive study on content based Trademark Retrieval System- Ranjeet Kumar, R.C.Tripathi, M.D.Tiwari- IJCA- 0975-8887, Vol 13-No.6, January 2011.
4. Unveiling the Technology: A case study for cellular mobile phones- Ranjeet Kumar, R.C.Tripathi, M.D.Tiwari - IJIPM, InderScience publications, Vol 4, No. 4 pp. 211-219.
5. Image Quality feature based Algorithm for detection of image forgery- Shrishail Math and R.C.Tripathi- International Journal of Forensics, U.S.A. communicated Feb 2011.
6. An automated screening system for registration of Trademarks and domain names- Ranjeet Kumar, R.C.Tripathi and M.D.Tiwari.
7. An efficient method to detect region duplication in digital images- Vivek Kumar Singh, Shrishail Math and R.C.Tripathi- International Journal of Forensics, U.S.A. communicated Feb 2011.
8. A system and method for authentication in A Wireless local area network (WLAN) - Abhishek Pandey and R.C.Tripathi, communicated to IEEE transactions on Signals and Systems- Feb 2011.
9. The Impingement of Patenting on Research and Innovations in Indian Perspective- Ranjeet Kumar, R.C.Tripathi, M.D.Tiwari, Springer Scientometrics communicated.
10. Trade Secrets protection in Digital Environment: A Global perspective- Ranjeet Kumar, R.C.Tripathi, M.D.Tiwari- Scientific International Journal-Patents and Trademarks-accepted.
11. Technology trend summarization using patents- Ranjeet Kumar, R.C.Tripathi, M.D.Tiwari- Scientific International Journal- Patents and Trademarks-accepted.

B: National and International Conference Papers

1. Confusingly Similar Trademarks Retrieval using Lines Algorithm- Ranjeet Kumar. Akriti Nigam, R.C.Tripathi-

Computer Vision and Image Understanding, Elsevier communicated.

2. Color and texture based approach for distinguishing a new Trademark- Ranjeet Kumar, R.C.Tripathi, M.D.Tiwari- IEEE International Conference on CSNT, May 2012-accepted.
3. Morphological pattern based approach for Trademark Retrieval- Ranjeet Kumar, R.C.Tripathi, M.D.Tiwari- ICASEIT 2011 in Malaysia, 14-15 January 2011.

Participation in Seminars/ Workshops/ Conferences

- 1) Organized Workshop on E & ICT Intellectual Property Rights held during Feb 7, 2012 in IIIT-A.
- 2) Organized Workshop on Electronics System Design & Manufacturing (ESDM) held during July 18, 2012 in IIIT-A.

Work done in Projects undertaken in the Institute

- a) Coordinated the project on "Setting up of the Patent Referral Centre at IIIT-A"- the project completion report was submitted to the Department of Information Technology (DIT), Ministry of Communications and Information Technology (MCIT), New Delhi along with Phase II of the project proposal with an outlay of Rs 82.4 lakhs for duration of three years.
- b) Coordinated the "Technology Incubation and Development of Entrepreneurs (TIDE)" scheme of DIT, MCIT, GoI, New Delhi for which Rs 40 lakhs was received as the first instalment during the year out of approved outlay of Rs 155 lakhs over duration of 4 years.
- c) Coordinated Traditional and e- agriculture section of the Discovery Park Project (DPP) of DST at RGIIT Amethi with approved cost of Rs. 1.5 crores for 2 years duration.
- d) Coordinated the "Fund For Improvement of S&T Infrastructure (FIST)" project of DST with outlay of Rs. 150 lakhs over a period of 5 years.
- e) Also worked as Co.PI for implementation of DIT project- Setting up Northern India Centre for Development of Mentors, Teachers, Knowledge Workers in the area of IT/IT enabled services.

Research & Development

- a) R & D activities / Inventions if any: ---
- b) Patents filed: Indian: A Patent was filed entitled "A personal Human Computer Interaction System based on Eye Gaze Tracking"- Santosh Kumar Barnwal, R.C.Tripathi and M.D.Tiwari- IIIT-Allahabad on 10.04.2012 to Delhi Patent office.

Particulars of Academic Work

PG courses taught:

- 1) Image and Vision Processing with associated Practicals in 2nd Semester of M.Tech (IT)- HCI & IS.

- 2) Course taught at graduate level – Data and Network Security- (B.Tech-IT) 7th sem both to students of IIIT- A and RGIIT Amethi.
- 3) Legal Dimensions of Intellectual Property Rights for all M.Tech 3rd sem branch in mid sem 2012.
- 4) Course taught at graduate level – Data and Network Security- (B.Tech-IT) 7th sem to students of IIIT- A in mid sem 2012.

Extra-Curricular activities

Coordinated plagiarism check up of all research papers, PhD Thesis, M.Tech Thesis etc for entire IIIT-A. About 400 reports were generated and about 20 worst cases were detected, plagiarism removed to save name of IIIT-A.

Awards / Honors / Recognition received

- Member of the following bodies of IIIT-A: (i) Board of Management (ii) Senate Committee (iii) Buildings and Works Committee (iv) Research Degree Committee
- Member PRSG of DIT Project "Development of a web based tool for e verification of Confusingly Similar Trademarks" at Dayalbagh Engg Inst. Agra.
- Member PRSG of DIT Project- "Setting up of a Patent Search Centre" at CDAC Pune.
- Member of PRSG Committee of the DIT Project- Application Analysis and Development of Web Based Patent Analysis and Management System" at CDAC Pune for SME Sector.
- Member, PRSG of DIT Project on Malware based Alert System – CDAC Hyderabad.

Training Programmes Organized

- 1) Organized Workshop on E & ICT Intellectual Property Rights held during Feb 7, 2012 in IIIT-A.
- 2) Organized Workshop on Electronics System Design & Manufacturing (ESDM) held during July 18, 2012 in IIIT-A.

Any other Achievements / Distinctions

Assisted Director IIIT- A to decide financial support for presentation / publication of IIIT-A research papers.

AN OUTLINE OF IPR PROFILE OF IIIT-A

A) Patents Granted:

- 1) **Title : Method for Executing a Sequential Program in Parallel with Automatic Fault Tolerance –**
US Patent No: US 7159,211 B2 - Granted Dated Jan 2, 2007
Indian Patent Application No: 884 / Del / 2002

2) **Title : Method and Device for detecting watermark in digital data-**

US Patent No: US 7,336,800 B2 granted dated 26.02.08
The Patent was also filed on 16.05.2002 in India vide No: 563 / DEL / 2002. It was granted on 02.03.09 vide Indian Patent No: 231097.

Patents Filed in India and under progress:

- 3) **1971 / DEL / 2005:** An Encryption Method and System.
- 4) **757 / Del / 2006:** A block based method and apparatus for optimized terrain rendering allowing dynamic paging of very large data with multiple levels of details (LOD) and triangle strip based on indexing.
- 5) **399 / DEL / 2007 / FAB:** A fuzzy- adaptive brightness control mechanism for a computer display device.
- 6) **492/ DEL/ 2007:** Soft computing based microprocessor controlled Adaptive Modular Active Leg System.
- 7) **2215 / Del / 2007:** Cushy Mouse Kit, An Ergonomic mouse and mouse pad.
- 8) **779 / DEL / 2009:** A method and A software Implemented Tool for Detecting Plagiarism in documents.
- 9) **1294/DEL/2012:** A personal Human Computer Interaction System based on Eye Gaze Tracking

B) Copyrights :

Obtained Copyright certifications have been obtained from the Registrar of Copyrights, New Delhi for following six software tools:

- 1) **Libsite ver.1.0** for Library Management : It is an in-house developed complete web based solution for academic libraries management consisting of Online Public Access Module(OPAM),Online Member Access Module (OMAM),Online Data Management Module (ODMM)
- 2) **Excite ver.1.0** is a web based complete solution for Examination Cell of any Institute.
- 3) **Aware ver.1.0** is a software tool for Embedding and Recovery of a watermark in digital records.
- 4) **Software CodeCop** is a software tool to detect Patents being gazetted for opposition which are likely covered under Free Open Source Softwares(FOSS) .
- 5) **Content Class Marker** is a software tool which essentially allots International Patent Classification (IPC) No. on a newly received Patent for search and examination.
- 6) **Virgin Innovation Detector** is a software tool which may detect whether a newly drafted research paper/ Patent has a virgin originality to merit publication / grant of Patent and is not covered under existing science and technology Prior-Art.
- 7) **Patent Vulture 1.0** is a Software Tool to catch immoral / illegal patents and Business Method Patents in the Indian Patents being Gazetted for Opposition.

C) Copyrights Applied:

- 1) **RoboCAM 1.0** is a software tool which provides a multi client video conferencing facility for text chat, display of other users registered through a secure login storage database and viewing of own's camera feed etc.
- 2) **Lekhok** is a software tool which provides the writing capability to Hoap-2. Using which the user just needs to enter some text and this will be written by the Hoap-2 on the board with a pen in its hand.

Prof. U.S. Tiwary
Professor



Reference Book in Information Science (Edited)

- Speech, Image and Language Processing for Human Computer Interactions; Multi-Modal Advancements, 320 pages, IGI Global, USA, 2012, ISBN: 97814666009549, EISBN: 9781466609556

Book Chapters

- Uma Shanker Tiwary & Tanveer J. Siddiqui, "Working Together with Computers: Towards a General Framework for Collaborative Human Computer Interaction", Speech, Image and Language Processing for Human Computer Interaction: Multi-Modal Advancements, U.S. Tiwary & Tanveer J. Siddiqui (Eds.), IGI Global, 2012, pp. 20-41
- Tanveer J Siddiqui & Uma Shanker Tiwary, " Issues in Spoken Dialog Systems for Human Computer Interaction", To appear in U.S.Tiwary & Tanveer J. Siddiqui (Eds.), Speech, Image for Language Processing for Human Computer Interaction: Multi-Modal Advancements, U.S. Tiwary & Tanveer J. Siddiqui (Eds.), IGI Global, 2012, pp. 128-148

Publications of Articles/ Research Papers

- Gyanendra K. Verma, Uma Shanker Tiwary, Mahendra K.Rai: Facial Emotion Recognition Using Different Multi-resolution Transforms. Advances in Computing and Communications, Communications in Computer and Information Science, 2011, Volume 192, Part 3, 469-477, Springer, DOI: 10.1007/978-3-6
- Anupam Srivastava, Divij Vaidya, Malay Singh, Pranjal Singh, U.S. Tiwary: A Cognitive Interactive Framework for Multi-Documents Summarizer, Advances in Intelligent Systems and Computing, Springer, Volume 179, 213, pp 257-268; ISBN: 978-3-642-31602-9; Proceedings of the Third International Conference on Intelligent Human Computer Interaction (IHCI 2011), Prague, Czech Republic, August, 2011

Publications of Seminars/ Workshops

- National: Winter School on Statistical Estimation and Modeling: Topics on Least Square Methods, I11-

Conditioned Inverse Problems in Imaging, Natural Language Processing & Information Retrieval, and Speech International: Organized as Co-Chair and Delivered Invited Lectures.

Work done in Projects undertaken in the Institute

- FIST Project (Funded by DST, Govt. of India) for HCI: Several B.Tech and M.Tech. Students have done projects in the state of the art areas of Human Computer Interaction.

Research & Development

- Actively involved in the state of the art research in the areas of Computer Vision, Object and Human Tracking, Understanding Medical Images, Speech and Language Recognition, Text and Spoken Document Retrieval, Word Sense Disambiguation, Multimodal Information Extraction, Human Emotion Recognition, Eye and Head Tracking, Human Computer Interaction, etc. Five publications as mentioned above in these areas.

Particulars of Academic Work during the Year

- Design and Analysis of Algorithms
- Cognitive Science and Cognitive Process Modelling, Supervised 5 M.Tech Thesis, One Ph.D. student.

Extra-Curricular activities

Organized one international conference:

- Co-Chair: Third IEEE International Conference on Intelligent Human Computer Interaction, August 2011, Prague, Czech Republic.

Awards/Honours/Recognition

- Member, Executive Committee, IEEE UP Chapter at IIT Kanpur; Senior Member IEEE

Any other Achievements

- Reviewed paper for IEEE journals and conferences and has contributed in several ways for the generation and propagation of Knowledge in general.

Dr. Sudip Sanyal
Professor



Academic Achievements of the year 2011-2012

Brief Particulars:

Dean (Academic) till 26th September 2011

Member (BOG)

Member (Senate) / Member (Academic Council)

Publications during the year (2011-2012):

Measuring document similarity with Information Retrieval techniques, Multimedia Information Extraction and Digital Heritage Preservation, published by World Scientific, Chapter 10, pp.261-280, (2011)

Publications of Articles / Research Papers in Journals / Magazines:

b. International Journals

1. Extraction of Relevant Figures and Tables for Multi-document summarization, Springer Lecture notes in Computer Science 7182, pp. 402-413, (2012)

Participation in Seminars / Workshops / Conferences / Symposiums etc. during the year (Apr'2011-Mar'2012)

a. International

1. Segmenting long Sentence Pairs to Improve Word Alignment in English-Hindi Parallel Corpora, 8th International Conference on Natural Language Processing (Kanazawa, Japan), (2012)
2. A Hybrid Approach for Word Alignment in English-Hindi Parallel Corpora with Scarce Resources, International Conference on Asian Language Processing, Hanoi, Vietnam, (2012)

Work done in Projects undertaken in the Institute (Apr '2011-Mar'2012)

- Development of robust document analysis and recognition system for Indian Scripts – Nepali and Tibetan (consortia project, funded by MCIT, New Delhi).
- Annotation of Tibetan text completed and Initial version of the OCR submitted for testing. Results of error reports being investigated. Work on HoG based classification has been initiated and work on nearest neighbor based classifier and stroke based classifier started. Creation of confusion matrix based on the current OCR

Research & Development

a. R & D Activities / Inventions, if any (give only names and brief relevant particulars in support)

Initial version of the software of robust document analysis and recognition system for Tibetan is completed

Particulars of Academic Work during the year

- Information Retrieval (B.Tech. & M.Tech)
- Computational Intelligence (M.Tech)
- Patterns in software design (M.Tech)
- Programming Practices (B.Tech)
- Distributed Systems (B.Tech & M.Tech.)

Extra-Curricular activities (Apr'2011-Mar'2012)

Member of the organizing committee of the 4th Science Conclave

Awards / Honours / Recognition received

Software development category- Best Verifiability, Reproducibility & Working Description award, CICLING 2012

Any other Achievements / Distinctions not included in the above

Resource person for UPSC

Prof. Om Prakash Vyas
Professor



Academic Achievements of the year 2011-2012

- Invited by Director General of 'National Institute of Informatics-Tokyo (Japan)' as Visiting Researcher to pursue collaborative research in 'Linked Open Data Mining'-resulted into joint guidance of IIIT-A Students with reputed Japanese Professors for high quality research work.
- Contributed as Professor Incharge (Doctoral Research Section) in many policy initiatives of IIIT-A for inculcating research culture.

Publications during the year (2011-2012):

Names of Books published

- Book chapter "An Investigation on Protocols for Wireless Sensor Networks" in Taylor & Francis publication "Wireless Sensor Networks: Current Status and Future Trends" (published by CRC Press, USA)

Publications of Articles / Research Papers in Journals / Magazines:

List of Publications:-

1. P. Manu, B. Rudra, B. Reuther, and O. P. Vyas. 'Design and Implementation Issues of Flexible Network Architecture'. International Conference on Computational Intelligence and Communication Networks, pages 283-288, Oct, 2011.
2. Sunita Soni, O.P.Vyas, 'Performance Evaluation of Weighted Associative Classifier in Health Care Data Mining and Building Fuzzy Weighted Associative Classifier' PDCTA 2011, CCIS 203, pp. 224-237, 2011. © Springer-Verlag Berlin Heidelberg 2011
3. S. Pramod, O.P.Vyas "Data Stream Mining" Springer Lecture Notes of Electrical Engineering Vol. 150 (ISSN 1876:1100) 2012.
4. Jyothi Pillai, O. P. Vyas, Maybin Mueyba: HURI - A Novel Algorithm for Mining High Utility Rare Itemsets. ACITY (2) 2012: 531-540
5. S. Pramod, O. P. Vyas: Recent frequent itemsets mining over data streams. CCSEIT 2012: 484-489

6. Bhawana Rudra, A. P. Manu, and O. P. Vyas. Service Authentication Codes (SAC) for Emerging Network Architectures. International Journal on Recent Trends in Engineering and Technology. 6(1), pages 61-64, July, 2010.
7. Jyothi Pillai, O.P. Vyas, High Utility Rare Itemset Mining (HURI): An approach for extracting high-utility rare item sets, published i-manager's Journal on Future Engineering and Technology (JFET), Volume 7, 2011.
8. Kavita Das, O.P. Vyas, 'A Conceptual Model for Website Personalization and Web personalization'. International Journal of Research and Reviews in Information Sciences(2046-6439) Volume1- No.4, December 2011.
9. AP Manu, Bhawana Rudra, Vipin Kumar, O P Vyas. 'SOA Based Broker's Communication for Flexible Network Architecture', In International Journal of Computer Science Engineering and Information Technology Re-search (IJCNWMC), 2012.
10. Hardikkumar Shah, A. P. Manu, B. Rudra, B. Reuther, and O. P. Vyas. 'Implementation of Congestion Control Mechanism using SOA for Future Internet', Accepted in International Journal of Computer Engineering Research (IJCER), 2012.

Work done in Projects undertaken in the Institute

- The ATB (Army Technology Board) Research project with MCTE- Mhow for development of "Network Simulation Testbed" coordinated under the guidance of Hon'ble Director.
- One Indo German Project under 'Max Planck Center for Computer Sciences' got approved by German side (under review process by Indian side)- facilitating the exchange of scientists between IIIT-A & Germany.

Particulars of Academic Work during the year

- Coordinated activities of M.Tech (Software Engineering)
- Taught Semester courses in M.Tech.(SE) and B.Tech. Courses in IIIT-A and RGIT Amethi campuses.
- Guided 05 Ph.D. and 05 M.Tech. Theses.

Extra-Curricular activities (Apr'2011-Mar'2012)

- Served as Chairman/Member of various organizing Committees in 'Science Conclave of Noble Laureates'2011.
- Reviewer of many International Conferences and Journals.

a. Awards / Honours / Recognition received, if any- National level:

- Expert member in Faculty Selection Committee of Central University of Mizoram.
- Ph.D. Theses examiner for BITS Pilani, Anna University Chennai & Board of Studies Member of Central University GGU Bilaspur (CG)

- b. International level: **Worked as Visiting Researcher at NII Tokyo-Japan [Oct. 2011]**

Training Programmes Organized

(a). In-Campus Training Programmes

- Organized *first compulsory credit course on 'Research Methodology'* for Institute Ph.D. scholars as Prof. incharge (Doctoral research section).

(b). Off-Campus Training Programmes

Any other Achievements / Distinctions not included in the above-Specify in brief

- Delivered invited Lecture at Workshop in MNIT Allahabad.

Prof. G.N. Pandey
Adjunct Professor
IIIT-A & Ex-VC, JRH University, Chitrakoot



Publications during the year

1. "Studies of E Governance in India Using Data Mining perspective" Journal of computing, volume 2, issue 10, October 2010, ISSN 2151-9617, <https://sites.google.com/site/journalofcomputing>
2. "Implementation of Data Mining and Data Warehousing In E-Governance". International Journal of Computer Applications 9(4):18-22. Published By Foundation of Computer Science
3. Knowledge management in E-Governance, Selected for publication in Journal SCI, USA, Dr. M.D. Tiwari, Dr. G.N. Pandey & Mr. S.K. Singh

Publications during previous years

13 papers and 14 books published in earlier years.

Participation in

Seminars/Workshops/Conferences/Symposiums etc. during the year

1. Sonali Agarwal, G.N. Pandey, M.D. Tiwari "Data Mining in Education: Data Classification and Decision Tree Approach" Proceedings of IC4E 2011, NMITD, Mumbai.
2. Sonali Agarwal, Divya, G.N. Pandey, "SVM Based Context Awareness Using Body Area Sensor Network For Pervasive Healthcare Monitoring" Proceedings of IITM 2009, IIIT-Allahabad, India.

Participation during previous years - 08

Work done in projects undertaken in the Institute

1. Discovery Park, DST, Government of India, New Delhi as Co-investigator (under process).
2. Development of Process Automation Centre, Ministry of Petroleum and Natural Gas (under process) 2008-2012.

Particulars of Academic Work during the year

Ph.D. Supervision

1. Dr. Sonali Agarwal (Studies on E-Governance in India using Data Mining Perspective) – Awarded
2. Ms. Savita Nigam (Studies on Diffusion Through Liquid) – Under submission
3. Dr. B.L. Tripathi (Studies on Isolation and Characterization on Protein from Seed Cakes – Under submission
4. Mr. Ajai Nigam (Studies on Diffusion through Liquids – II) – Under submission

Subject taught in last year

M.Tech in the year 2011 (third Semester) – Green ICT, ERP

B.Tech in the year 2011 (seventh Semester) – Green ICT

Awards / Honours / Recognition received

He is Reviewer of the following Journals:

- i. Indian Journal of Technology
- ii. Indian Chemical Engineers
- iii. Journal of Environmental Health
- iv. Journal of Environmental Biology

Recognition

- i. Member, ACM Foundation
- ii. Fellow, Indian Institution of Chemical Engineering, Ex-Chairman / Hon'ble Secretary, Kanpur Regional Centre
- iii. Fellow of American Society of Mining Engineers, Petroleum Engineering Division (USA)
- iv. Member, American Institute of Chemical Engineering (USA)
- v. Fellow, Institute of Engineers (India). Served as Member Executive Committee, Uttar Pradesh, Centre Institution of Engineers (India) and Kanpur Sub-Centre
- vi. Fellow, Indian Social Science Academy, India

Any other Achievements / Distinctions not included in the above

1. IOCL, Indian Oil, as Co-investigator (under process), 2011
2. Telemedicine, ITRA – Information Technology Research Academy,

Teaching & Research Areas

Environmental Engineering, Transport Phenomena, Unit operations, Thermodynamics, Chemical Engineering, Petroleum Refinery Engineering and Petrochemicals, advanced Fluid Mechanics, Heat Transfer, Oil Technology and Mass Transfer, and Food Technology, Information Technology, Information Systems, System Analysis and Design, e-Governance, Enterprise Resource Planning, Data Ware House and Data Mining etc.

Research and Ph.D. Guidance

Supervised 27 research schemes, guided about 24 Ph.Ds written 20 books, and published 216 research and technical papers.

Visits Abroad

Visited U.S.A., CANADA, U.K., FRANCE, BELGIUM, HOLLAND, GERMANY, SWITZERLAND, NEPAL, ITALY, CHINA, THAILAND, HONGKONG, POLAND, ETC.

Prof. M. Radhakrishna

Professor & Divisional Head, Electronics



Teaching & Research Areas

Physics, Electronics, Instrumentation, and a variety of courses in Computer science and Engineering at UG and PG levels.

Research Experience

Researches in the areas of Nuclear Physics, Solid state Physics, Instrumentation, Analog, digital and Hybrid computer based Simulations, Computer Architecture, Artificial Intelligence, Digital systems, Computer Networks, Educational computing over a period of 42 years.

Major Accomplishments

Published more than 60 papers, 3 unpublished reports (at TNO, Delft) and two books Guided Doctoral work. Member of a number of National level Committees of DOE (Currently MIT), MHRD, and AICTE during 1985 and 1996 Adviser to Computer Maintenance Corporation around 90-93 Advisor to a number of Universities and Engineering Colleges in India and abroad. Taught / conducted researches at a number of prestigious universities and laboratories in India and Abroad.

Current Areas of Research Interest

Artificial Intelligence, Intelligent Systems, Digital Design, Embedded Systems, Machine Vision, Computer Based Instrumentation and Control, Automation, Computer and Sensor Networks, Computer Based Instructional Systems, Cognitive Sciences, Modeling and Simulation

Prof. B.R. Singh **Professor**



Publications during the year

- The impact of Channel Engineering on short channel effects in Nano Fin FETs Riti Kumari, Manish Goswami and B.R.Singh International Journal of Nano Science Vol.11, No.1 2012
- Design and simulation of low-g single axis SOI-MEMS capacitive Accelerometer; Hari Kakara, Manish Goswami and B.R.Singh International Journal of Contemporary Research in Engg. & Tech., Vol.2, No.1, pp63-69, 2012
- Analysis of leakage current in extremely scaled HfO₂ gate stack deposited by ALD Savita Maurya S.Rigante, A.M.Ionescu, M.Kayal, B.R.Singh and M.Radhakrishna, Thin Solid Films (Under Review)
- Optimization of short channel effects in sub 40nm bulk MOSFET using halo doping Akansha Bansal, Manish Goswami and B.R.Singh IEEE student conf. on Engineering systems, MNIT, Allahabad, 2012

Research & Development

- Actively involved in setting up a VLSI fabrication and characterization laboratory to carry out training and R&D work in the area of VLSI, High K Dielectrics, Sensors and MEMS
- Design of low g single axis SOI MEMS accelerometer
- Process optimization for VLSI/MEMS Technology
- Modeling and simulation of nano MOSFETs.

Particulars of Academic Work during the year

Taught courses on

- Advanced VLSI Devices and Technologies (M.Tech.IISem)
- MEMS (B.Tech VII & M.Tech III Sem)
- EDC Lab. (B.Tech. II Sem)

Awards / Honours / Recognition received

- Member: Project Review and Steering Group in Photonics Switching, Multiplexing and Networking Programme MCIT, New Delhi
- Chairman: PRSG Constituted by MCIT, New Delhi on Nano Technology

Any other Achievements / Distinctions

- Dean (Academics) (during the period)

- Professor Incharge Examinations
- Member: Board of Management

Dr. Anupam Agarwal
Associate Professor & Chief Proctor



Academic Achievements of the year 2011-2012

- * Served as Chairman of ACM IIIT Allahabad Chapter
- Prepared & submitted a joint INDO-UK project proposal in collaboration with University of Strathclyde, UK in 2011 which has been approved subsequently by the RCUK and DST in 2012 (It was ranked in the top 5, of 25 applications).
- Served as Chairman of CSI Allahabad Chapter

Publications during the year (2011-2012):

List of Publications in Refereed Journals (2011-2012)

1. Siddharth S. Rautaray and Anupam Agrawal, "Vision based Hand Gesture Recognition for Human Computer Interaction: A Survey", In Artificial Intelligence Review (**AIR**), Springer Netherlands, pp 1-56, 2012. (Impact Factor:1.213)
2. Siddharth S. Rautaray and Anupam Agarwal, "Real Time Hand Gesture Recognition System for Dynamic Environment," In International Journal of UbiComp (**IJU**), AIRCC Pub., Vol.3, No.1, pp. 21-31, 2012.,
3. Siddharth S. Rautaray and Anupam Agarwal, "Real Time Multiple Hand Gesture Recognition System for Human Computer Interaction," In International Journal of Intelligent Systems and Applications (**IJISA**), MECS Pub., Hong Kong, Vol. 4, No. 5, pp. 56-64, 2012.
4. KN Mishra, PC Srivastava, Anupam Agarwal et al., "A Framework Towards Using Eigen Iris, Minutiae Thumb and DNA Sequence Features for Personal Identification," International Journal of Information Acquisition (**IJIA**), World Scientific Pub., Vol, 08, No.03, Sept 2011, pp. 197-225. (Impact Factor: 1.084)
5. Siddharth S. Rautaray and Anupam Agrawal, "Vocabulary based Gesture Recognition System (VGRS): Design and Application", In International Journal of Image Processing and Applications". International Journal of Computer Applications (**IJIPA**), 2(1), pp. 119-125, 2011.
6. Siddharth S. Rautaray and Anupam Agrawal, "Real Time Hand Tracking System for Interactive Applications." International Journal of Computer Applications (**IJCA**), FCS (USA), 18 (6): 28-33, 2011.
7. K.N. Mishra, Anupam Agrawal et al., "An Efficient Eigen Values Based Technique for Online Iris Image Compression and Identification," International Journal of Information Acquisition (**IJIA**), World Scientific

Publishing, ISSN: 0213-8789, Vol. 8, No.2, pp. 133-152, 2011. (Impact Factor: 1.084).

Participation in Seminars / Workshops / Conferences / Symposiums etc.

List of Publications in Refereed Conferences (2011-2012)

1. Piyush Kumar, Siddharth S. Rautaray and Anupam Agrawal, "Hand Data Glove: A New Generation Real-Time Mouse for Human-Computer Interaction," 1st Intl. Conference on Recent Advances in Information Technology (**IEEE RAIT 2012**), ISM Dhanbad, 15-17 March, 2012, pp. 333-338.
2. Siddharth S. Rautaray, Anand Kumar and Anupam Agrawal, "Human Computer Interaction with Hand Gestures in Virtual Environment," In Perception and Machine Intelligence (**Springer PerMin'2012**), Jan 12-13, 2012, CDAC, Kolkata, LNCS 7143, pp. 106-113.
3. Sarvesh Vishwakarama and Anupam Agrawal, "Representing Feature Quantization approach using Spatial-Temporal Relation for Action Recognition", 1st Indo-Japan Conference on Perception and Machine Intelligence (**Springer PerMin'2012**), 12-13 January, 2012, CDAC, Kolkata, LNCS 7143, PP. 98-105.
4. Siddharth S. Rautaray and Anupam Agrawal, "Design of Gesture Recognition System for Dynamic User Interface," In IEEE International Conference on Technology Enhanced Education (**IEEE ICTEE 2012**), Amrita Vishwa Vidyapeetham, Kerala, Jan 3-5, 2012, pp.1-6.
5. Siddharth S. Rautaray and Anupam Agrawal, "Interaction with Virtual Game through Hand Gesture Recognition," In International Conference on Multimedia, Signal Processing and Communication Technologies. (**IEEE IMPACT 2011**), AMU, Aligarh during Dec 17-19, 2011.
6. Sarvesh Vishwakarma and Anupam Agrawal, "An Novel Approach for Feature Quantization using One-dimensional Histogram," In **IEEE INDICON 2011**, 16-18 Dec'. 2011, BITS Pilani, Hyderabad Campus, pp.1-4.
7. Siddharth S. Rautaray and Anupam Agrawal, "A Framework for Design and Development of Gesture Recognition System in Complex Environment," Research Proposal presented at Ph.D. Scholars' Colloquium in 46th **CSI** Annual National Convention 2011, Ahmedabad, during Dec1-3, 2011, pp.90-91.
8. Sarvesh Vishwakarma and Anupam Agrawal, "Framework for Human Action Recognition using Spatial Temporal based Cuboids," IEEE Int. Conf. on Image Information Processing (**IEEE ICIIP 2011**), 3-5 Nov. 2011, Shimla, India, pp.1-6.
9. Sarvesh Vishwakarma, Akshay Sapre and Anupam Agrawal, "Action Recognition using Cuboids of Interest Points", IEEE Int. Conf. on Signal Proc., Communications and Computing, Xi'an, China (**IEEE ICSPCC 2011**), Sept 14-16, 2011, Xi'an, China, pp.1-6.
10. Siddharth S. Rautaray and Anupam Agrawal, "Hand Gesture Recognition in Virtual Environment", In

Proceedings of International Conference on Issues and Challenges in Networking, Intelligence and Computing Technologies (ICNICT' 2011), CSI-Ghaziabad Chapter, during Sept 2-3, 2011, pp. 44-49.

11. Siddharth S. Rautaray and Anupam Agrawal "Manipulating Objects through Hand Gesture Recognition in Virtual Environment", In Advances and Parallel Distributed Computing (**Springer PDCTA 2011**), CCIS-203, Tirunelveli, India, Sept 23-25, 2011, pp.270-281.

Work done in Projects undertaken in the Institute

- DST's FIST project: carried out project developments related to Gesture-Recognition & HCI using HMD, VR Data Gloves as well as Eye-tracking equipment.
- As PI of INDO-UK project, carrying out project development on "Distributing Industrial Optimizations Tasks to Rural Worker" in collaboration with the UK PI at the University of Strathclyde, UK.

Research & Development

- Activity involved in setting up the "Interactive Technologies & Multimedia" Lab at IIITA to carry out training and R&D in related areas.
- Development of Computer Vision algorithms in areas such as Gesture Recognition, Biometric Identification, Soft-Computing, HCI and Surveillance etc.
- Development of GPU-Accelerated Vision and Visualization/Animation Algorithms.

Particulars of Academic Work during the Year

- Human Computer Interaction (B.Tech IT Vth Sem)
- Image Processing (B.Tech. IT & EC Vth Sem)
- Advanced Graphics & Animation (M.Tech. IT HCI IIrd Sem)
- Principles of Interaction Design (M.Tech . IT HCI Ist Sem)
- Virtual Reality (M.Tech. IT HCI IIIrd Sem)
- Compiler Design (B.Tech. IT VIth Sem)
- Supervised approx. 40 undergraduate projects
- Supervised 06 M.Tech projects
- Supervising 3 PhD Students
- Served as Chairman of B.Tech. Project Evaluation Board.

Extra- Curricular Activities

- Contributed in Organizing the Foundation Day on 31st July' 2011 and the annual function "Effervescence 11" during September 26-30, 2011.

Awards/ Honours/ Recognition

- Conferred honour of 'Distinguished Academician' by United Group of Institution, Allahabad in 2012.
- Certificate of appreciation: Overall In-charge of Security Committee during 4th Science Conclave, 2011 at IIIT Allahabad
- Delivered a lecture on "Gesture-based HCI" under CSI Allahabad Chapter, October 10, 2011.
- Chairman: ACM SIGCHI Chapter at IIIT-A

International level

- Invited Reviewer of Int. Journals: IEEE Trans. On GRS; Int. J.RS and Int. J.GIS (Taylor & Francis), Journal of Supercomputing (Springer), "Sensors" journal (MDPI) and others.
- Invited Reviewer of International Conferences: IEEE IGARSS, ACM COMPUTE and others.

Training Programs/Workshops Organized

- (a) In-Campus Training Programs
 - Organized Technical Lectures under the ACM Chapter at IIITA (While serving as its Vice-Chairman).
- (b) Off-Campus Training Programs
 - Organized a National Conference on "Advanced Computing Techniques in Science & Technology" (UNICON-2012) at UCER Campus, Allahabad during 17-18 Feb' 2012 under the banner of CSI Allahabad Chapter (While serving as its Chairman)
 - Also organized students' Competition and technical Lectures under the CSI, Allahabad Chapter.

Any other Achievements

- Chief Proctor at IIIT Allahabad: Carried out several assignments related with Discipline and Anti – ragging.

Dr. Anurika Vaish
Associate Professor
& Divisional Head (MBA-IT/MSCLIS)



Publications-International Journal

1. Sustaining Environment & Organization through e-Waste Management: A Study of Post Consumption Behavior for mobile phone industry in India, International Journal of Logistics and Systems Management (in press).
2. Retail Ownership Influences on Consumer Buying Preference An Empirical Study of Indian Consumer Arabian Journal of Business & Management, American University of Kuwait Volume 1, Number 9, 2012, Page 106-115
3. Analysis of Accounting Models to Detect Duplicate Requests in Web Service, Journal of King Saud University, Journal of King Saud University - Computer and Information Sciences, IN PRESS, 2012
4. Lip Print Recognition for Ssecurity Ssystems: An Upcoming Promising Biometric Solution Computer Science Journals, CSC Journals, Kuala Lumpur, Malaysia, Volume 5, Issue 2, 2011
5. Gap Analysis : an approach towards meaningful service delivery for improved customer satisfaction by banks in North India, International Journal of Indian Culture and Business Management , Inderscience Publishers, Volume 4, No. 6, 2011, Page 685-697

6. Integrated & Individual Approach of Measuring Market & Credit Risk, Amity Management Review, Amity, India, Vol-1, Number-2, 2011, Page 19-24

7. Media Mix: A Pragmatic Solution for Advertising Complexities, International Journal of Management Practice, Inderscience Publishers, Vol 04, No. 04, 2011, Page 345-359

8. Artificial Immune System based mobile agent platform protection is in revision in International Journal on Computer Standard and Interfaces, Elsevier Standards (In Revision)

National Journal

1. Does Loan Loss Provision Signal Income Smoothing? - An Empirical Investigation of Indian Banking Industry", The IUP Journal of Accounting Research & Audit Practices, Vol 11, No.2.

2. Sectoral Imbalance in an Economy : A Cause and Effect Based Study with Focus on Rural to Urban Migration, Invertis Journal of Management Invertis group of Institutions, India, Volume 4, Number 1, 2012, Page 61-67

International Conference

1. Implementation of ISO 27001 in Indian Scenario: Key Challenges, International Conference on Recent Trends of Computer Technology in Academia (ICRTCTA 2012), JRN RV University, Udaipur, April 21-23, 2012
2. ICT Based Financial inclusion: Challenges and recommendation, International conference on frontiers in infrastructure finance, IIT Kharagpur, December 29-30, 2011, Planning Commission GOI & Council of Scientific and Industrial Research
3. Performance Analysis of Enhanced Mobility Model in Cloud Computing, International Conference on Recent Trends in Information Technology, ICRTIT 2011, Madras Institute of Technology, Anna University Chennai, June 3-5, 2011 IEEE
4. Secure DHCP with Inter-Domain Roaming, International Conference on Computer Applications and Network Security (ICCANS 2011), University of Florida & IEEE Computational Intelligence Society, May 27-29, 2011, IEEE
5. Demystifying Reality of Carbon Markets: A Cause & Effect Study, International Journal of Climate Change Strategies and Management, Civil Engineering Department, Universitas Sebelas Maret, Indonesia, February 22, 2011, UNS-Solo

Books/ Book chapters

1. Mobile Agent based Multimedia content discovery in
Book titled : Ubiquitous multimedia & Mobile Agents-

Models & Implementations edited by Susmit Bagchi-IGI Publishers, U.S.A 2011-978-1-61350-107-8

Edited Books

1. M.D. Tiwari, Anurika Vaish (2012) Green Energy, River Publishers, ISBN: 978-87-92329-41-7.

Article

1. Empathy directly perceived Psychology of Empathy, Nova Publishers- Page 251-256, 2011.
2. Content Dissemination through ICT-Distance education Perspective, UPRTOU, Allahabad
3. Energy Efficient Content delivery over Internet, RGIIT, Amethi, 2011

Copyright

WISCOM ver. 1.0" - The web-based information system using content object modeling. It is a Prototype deployment and testing for content creation and content dissemination modules using live data from internet for content aging and on-the-fly auto filtering of obsolete content from the delivery over internet and awarded

Presentation

"Green web: The energy efficient content delivery platform", National seminar on Green Energy & ICT: Solar Energy Empowerment of Rural India, RGIIT, Amethi, August 20-21, 2011

Work done in Projects undertaken in the Institute

1. Co-investigator in the IT& ITES Project - **Completed**
2. Co-PI in the NME Project - **Completed**
3. Member in Development of neuron like detection filters image identifications - **Completed**
4. PI- Setting up a Centre for Cyber Security Research & Standard Development for Children - **Ongoing**
5. Coordinator of the ISEA Project - **Ongoing**
6. India -UK Collaborative Research initiative in (Bridging the urban & rural device) distributing industrial optimization costs to rural workers - **Ongoing**

Research & Development

- ✓ Designing Global Content Delivery Platform for Efficient Knowledge Creation and Dissemination
- ✓ Organized Retailers ordering policy for perishable food items
- ✓ A study on sustaining Environment & climate in profitable ventures through supply chain management
- ✓ International Accounting - Standard - especially on the Indian banking sector or industry
- ✓ Financial Inclusion

Particulars of Academic Work

Classes/subjects taken

MBA -1st semester (2011) July – December

- ✓ Managerial Economics-30 (02 credits)

MBA -3rd semester (2011) July – December

- ✓ Operations & Strategic Cost Management- 30 (02 credits)

B Tech-1st semester (2011) July – December

- ✓ Communication Skill-30 (02 credits)

MBA -2nd semester (2012) Jan - June

- ✓ Cost & Management Accounting (02 credits)

B Tech-4th semester (2012) Jan – June

- ✓ Business Systems (03 credits)

Extra-Curricular activities

- ✓ Organized Foundation day on 12th August, 2012
- ✓ Organized the Annual Cultural cum Technical Fest “Effervescence MMXI” held at IIITA

Awards / Honors / Recognition

- ✓ Awarded as the best “B school” with an engineering college in the government category by Star news in the year 2011.
- ✓ Amar Ujala B-School Excellence Award in the year 2012 for B-Schools with Industry related curriculum in Information Technology Endorsed by BSA and WEC.

Training Programs / outreach Organized

- ✓ India Africa training program on Technological Innovation for Capacity Building under India-Africa Forum Summit held from 15th October to 3rd November, 2012
- ✓ 4th Science Conclave: A Congregation of Noble Prize Winners organized at IIITA from December 8-14, 2011

Any other Achievements

1. Member of ACM
2. Member of CSI
3. Member of AIMA
4. Member of Association of Business Schools

Dr. Shekhar Verma
Associate Professor



Publications during the year

- Infrastructure aided Privacy Preserving-Authentication in VANETs; International Journal of Multimedia and Ubiquitous Engineering; Science & Engineering Research Support Society Publication, Vol. 6, No. 2, Year 2011, 41-54

- Conditional Privacy through Ring Signature in Vehicular Ad-hoc Networks; Transactions on Computational Science; Springer Publication, Vol. 13, 2011; Year 147-156
- Neural Network Based Lane Change Trajectory Prediction in Autonomous Vehicles; Transactions on Computational Science; Springer Publication; Vol. 13, 2011, 125-146
- Lane Change Trajectory Prediction using Artificial Neural Network; International Journal of Vehicle Safety (IJVS); Inderscience Publication, Article in Press, 2011
- Evaluating the Practicability of Multivariate Cryptosystems for WSN; International journal on Internet Technology and Secured Transactions (IJITST); Inderscience Publication, Article in Press, 2011

Participation in Seminars / Workshops / Conferences / Symposiums etc.

- b. International - WCSN 2011
- Neural Network Based Lane Change Trajectory Predictions for Collision Prevention; Computational Intelligence and Communication Networks (CICN-2011), MIR Labs, Gwalior (M.P.), 7-9 Oct. 2011, IEEE
 - SVM Based Trajectory Predictions for Lane Changing Vehicles; Computational Intelligence and Communication Networks (CICN-2011), MIR Labs, Gwalior (M.P.); 7-9 Oct. 2011, IEEE
 - Enhanced SDMA for VANET Communication; Advanced Information Networking and Applications Workshop (WAINA-2012); Fukuoka Institute of Technology, Japan; 26-29 March 2012, IEEE
 - Feasibility of Rainbow Signature for Broadcast Authentication in Sensor Networks, IEEE Vehicular Technology Conference, Budapest, Hungary, 15-18 May 2011, IEEE
 - *Comparison of MAC Layer Performance of Reactive and Proactive Protocols for different Mobility Conditions in WSN; International Conference on Parallel, Distributed Computing technologies and Applications (PDCTA-2011), Tirunelveli, India, 23-25 Sep. 2011, Springer*
 - Performance Evaluation of AODV for Different Mobility Conditions in WSN; IMPACT-2011, AMU, Aligarh (U.P.); 17-19 Dec. 2011; IEEE

Particulars of Academic Work during the year

Class	Semester	Course Taught
B.Tech VII	2011 Odd	Cryptography & Information Security
M.Tech I M.Tech III	2011 Odd	Topics in Wireless Algorithms Cryptography & Information Security
B.Tech VI	2011 Even	Mobile Intelligent Networks
M.Tech II	2011 Even	Mobile Intelligent Networks TCP for Wireless
M.Tech II B.Tech VI	2012 Even	Wireless Network Protocols Storage Technology and Networks

Dr. Shirshu Varma
Associate Professor



Publications during the year

- **Distributed Computing Paradigms for CSIP in Wireless Sensor Networks: A Comparative Review-** Journal of Computational Intelligence and Electronic Systems (Communicated)-Mar. 2012
- **Collision-Free Time Synchronization for Multi-hop Wireless Sensor Networks-**Computational Intelligence and Electronic Systems (Communicated)-Feb. 2012

Work done in Projects undertaken in the Institute

- DST-Methods for compensation and localization of interferences in ultra wideband wireless sensor networks-2009-11, (Completed)
- DST-Disaster Management System for large scale deployment of sensor network using a fault tolerant mechanism – 2011-14, (In Progress)

Research & Development

- b. Patents accepted / filed (Reference)–
No. of Patent Applied:01
“Non-Redundant Data Dissemination Protocol for Wireless Sensor Networks”(Indian)

Particulars of Academic Work during the year

- Wireless Sensor Network
- Mobile Communication
- Wireless Network and Security

Extra-Curricular activities

- Faculty– in – Charge, Library, IITA
- Member, Purchase Committee, IITA

Dr. T. Lahiri
Associate Professor



Publications during the year

a. **National Journals:** Nil

b. **International Journals:** Exploring geometric properties of gold nanoparticles using TEM images to explain their chaperone like activity for citrate synthase, Bioinformation. Vol. 7(7), pages 320–323, 2011, December 10.

(Please give only the title of articles/papers and names of the journals in which published)

Participation in Seminars / Workshops / Conferences etc.

a. National: “Importance of psychometric studies for overall improvement of society”, Vision 2035 for Technology Information Forecasting Assessment Council (TIFAC), held on 20th May 2011 at IT-BHU, Varanasi.

b. International: Nil

Work done in projects undertaken in the Institute: ICMR project which has been started in February, 2010.

Aims and objectives of the project:

- To develop a low cost, simple and fast computer-aided microscopic tool to study the correlation of protein aggregate parameter with the surface profile of a protein, Surface Roughness Index (SRI).
- Finding active site of a protein of concern from its SRI measure without the help of prior structural knowledge from X-Ray Crystallography or other such structure determination methods so as to help better drug design.
- To find out the structural discriminatory property of pathologically significant proteins which cause disease by their aggregation.

Patents accepted / filed

i). Indian: “Design of protein-marker using multifractal property of microscopic image of heat-denatured protein aggregate”, submitted to Prof. R.C. Tripathy, in-Charge for this matter at IIIT, Allahabad on June 10, 2008 and yet to be informed about its status.

Particulars of academic work

Class	Year & Semester	Subjects taught	Input (as understood)
M.Tech. in IT(Specialization in	2011, 2 nd Semest	Molecular Structure Prediction	Slides, theory, quiz and

Bioinformatics)	er	and Visualizati on	tutorial questions, lab and term paper assignmen ts
B.Tech. in IT	2011 4 th Semest er	Operation Research and optimizati on Technique s	Slides, theory, quiz and tutorial questions, lab assignmen ts
M.Tech. in IT(Specializat ion in Bioinformatics)	2011, 3 rd Semest er	Molecular Structure Prediction and Visualizati on (Advance level)	Slides, theory, quiz and tutorial questions, lab and term paper assignmen ts
B.Tech. in IT	2011 7 th Semest er	Systems Modelling and Simulation	Slides, theory, quiz and tutorial questions, lab assignmen ts
M.Tech. in IT(Specializat ion in Bioinformatics)	2012, 2 nd Semest er	Biological databases	Slides, theory, quiz and tutorial questions, lab and term paper assignmen ts,
B.Tech. in IT	2012 4 th Semest er	Operation Research and optimizati on Technique s	Slides, theory, quiz and tutorial questions, lab assignmen ts

Awards/Honours/Recognition

b) International level:

- i) Nominated as member of American Chemical Society
- ii) Received offer to review article from following journals,

“Transactions on Biomedical Engineering” on May 6, 2011,
 “Recent Patents on Electrical Engineering” on July 21, 2011
 “Science Journal of Medicine & Clinical Trial”, on March 10, 2012
 iii) Received offer to serve as a Member of Program Committee
 and to review article for following conference:
 Third International Conference on Emerging Applications of
 Information Technology (EAIT) (2012) on March 16, 2012

Any other achievements/distinctions not included in the above

1) In spite of lots of hurdles cropped up during 2011-2012, I have played a successful role of Senate and academic council member supporting the main academic administration of our institute by pursuing mainly the academic causes, a) successfully incorporated the plan of introducing new and more promising course under Division of Applied Science and IRCB within action taken report of Senate. The name of the course is: Integrated M.Tech. course in Biomedical Science, b) successfully incorporated the plan of unified institutional plan for smooth conduction of institution organized conferences within action taken report of Senate, c) successfully raised the issue of need to concretize divisional framework and partially successful to incorporate it as action taken report of Senate. In spite of absence of concrete divisional framework and support and existence of apparently irregular and confusing office orders, I have tried my best to pursue the developmental matters of division of Applied Science and IRCB – a task given to me during 2009-2011 by competent authority. During this period and beyond that I have extended my full support to all institutional administrative activities whenever sought from me which also includes, serving as academic coordinator in interactive sessions of yearly held science conclave organized by IIIT, Allahabad.

2) Ph.D. Thesis submitted by the student Hrishikesh Mishra on May 12, 2011 whose evaluation process is yet to be completed.

3) Ph.D. student Kalpana Singh has been enrolled as Ph.D. student in November, 2011.

Dr. B. Srinivas Sanjeev
Assistant Professor



R & D Activities/ Inventions

1. Conformational epitopes
2. Enzymatic activity analysis through MDS
3. Co-factor dependency in drug design
4. OpenCL based improved approaches for chess engines

Particulars of Academic Work during the year June- December 2011:

1. Concepts of Basic Sciences (MTech BI)
 Introduction to Programming (BTech IT/ECE)

January- June 2012;

1. Language Algorithms and Tools (MTech BI)

2. Data Structures and Algorithms (B.Tech. IT)
Any other Achievements/Distinctions not included in the above

1. Organizing Secretary of the International Conference 2nd Disputations: Future Technologies for Health Care Converging Biomedicine and Engineering
2. Worked for Science Conclave as Overall Incharge for Inspire and as a VVIP escort.

Dr. C.V.S. Siva Prasad
Assistant Professor



Academic Achievements of the year

Two research scholars working for Ph.D.

Publications during the year (2011-2012):

b. International Journals

1. Vibhav Taygi, & **C.V.S.Siva Prasad**, RAmiRNA: SVM-based viral mature miRNA prediction suite, Bioinformation 8(12): 581-585 (2012) (I F 1.15).
2. **C.V.S. Siva Prasad**, Saurabh Gupta, Alex Gaponenko & M.D. Tiwari "In-silico comparative study of inhibitory mechanism of Plant Serine Proteinase Inhibitors " Bioinformation (14):673-677(2012) (IF 1.15).
3. Ankur Omer, Sumit Govil, Shailesh Kumar & **C. V. S. Siva Prasad**, "Designing allosteric modulators for active conformational state of γ -glutamate G-protein coupled receptors", Bioinformation, Vol. 08(4), 2012 (I F 1.15).
4. Vinita Mishra and **C.V.S. Siva Prasad**, "Ligand based virtual screening to find novel inhibitors against plant toxin Ricin by using the ZINC database", Bioinformation, 7(2), 2011 (I F 1.15).

Participation in Seminars / Workshops / Conferences / Symposiums etc. during the year (Apr'2011- Mar'2012)

c. International

1. **C.V.S. Siva Prasad &** Saurabh Gupta, 3-D Modeling of Plant lectin proteins and prediction of Carbohydrate binding sites, International Symposium-cum-Training Workshop on "Recent Trends in Bioinformatics, Systems Biology & Biomolecular Interactions & Alumni Conclave Centre of Bioinformatics, Allahabad University, January 8th-10th 2012.

2. **C.V.S. Siva Prasad**, Bioinformatics approaches for Stem Biology research, Conference on future technology for Health care converging biomedicine and Engineering Indian Institute of Information Technology, Allahabad, 18-20 Sept 2011, River publishers, Netherlands.
3. **C.V.S. Siva Prasad &** Saurabh Gupta, Protein-Protein docking of Serine Poteinase of Nematodes with Plant Proteinase Inhibitors, International Interdisciplinary Science Conference-2011 on Bioinformatics: An Interface between Computer Science and Biology, Jamia Millia Islamia, New Delhi, November 15-17, 201.

Work done in Projects undertaken in the Institute

Title: Development of Transgenic Wheat Plant against Cereal Cyst nematode (*Heterodera Avenae*) and Sunnpest (*Eurygaster intergrices* Puton) by using Bioinformatics and Genetic Engineering approaches. Indo-Russian Project, Project Code INT/ILTP/A-1.28 (Rs.55 Lakhs).

Benefits: India and Russia will develop Transgenic Wheat plant against Sunnpest and rootnot nematode. These verities will enhance the Wheat production of the country.

Results:

1. siRNA based constructs developed.
2. Site directed mutagenesis work is going on in Protease inhibitors.
3. Wheat tissue culture is going on.

Particulars of Academic Work

M.Tech: Introduction for Genomics and Proteomics, Computer Aided Drug Designing.

B.Tech: Bioinformatics Introduction, Biological System I, Environmental Engineering.

Extra-Curricular activities

1. Biology coordinator for Inspire, DST program 2011.
2. Member in Escort committee in the Fourth Science Conclave.

Training Programmes Organized

National Seminar on Brain Awareness Program at Indian Institute of Information Technology at Rajiv Gandhi Institute of Information Technology, Amethi (RGIIT), 2011. (Academic Chair).

Any other Achievements / Distinctions not included in the above-Peer Reviewer:

1. Journal of Bioinformatics, Oxford press, London, U.K.
 2. Indian Journal of Biotechnology (CSIR, India)
- Company consultancy:
 Prime Health Tech Limited, New Delhi

Dr. Vrijendra Singh
Assistant Professor



Research Interests

-Blind Source Separation, Independent Component Analysis, Biomedical Analysis, Artificial Neural Networks, Data Mining, Image & Audio Processing, Digital Signal Processing, Materials Management & Inventory Control, Information Security & Forensics.

Educational

Qualifications-Ph. D. (Independent Component Analysis and Blind Source Separation applications to Signal Processing and Artificial Neural Networks) from Dayalbagh Educational Institute, Agra. [The key achievements are separation of image/audio mixtures, audio enhancement / image denoising, security applications such as fingerprints separation, face image separation, text mining and image compression using newly developed ANN Models / technique].

Membership of Professional Societies

-Member – IEEE
Member – International Association of Engineers
Member -- Society for Neurochemistry India

Research Experience-3+ years as Senior Project Associate at Department of Electrical Engineering, IIT Kanpur, India.

Previous Administrative Experience-Warden, Boys Hostel, Indian Institute of Information Technology Allahabad (Aug. 2005 to June 2012).

Courses Undertaken-Pattern Recognition [MS III, 2011]
Data Information & Cryptography [MS II, 2011]
Cryptographic Protocols [MS II, 2010]
Quantative Decision Modelling [MBA I, 2009, 2010]
Data Warehousing & Mining[MBA IV, 2006, 2007, B. Tech. VI, 2006]
Digital Electronics[B. Tech I (EC & IT), 2007]
Electronics Workshop[B. Tech I (EC & IT), 2007]
Introduction to Programming [B. Tech I (EC & IT), 2006]
Digital Infrastructure & Enterprise Resource Planning [MBA I, 2006, 2007, 2008, 2009, 2010, 2011]
Digital Signal Processing [B. Tech VI, 2006]
Introduction of Computers and Programming[B. Tech I, 2005]
Neuro- Fuzzy Computing [B. Tech VI, 2005]

Conferences & Courses Organized

2nd IEEE International Conference on Wireless Communication and Sensor Networks, Dec. 17 – 19, 2006.

80th All Indian Universities/ Institutes Vice Chancellors / Directors Conference, at IIT Allahabad, Nov. 24 – 27, 2005.

Workshop on Artificial Neural Networks, at Bhabha Atomic Research Centre, Mumbai, India, Sept. 2003.

Short Term Course on Computational Neuroscience at Indian Institute of Technology Kanpur, July 7 – 18, 2003.

Thesis Supervised-Software Based Optimized Bit Error Detection & Correction Model – Mr. Kaustuv Kunal, M. Tech. (Software Engineering), 2011

Face Recognition from Sketch – Mr. Devendra Km. Dellwar, M. Tech. (Intelligent System), 2011

Improving Business Intelligence and Data Warehousing – Mr. Tarun Goyal, MBA (IT), 2006

Study of Common Architecture for Intel Demand Program – Ms. Shalini Bakshi, MBA (IT), 2006

Software Developed

[@ Dept. of EE, IITK]-General Purpose Neural Network Software BIKAS for BARC.

Neural Network Inversion Software for Indian Oil Corporation Limited, Faridabad.

ANN Software for ISRO- Inertial System Unit, Thiruvananthapuram.

Papers Published

-Prince Agarwal, Vaibhav Mishra, Manjari Sahai, Monark Bag, Vrijendra Singh, "Supplier Selection in Dynamic Environment using Analytic Hierarchy Process", Asian Journal of Management Research (ISSN-2229-3795), Integrated Publishing Association (Article in Press).

Gunjan Srivastava, Anil Kumar Ransom, Monika Lal, Shashikant Rai, Monark Bag ,Vrijendra Singh, Kannan Govindan, "Demand Function for Perishable Items based on Deterioration, Seasonal Variability and Shelf Space", International Journal of Business Performance and Supply Chain Modelling (ISSN-1558-9401), Vol.4, No.2, 2012.

Manjari Sahai, Prince Agarwal, Vaibhav Mishra, Monark Bag, Vrijendra Singh, "Supplier Selection through Application of DEA", Asian Journal of Management Research (ISSN-2229-3795), Integrated Publishing Association (Article in Press).

Prince Agarwal, Manjari Sahai, Vaibhav Mishra, Monark Bag, Vrijendra Singh, "A Review of Multi-Criteria Decision Making Techniques for Supplier Evaluation and Selection", International Journal of Industrial Engineering Computations (ISSN 1923-2926). GrowingScience Publication, Volume 2, Number 4, 801-810, October 2011.

K. Kunal, R. C. Tripathi and V. Singh. "An HARQ Based Optimized Error Correction Technique." International Journal of Computer Applications, 9(1):1-5, November 2010.

A. Khare, V. Singh, S. Arora, N. Jain & A. Verma, "Designing Competitive Strategy using CRM for Indian Primary Education", Int. Journal of Indian Culture and Business Management, ISSN (Online): 1753-0814, ISSN (Print): 1753-0806, InderScience, pp 466-487, Vol.-3, No.-4, 2010.

A. Khare, V. Sehgal, D. Dhal, S. Agarwal, V. Singh., "Technology as a Driver to Indian Ready- made Garment Supply Chains", Int. J. of Logistics Systems and Management, ISSN (Online): 1742-7975, ISSN (Print): 1742-7967, pp47-65(19), Vol. 8, No.-1, Dec. 2010.

V. Singh and P. K. Kalra, "The General Purpose Neural Network Software", Proceedings of 5th Technical Program Discussion Meeting, Organized by Nuclear Reactors and Fuel Cycle Committee, Board of Research in Nuclear Sciences, Department of Atomic Energy, Govt. of India, Mumbai, February, 2003.

V. Singh and P. K. Kalra, "Development of General Purpose Neural Network Software as Applied to Fracture Mechanics, Earthquake Engineering, Miniature Sample Test Data & Other Reactor Application", Technical Report, BARC, Mumbai, September 2003.

Yadav, R. N., Singh, V. and Kalra, P. K. "Classification Using Single Neuron", IEEE - International conference on Industrial Informatics, Banff, Canada, October 2003.

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Talks Delivered-"Application of ANN to Real Life Problems" at Bhabha Atomic Research Centre, Mumbai, India, in 2003.

"Artificial Neural Networks and its Applications in Signal Separation" in the Short Term Course on Computational Neuroscience at University of Hyderabad, in October 2004.

"Data Mining Applications in Audio/Speech Processing" in short term course on Bio-informatics and Data mining at Indian Institute of Technology Kanpur, in 2005.

"Blind Source Separation using Independent Component Analysis" to the Directors and Secretaries of Ministry of Communication and Information Technology (MCIT), Central Bureau of Investigation

(CBI), National Crime Records Bureau (NCRB), Directorate of Forensics (DFS) and members from CDAC- Calcutta etc, Feb. 2006.

"Computer based Acoustics Quality Testing of Engines" at Conference on Advanced Manufacturing Technologies, organized by DST at Central Leather Research Institute, Chennai, June 17, 2006.

"Lectures on BSS, ICA & Image Compression" in QIP short term course on "Application of Matlab in Engineering", sponsored by AICTE at IIT Kanpur, May 15 - 30, 2006.

Dr. Neetesh Purohit
Assistant Professor



Academic Achievements of the year 2010-2011

- Three M.Tech students have completed final project requirements under my supervision.
- Guided 10 B.Tech students for their semester project.

Publications during the year (2010-2011)

1. Names of Books published **(April' 2011 – March'2012 only)** Contributed chapter- 5, "The Physical layer aspects of wireless networks", in the book titled, "Technology and Protocols for the Future of Internet Design: Reinventing the Web" edited by Deo Prakash Vidyarthi, Jawaharlal Nehru University, India. It will be published by IGI in Feb 2012. (<http://www.igiglobal.com/book/technolgoies-protocols-future-internet design/58285>)
- Fuzzy Logic based clustering in wireless sensor networks: a survey, International Journal of Electronics, Taylor and Fransis.
- An Energy Efficient Approach for Clustering in WSN using Fuzzy Logic, International Journal of Computer Applications, Foundation of Computer Science.
- Analysis of Lifetime of Wireless Sensor Network with Base Station Moving on Different Paths, IEEE International Conference INDICON 2011.
- A New Scheme for Cooperative Communication in LEACH Based Wireless Sensor Network, IEEE international conference, CICN 2011.
- A Moving Base Station Strategy Using Fuzzy Logic for Lifetime Enhancement in Wireless Sensor Network, IEEE International conference, CSNT 2011.

Participation in Seminars / Workshops/ Conferences/

- Fourth Science Conclave – A congregation of Nobel Prize Winners Organized at IITA.
- Seventh International conference on Wireless communication and sensor networks (WCSN 2011) at Panna (M.P.)

Particulars of Academic

- 3 M.Tech and 4 B.Tech. Courses.

Extra-Curricular Activities

- Member of VVIP escorts committee during SCIENCE Conclav 2011.
- Member of Interaction Session during Science Conclave 2011.

Dr. Abhishek Vaish Assistant Professor



Research & Development

- Submission for various Joint projects under different scheme.
- Enrollment of Ph.D. Students and help them to achieve their targets
- One workshop/conference per year.
- Incubation of new technology through collaborative arrangements with industry.

Teaching

- I am teaching two courses in each semester with full dedication and will continue to do it.
- I will try to bring some new innovation in my teaching skills to make it more impact full.

Self-Knowledge upgradation.

- Few skills-set enhancements training in the field of Computer forensics and cloud computing.

Literary Work

- Planning to write a book in the area of Information Security.

Paper(S) Published in Refereed Journals

- Quantifying the dynamics of Information through new valuation system : Information Management & Computer Security-Emerald Publications Group-U.K.-Vol. 19 Iss: 5 - 2011-313-332-
- Instant Human Face Attribute Recognition System-International Journal of Advanced Computer Science and Applications -U.K.-2156-5570-2011-112-120-

- Multi – Agent based Dynamic Data Integrity Protection-Springer-U.S.-DOI: 10.100 7/978-3-642-19542-6 Volume 142, part 1-2011-76-82-

Paper(S) published in Conferences

- Behavior Prediction Using Call Data Record-3rd International ICST Conference on Security and Privacy in Mobile Information and Communication Systems-CTIF, Aalborg Denmark-May 17-19 2011-Springer
- 3 Dimension al Security in Cloud Computing-Computer Research and Development (ICCRD), 2011 3rd International Conference on -Shanghai China-11-13 March 2011 -IEEE

Articles (give full details of Publication)

- V-Factor of information – An insight on the new dimension of information protection-ISACA, USA, New Delhi Chapter, Newsletter Volume 2, Issue 2- OCT 2011

Participation in seminar / workshop/ Conferences

- 3rd International ICST Conference on Security and Privacy in Mobile Information and Communication Systems. CTIF Aalborg, Denmark , May 17-19 2011 Springer
- Computer Research and Development (ICCRD), 2011 3rd International Conference on Shanghai, China, 11-13 March 2011 IEEE.

Work Done in Projects Undertaken in the Institute (2011-2012)

- DST, RFBR-Development of Neuron like detection filters Image Identification -30 Lacs (Approx)-2 years-Dr. Abhishek Vaish (PI)
- DST-RFBR-Disaster Management for Large Scale wireless sensor network-150 lacs (Approx)-3 years-Dr. Abhishek Vaish, (CO-PI)
- DST-RFBR-Localization Method in Wireless Sensor networks-25 lacs (Approx)-2 years-Dr. Abhishek Vaish, (CO-PI)
- MCIT-ISEA-10 Lacs Per Annum (Approx)-5 years-Member

Research and Development

Project Name-Achievement

- Development of Neuron like detection filters Image Indemnification-95%
- Disaster Management for large scale wireless sensor network-20%
- Localization Method in Wireless Sensor Networks-80%

Course taught in the previous academic calendar

- Ms (CLIS) January-May 2011, July- December 2011, Computer Forensics & Jurisprudence, Technical Risk Assessment, Fundamental of Information Security,

Extra Curricular

- Table Tennis (Winner in Single and Doubles)

Awards

1. Membership of Professional Societies, If any with details
 - a. Membership & Reviewer IEEE
 - b. Academic Advocate ISACA, USA
2. Member International Association of Engineers and Scientists

Dr. Rajat Kumar Singh Assistant Professor



Publications during the year

In International Conference:

- [1]. Shrawan Kumar Trivedi and **Rajat Kumar Singh**, "Enhancement of energy efficiency in heterogeneous wireless sensor network using multi-hop transmission technique" *WCSN 2011*, Panna National Park, (MP), India, Dec, 2011.

Particulars of Academic Work during the year

Subjects taught

1. Radar and Satellite Communication
2. Telecommunication Switching System
3. Electronics Measurements and Instrumentation

Extra-Curricular activities

Faculty-Incharge (Music Club)

Dr. Madhvendra Misra Assistant Professor



Publications during the year

International Journal: 06

1. Current industry approaches towards Marketing ROI an Empirical study; S Mishra, M Mishra, *European Journal of Business and Management* 3 (6), 86-100
2. A conceptual framework for defining scope and opportunities of interdisciplinary research in management. Sumant Kumar Tewari, Madhvendra Misra *International Journal of applied management sciences*, Geneva SWITZERLAND, Vol 4, No.2
3. Building an Information Security Infrastructure-A Comprehensive Framework towards a Robust, Resilient and Dependable Infrastructure, S Ranjan, MK Maurya, AK Malviya, R Yadav, R Gupta, M Mishra, S Rai- *IJCSI*

International Journal of Computer Science Issues, Vol. 9, Issue 3, No 1, May 2012 ISSN (Online): 1694-0814

4. An assessment of ROI in online perspective leading to a critical review and framework development towards standardization of ROI practices Saurabh Mishra, & Madhvendra Misra *Journal of Internet Banking and Commerce* April 2012, Vol. 17, No. 1
5. Developing supply chain evaluation framework through performance, Sumant Kumar Tewari, Madhvendra Misra, *Int. J. of Business Performance and Supply Chain* Accepted In Press
6. Marketing Efficiency: A Construct to Evaluate Strategic ICT Adoption, Sumant Kumar Tewari, Madhvendra Misra, *International Journal of Business Excellence (IJBEX)* Accepted, In Press

Participation in Seminars / Workshops / Conferences / Symposiums etc.

National 02

1. Cloud Computing: A Holistic Approach To Cloud Security International conference on computer science and Information Technology, Tirupathi, AP, 10 June 2012,
2. "Leadership and social media marketing in IT organizations" 5th ICMBBS 2012 International Conference (organized by Society of Management and Behavioural Sciences) to be held in Haridwar – Uttarakhand (India) during June 23 to 24, 2012

d. International -01

The Impact of ICT on Manufacturing Industry: An Empirical Analysis
SK Tewari, M Misra, 2012 International Conference on Communication Systems and Network 2012

Work done in Projects undertaken in the Institute

Contributed in the IT& ITES Project.

Particulars of Academic Work during the year MBA-IT

Strategic Management & Information System Strategy 3rd Sem
Process management and Consultancy 2nd Sem.

MSCLIS

Process management and Consultancy 4th Sem.
ITIL 3rd Sem

Extra-Curricular activities

Faculty In-charge Sports



Publications during the year

b. International Journals

1. V.K. Chaurasiya, S. B. Govil, Karthik T, Karthikeyan S., S. Das, An approach to identify the optimal cloud in cloud, Published in: International Journal of Cloud Computing and Services Science (IJ-CLOSER). Vol.1, No.1 pp. 35 ~ 44.
2. V.K. Chaurasiya, J. Thomas, K. Raman, S. Das, Resource Leasing Cloud Computing Model: AWin-Win Strategy for Resource Owners and Cloud Service Providers, Published in: Journal of Computing. Volume 4, Issue 5, May 2012.
3. V.K. Chaurasiya, A. Sinha, A. Jaiswal, R. Gupta, SAS 70 TO SSAE 16 / ISAE 3402: AN INSIGHT INTO OUTSOURCING SECURITY AND PROCESS CONTROLS, AND SIGNIFICANCE OF NEW SERVICE AUDIT STANDARDS, Published in: Global Journal of Business Research San Jose , Costa Rica, Volume 6, Number 2, June 2011, pp 315-324
6. V.K. Chaurasiya, A. Kumar, A. Srivastava, M. Raheja, S. Bansal, Basel III and the Requirement for Capital Inclusion: A Case of India, Published in: 5th International Conference on Management and Behavioral Sciences, "An Interdisciplinary Conference" June, 2012, Society of Management and Behavioral Sciences
7. V.K. Chaurasiya, M. Chandra, N. Kumar, R. Gupta, S. Kumar, V. Srivastava, Protection from Paging and Signaling Attack in 3G CDMA networks, Published in: International Conference on Networks and Computer Communications (ETNCC2011), April, 2011 The Institute of Engineers (India), Udaipur Local Center, Under the aegis of Computer Engineering Division.
8. V.K. Chaurasiya, P. Srivastava, S. Singh, A.A. Pinto, S. Verma, R. Gupta, An architecture based on proactive model for security in cloud computing, Published in: International Conference on Recent trends in Information Technology (ICRTIT), June 03 - 05, 2011, IEEE Madras Section.

Participation in Seminars / Workshops / Conferences / Symposiums etc.

e. International

1. V.K. Chaurasiya, A. Saxena, A. Luthra, R. Singh, S. Das, Celebrity Endorsements and Cognitive Dissonance among Consumers?, Published in: International Conference on Management and Behavioral Sciences, June 2012, Society of Technical and Management Professionals (STMP)
 2. V. K. Chaurasiya, R. Gupta, V. Srivastava, A. K. Keshri, A. D. Roy, Advanced Port Knocking Authentication Scheme with QRC using AES, published in: International Conference on Networks and Computer Communications (ETNCC2011). April 22-24, 2011.
 3. V.K. Chaurasiya, R. Gupta, A. Kesarwani, C. Gupta, M.M. Tripathi, V. Gupta, Implementation of Chinese wall Model in Cloud Computing for Enhanced Security, published in: International Conference on Networks and Computer Communications (ETNCC2011). April 22-24, 2011.
 4. V.K. Chaurasiya, R. Gupta, A.A. Pinto, S. Verma, S. Singh, P. Srivastava, Securing Cloud System via Internal Control Management, published in: International Conference of Information Security and Internet Engineering, London, U.K., 6-8 July, 2011.
 5. V.K. Chaurasiya, R. Gupta, S.G. Banerji, S. Mohanty, Information Security Governance is Critical to Wider Corporate Governance Demands-An Indian Perspective, published in: International Conference on Economics, Trade and Development, (ICETD 2011), Bali, Indonesia, April 1-3, 2011.
- #### **Work done in Projects undertaken in the Institute**
1. Working Member of the Technical Team under National Mission on Education Project funded by MHRD, Govt. of India.
 2. Working member of the ongoing project of IT/ITES, funded by MCIT, Govt. of India.
 3. Working member of the ongoing project of education through ICT funded by AICTE, Govt. of India.
- #### **Particulars of Academic Work during the year**
- Taken Following Courses:
1. Database Management System.
 2. Network and Network Security.
 3. Storage Technology and Networking.
- #### **Extra-Curricular activities**
1. Involved in organizing various sport events at the Institute Level.
 2. Organizing Member of various Institute level cultural events.
- #### **Any other Achievements / Distinctions**
1. Member of organizing committee of First International Conference on Intelligent Interactive Technologies and Multimedia (IITM, 2013).
 2. Member of Organizing Committee of 4th science conclave.
 3. Member of MBA & MSCLIS entrance exam committee.
 4. Professional Member of ACM.
 5. Working as Hostel Warden.
- Dr. Vijaishri Tewari**



Specializations/areas of interest : Human Resource Management & Organizational Behavior

Publication details :

- **Critical appraisal of Indian Food Policy- a proposal of rationalization towards PPP**(Dynamics of Public Administration, International Journal university of Lucknow(ISSN no. 0975-3907; Issue 1, volume 28,page147-163,2011)
- **The Burden surplus” A food policy challenge approached through statistical modeling converging lost motives of food security and procurement management in india**
India.Dr. Misra Madhvendra, Dr. Tiwari Vijayshri, Mr. Rai ShashikantIndian ,etal; **Online published on 31 January, 2012.**International Journal of Social and Economic Research,Year : 2011, Volume : 1, Issue : 1First page : (133) Last page : (151) Online ISSN : 2249–6270.

Participation in conferences / Seminars:

- **Analysis of business Intelligence adoption and its result in Indian Organized retail Sector** Dr.MM.,V Tewari,etal. (Presented by Student, International Conference on Business Intelligence-An Alignment of IT and Management, Institute of Management and Technology, Faridabad, INNS India Regional Chapter)
- **5C framework of Knowledge management.** Dr.MM.,V Tewari,etal (Presented by Student), National Conference on Contemporary Management Research’ Society of management and Behavioural Sciences, Jodhpur
- **Detecting Key vulnerabilities in web application through integrated assessment approach.** Dr.MM.,V Tewari,etal(In Absentia), International Conference of information Management and engineering,(IEEE Beijing Section &International Association of Computer Science and Information Technology (IACSIT) &Zhengzhou Institute of Aeronautical Industry Management &Henan University of Technology, China)

Particulars of Academic work: As Follows

Class	Year & Semester	Subjects taught	No. of lectures taken
BTech	1 st semester	CSL(all 3 sections)	30(approx)
MBA-IT	1 st Semester	Principle of Management	30
BTech	2 nd Semester	Principle of Economics &Management(all 3 sections)	45
MBA-IT	2 nd Semester	Organizational Behavior	45
	4 th Semester	Organizational Behavior	

Extr

a Curricular Activities

- Faculty representative of the **Dramatics Committee** of the institute and I'm handling the coordination of the committee at the internal level
- **Is an active member and chairperson Hospitality organizing committee of Science Conclave** – a congregation of Noble laureates held at Indian Institute of Information technology, Allahabad, India, in Dec,2011 .
- Was the **Asst Proctor** at the Indian Institute of Information technology, Allahabad, India for the said period.
- Handled **Master Project and Internships for MBA-IT & Master of Sciences in Cyber Laws and Information Security** course .

Manish Kumar
Assistant Professor



Publications during the year

1. "GMCA: a greedy multilevel clustering algorithm for data gathering in wireless sensor networks", International Journal of Communication Networks and Distributed Systems (Inderscience) [Under publication process] (Authors: Manish Kumar, Neerav Agarwal and Shekhar Verma).

- 1) "XQuery based Query Processing Architecture in Wireless Sensor Networks", International Journal of Computer Applications, Vol. 43, No. 23, pp. 5-10, 2012. (Authors: Manish Kumar, Monalisa Panigrahi and Shekhar Verma)
- 2) Proposal accepted for chapter titled "Applications of data mining in social network analysis" for the upcoming book "Data Mining in Dynamic Social Networks and Fuzzy Systems" under the IGI-Global publishers, USA, 2012.

Participation in Seminars / Workshops / Conferences / Symposiums etc.

1. Delivered lecture on "Application of Database Management Systems in Agriculture" in "National Training program on Trends in Bioinformatics and Computation Systems: Exploring Interconnections for Molecular Biological Applications" under "National Agriculture Innovation Project", 16-29 July 2011 at National Bureau of Agriculturally Important Microorganisms (NBAIM), Mau. U.P.
2. Delivered lecture on "Database Systems" in "Workshop on AFRES and PRIME", at Headquarter North Central Railway-Allahabad, 2011.
3. Organizing committee member of International conference on Wireless Communication and Sensor Networks held at IIIT Allahabad in December 2011.
4. Organizing committee member of Science Conclave for Nobel Laureates held at IIIT Allahabad in December 2011

Work done in Projects undertaken in the Institute

M.Tech

1. Improved incremental approach for Web Usage mining.
2. Intrusion detection using combined data mining.
3. Secure data aggregation in wireless sensor networks.

B.Tech

1. Lead acquisition, submission and tracking system.
2. Parallel implementation of solution of PDEs on high performance computation GPU cluster.
3. Test Data management.

Research & Development

Research in the area of "Data Management in Wireless Sensor Networks" and Data Mining. This is my core area of research and contribution in form of research papers has been done.

Particulars of Academic Work during the year

M.Tech

- 1) Data Mining and Warehousing
- 2) Mobile Data Management
- 3) Advanced Database Systems

B.Tech

- 4) Advanced Database Systems

Extra-Curricular activities

Participated in Institute various sports activities.

Sonali Agarwal
Assistant Professor



Academic Achievements of the year

Completed Ph.D. Thesis on "**Studies on E-Governance in India with Data Mining Perspective**" from **Indian Institute of Information Technology, Allahabad**. Ph.D. degree received on August 12, 2011, Sixth Convocation of IIIT Allahabad.

Publications during the year (2010-2011):

Publications of Articles / Research Papers in Journals / Magazines:

- "Prediction of Profitability of Industries using weighted SVR"-International Journal on Computer Science and Engineering (IJCSE)-**Singapore**-Volume 3 Issue 5-May 2011-7-0.583
- Inspection of wall thickness of pipes in petrochemical plants through WSN-Journal of Current Engineering Research-New York-Volume 2, Issue 1. -Feb. 2012-5-0.583

Participation in Seminars / Workshops / Conferences / Symposiums etc.

Publications

- "Weighted Support Vector Regression approach for Remote Healthcare monitoring"-International conference on Recent Trends in Information Technology (ICRTIT 2011)-MIT, Anna University, Chennai-June 3-5, 2011-IEEE

- “E Governance Data Mining: Pulse Polio Immunization Case Study”-2012 World Congress in Computer Science, Computer Engineering, and Applied Computing-WORLDCOMP'12
- -July 18-21-Argonne National Laboratory

Particulars of Academic Work during the year

- B.TECH-Third Year, Fifth Semester IIITA and RGIIT Amethi-Software Engineering, (SEN-532), 60 Hrs. Theory, (Approx) and 60 Hrs. Lab (Approx)
- B.TECH-Second Year, Third Semester IIITA and RGIIT Amethi-Operating System, (OSY-332), -80 Hrs. Theory (Approx) and 80 Hrs. Lab (Approx)
- M. Tech. -M. Tech, First year, First Semester, IIITA-Software Process Management-40 Hrs. Theory
- M. Tech. -M. Tech, Second year, III Semester, IIITA-Software Development, Practices -40 Hrs. Theory

Extra-Curricular activities

1. Worked as member, Site Seeing Committee, Noble Laureate Science Conclave 2011 and organized Site seeing program for participants during Noble Laureate Science Conclave 2011.
2. Worked as member, Sound and Light Committee, during Science Conclave 2011 for supervising the work.
3. Participated as Judge for First Year fresher function 2011.
4. Actively participated for improving the performance of First Year students in Software Engineering Lab and Operating System Lab, by preparing unit wise home assignments, quizzes and their evaluation. The performance was indeed improved to a great extent and further efforts are on during this semester as well.
5. Extremely keen to support IIITA administration for excellence in academic and extra curriculum activities or any other work assigned to me.

Dr. S. Venkatesan
Lecturer



Publications during the year

International Journals

- Venkatesan S, Saleem Basha M.S., Chellappan C., Anurika Vaish and Dhavachelvan, 'Analysis of accounting models to detect duplicate request in Web Service', accepted to publish in Journal of King Saud University – Computer and Information Sciences, Elsevier Standards.
- Venkatesan S., C Chellappan, and Anurika Vaish, A collaborative Model to Mitigate the TCP SYN flood attack

in IPv4/IPv6 Environment to International Journal on Information Security, Inderscience. (In third Revision)

- Vemlatesam S., R. Baskaran R., C Chellappan, P. Dhavachelvan and Anurika Vaish, 'Artificial Immune System based mobile agent platform protection' is in revision in International Journal on Computer Standard and Interfaces, Elsevier Standards. (In Revision).
- Vemlatesam S., Vladimir Oleschuk, Anurika Vaish and P. Dhavachelvan, "An efficient Security framework for Preserving Data Privacy and Integrity in Cloud Computing and Social Network", International Journal on Information Security, Springer (In Revision)

Book Chapter

1. Venkatesan S. Chellappan C. Dhavachelvan P. (2012), 'Recovery of Ubiquitous Multimedia Content Discovery Mobile Agent', published in the book named Ubiquitous Multimedia and Mobile Agents: Models and Implementations, Editor: Susmit Bagchi IGI Global Publishing Service, USA. pp.215-231
2. Venkatesan S. Chellappan C. Anurika Vaish (2012), 'Mobile Agent based Multimedia Content Discovery' published in the book named Ubiquitous Multimedia and Mobile Agents: Models and Implementations, Editor: Susmit Bagchi, IGI Global Publishing Service, USA. pp 135-147.

International Conference

- a. Ayush Vrat, Manish Sachan, Aarti Dinker, Deepanshu Arora, Anurika Vaish and Venkatesan S., 'Performance Analysis of Enhanced Mobility Model in cloud Computing', accepted to publish in the IEEE proceedings of International Conference on Recent Trends in Information Technology, 03-05 June, 2011, Chennai.
- b. K.A. Prithvi, Neeraj Kumar, Ashwin G, A.R. Mani Kumar, Anurika Vaish and Venkatesan S., 'Secure DHCP with Interdomain Roaming' accepted to publish in the IEEE proceedings of 2011 International conferences on computer Applications and Network Security (ICCANS 2011) May 27-29, Maldives.
- c. Shubhra Deo, Pawan Sharma, Anurika Vaish and Venkatesan S., 'Lip Print Recognition For Security Systems: An Upcoming Biometric Solution' accepted to publish in the Springer proceedings of 4th International Conference on Intelligent Interactive Multimedia Systems and Services, 20-22 July 2011, Greece.

Subjects Taught for MS Cyber Law and Information Security

- PCI & DSS (Payment Card Industry & Data Security Standard)
- BCP & DRP (Business Continuity Planning and Disaster Recovery Planning)
- Network Security.
- Security Architecture
- Authentication Protocol
- Internet Protocol Packet Analysis

Project Guidance

- Supervised two M.Tech Students
- Co-Supervised five batches of MBA & MS Students.

Extra- Curricular

- Member of INSPIRE' 11 committee during 4th Science Conclave 2011.

Awards/Honours

- National Advisory committee member for First International Conference on Systems, Methodologies, Automation and Research Trends (SMART), 2012 by Sri Mankula Vinayagar Engineering College Pondicherry.
- Member Special Board of Studies for Six Year Integrated Course in M.Tech in Pervasive & Ubiquitous Computing, Pondicherry University.
- Member, Editorial Board of International Journal on Web Service Computing (IJWSC).

Any Other Achievements

Membership

- ACM
- ISCA

Papers reviewed in

- IEEE transaction on System, Man and Cybernetics: Part C
- International Journal of Network and Applications (Elsevier)

Manish Goswami Assistant Professor



Publications during the year:

b. International Journals- **02**

1. R. Kumari, Manish Goswami and B.R.Singh, "The Impact of Channel Engineering on Short Channel Behavior of Nano Fin-FETs", *Proc. Int. J. Nanoscience*, Vol. 11, No 1, pp. 21-26, 2012.
2. Hari Kakara, Manish Goswami, and B.R.Singh " Design and Simulation of low-g single axis SOI MEMS Capacitive Accelerometer", *Proc. Int. J. Contemporary Research in Engg. Tech*, Vol. 2, No 1, pp. 63-69, 2012.
3. Manish Goswami, Manoj Malik, and D Pal, "A Single Channel QAM Based DC Offset Cancellation Circuit for High Gain Instrumentation Amplifier System," in *Proc. Int. Conf. Inf. Comm. Embedded Systems.*, vol. 1, Chennai, India, 2012.
4. Manish Goswami, Prateesh Shukla, Piyush Joshi, Manoj Malik, and D Pal, "A Low Input Referred Noise Amplifier

System for Biomedical Application," in *Proc. IEEE Int. Conf. Electr. Comp. Technology.*, vol. 1, Kanyakumari, India, 2012, pp. 430-434.

5. Akanksha Bansal, Manish Goswami, and B R Singh, "Optimization of Short Channel Effects in sub 40nm Bulk MOSFET Using Halo Doping," in *Proc. IEEE Stu. Conf. Engineering Systems.*, vol. 1, Allahabad, India, 2012

Participation in Seminars / Workshops / Conferences / Symposiums etc. during the year

Work done in Projects undertaken in the Institute

Working on signal conditioning and offset cancellation circuitry for the project on wildlife protection.

Research & Development

- Actively involved in setting up the foundry support for the design carried out at IIIT-A.
- Designing the ASIC for variable resolution ADC.

Particulars of Academic Work during the year

Subject Taught:

1. Advanced Analog design (III sem M.Tech Microelectronics)
2. VLSI Design (VI sem B.Tech ECE)
3. Advanced VLSI Design (II sem M.Tech Microelectronics
4. Digital electronics (I sem B.Tech)
5. Analog Devices and Circuits (III Sem BTech)
6. Guided BTech and MTech students for the project work .
7. Related Lab Work and Project assessment

Extra-Curricular activities

1. Member of VVIP Escort committee in Science Conclave-2011.
2. Efferevescence-2011
3. Handling Microelectronics Website
4. Project coordinator for MTech MI

Any other Achievements / Distinctions

- a. Went to EPFL Switzerland for 1 month under the Indo Swiss Joint Research Programme (ISJRP) in the project "Micro and Nanoelectronic Devices and Technologies for Environment Monitoring"
- b. IEEE Member.

Dr. Krishna Pratap Singh Lecturer



Academic Achievements

- ✓ Three M.Tech Students have completed final project requirement under my supervision.

- ✓ Guided 10 B.Tech students for their semester project.

Journals:

1. Genetic Algorithm Based Fuzzy Weighted Average Application in Multi-Criteria Decision Making Problems, OPSEARCH (Springer), 48 (2), 96-108, 2011.
2. Fuzzy Based Interactive Method for Solution of Bi and Multi-level Programming Problems, International Journal of Information and Decision Sciences (IJIDS). 2012 (Under Review).
3. GA-NR for Optimal Design of Water Distribution Networks, International Journal of Operational Research (IJOR). (2012). (Under Review)

Participation in Seminars / Workshops/ Conferences

- ✓ Fourth Science Conclave – A congregation of Nobel Prize Winners organized at IITA.

Class Taken

- ✓ Computational Intelligence, M.Tech-I, July-December, 2011.
- ✓ Probability and Statistics, B.Tech IIIrd semester, July-Dec, 2011
- ✓ Concept of Basic Science, M.Tech. I, July-December, 2011
- ✓ Operational Research and Optimization Techniques, B.Tech IVth semester January-May, 2012.
- ✓ Lab in Optimization techniques, B.Tech IV semester, January- May, 2012.

Extra-Curricular Activities

- ✓ Was member of VVIP escorts Committee during Science Conclave 2011.
- ✓ Was member of Interaction Session during Science Conclave 2011.

Dr. Arun Prakash **Lecturer**



Academic Achievements

- Three M.Tech students have completed final project requirement under my supervision.
- Guided 10 B.Tech students for their semester project.

Books, Papers, Publications during the year

- Vehicle assisted cross-layer handover scheme in NEMO-based VANETs (VANEMO), International journal of Interest Protocol Technology (IJIPT), Inderscience, 6 (1), 83-95, 2011
- A seamless handover scheme for vehicles across heterogeneous networks, International Journal of Communication Networks and Distributed Systems (IJCND), 8 (1), 4-23, 2012.

- IP Level Mobility Management for Vehicular Networks: A survey, International Journal of Mobile Communication (IJMC): Under review.

Participation in Seminars / Workshops/

- Fourth Science Conclave – A congregation of Noble Prize Winners organized at IITA.

Particulars of Academic Work during the year

- Communication Engineering II (B.Tech. ECE IV Sem.)
- Digital Communication (B.Tech. I.T. III Sem)

Extra-Curricular Activities

- Organized Science exhibition during Science Conclave 2011.
- Was member of Interaction Session during Science Conclave 2011.

Ajay Singh Raghuvanshi **Lecturer**



Completed and Submitted Phd Thesis to the Electronic and Communication Department of MNNIT, Allahabad.

Publications during the year 2011-2012

Paper in international Journals:

1. Ajay Singh Raghuvanshi, S.Tiwari, R. Tripathi, and N. Kishor, "Optimal Number of Clusters in Wireless Sensor Networks: An FCM Approach," International Journal of Sensor Network, IJSNet, Inder-Science Publishers, vol.12, No.1, pp16-24, July 2012. **TR. Impact Factor 1.386.**
2. Ajay Singh Raghuvanshi, Rajeev Tripathi and Sudarshan Tiwari, "Machine learning approach for anomaly detection in wireless sensor data," International Journal of Advances in Engineering and Technology, IJAET, Vol.No.1, Issues No.4, pp47-61, September 2011, 2011. **Citation Index: 1.69.**

Papers in International Conference proceedings:

1. A.S. Raghuvanshi, Arun Prakash, R. Tripathi, and S. Tiwari, "Distributed Sensor Data Fault Detection and its Classification in Wireless Sensor Networks," in the proceeding of IEEE, 7th International Conference on Wireless Communication and Sensor Networks (WCSN-2011), December 4-10, 2011, pp1-8, 2011.
2. A. Prakash, A.S. Raghuvanshi, A.K. Shankhwar, and R. Tripathi, "Study and Performance of Adaptive Modulation for Wireless Fading Channel," International Conference on Electronics, Communication and Instrumentation, Jhanis, India, 6-7 April, 2012 (Accepted).
3. M.K. Gupta, S. Shrivastava, A.S. Raghuvanshi and S. Tiwari, "Channel estimation for wavelet based OFDM system," in the proceeding of IEEE, Device and Communication Conference (ICDeCom2011), pp1-4, 2011.

Particular of Academic work during 2011-2012

- B.Tech 1st Year, EC IT AND IT at RGIIT-1st Year 1st Semester-Electronics Devices and Circuits, (EDC) Both Theory and Practical-12 theory lectures +12 Practical periods per week
- B.Tech 3rd Years, EC,-3rd Year 1st Semester-RF and Microwave (RFM) theory- 3 theory Lectures per week

From January 2012 to June 2012

- B.Tech 2nd Years, EC, IT and IT at RGIIT-2nd Year 2nd Semester-Microprocessor Programming and Interfacing (MIP)Both theory and Practical-12 theory lectures + 12 Practical periods per week

Helped in compiling list of new equipments needed for Microwave Lab and EDC Lab for coming semesters

Particular of Extra Curricular activities during 2011-2012

1. Escorted VVIPs during Conclave 2011
2. Demonstrated Physics practical to the participants of INSPIRE 2011 in the Lab
3. Worked as invigilator for GATE 2011 and JEE 2011
4. Helped with review process of papers for Seventh IEEE conference on Wireless Communication and Sensor Networks, (WCSN-2011).

Ashutosh Kumar Singh
Lecturer



Academic Achievements

- Three M.Tech (WCC) students have completed final project under my supervision.
- Guided 14 B.Tech. Students for their Semester Project.

International Journal:

1. Fuzzy Based Clustering in Wireless Sensor Network: A Survey, International Journal of Electronics (Taylor & Francis, U.K.), 2012 DOI: 10.1080/00207217.2012.687191
2. Analysis of Lifetime of Wireless Sensor Network with Base Station Moving on Different Paths, International Journal of Electronics, Taylor & Francis, (Accepted with revision), 2012
3. An Energy Efficient Approach for Clustering in WSN using Fuzzy Logic, International Journal of Computer Applications, 44(18);8-12, April 201. Publied by Foundation of Computer Science, New York, USA.
4. Dual Band Triangular Slotted Stacked Micro strip Antenna for Wireless Applications, Central European Journal of Engg. (Springer), Accepted, 2012
5. Performance Analysis of First Iteration Fractal Log Periodic Antenna of Varying Angles, Central European Journal of Engg. (Springer), Accepted, 2012

6. Fuzzy Logic Based Routing in wireless sensor network, IEEE Sensor Journal, (communicated), 2012

International Conference:

7. A Novel Approach for Lifetime Analysis of Sensor Network using Fuzzy Logic, In the proceedings of IEEE International Conference INDICON-2011, BITS Pilani (Hyderabad Campus).
8. Random Interleaver with Iterative IDMA Receiver for Power Line Communications, In the Proceedings IEEE International Conference on Signal Processing, Computing and Control (IEEE, ISPPC-2012). March 15-17, Jaypee University of Information Technology, Solan, India.
9. E- Shaped Microstrip Antenna on Rogers Substrate for WLAN Applications, In the proceedings IEEE International Conference on Computational Intelligence and Communication Networks (CICN), 2011.
10. Wide Band W Slot Microstrip Antenna for Wireless Applications, In the proceedings IEEE International Conference on Computational Intelligence and Communication Networks (CICN),2011.

Participation in Seminars / Workshops / Conferences

- Fourth Science Conclave - A congregation of Nobel Prize Winners organized at IITA.

Particulars of Academic Work during the year (Class taken)

- Control System, M.Tech-1st Semester (Robotics), July-December, 2011.
- Electromagnetic Fields and Waves, B.Tech IIIrd semester (ECE), July-December, 2011.
- Electrical Engineering B.Tech (ECE) Ist Semester, January-May,2012
- Electrical Engineering B.Tech (IT) Ist Semester, January-May, 2012
- Electrical Engineering B.Tech (IT) Ist Semester, RGIIT Amethi, January- May, 2012

Extra –Curricular Activities

- a. Was member of Accommodation committee during Science Conclave 2011.
- b. Was member of Poster Presentation committee during Science Conclave 2011.

Dr. Kusum Lata
Lecturer



Publications

- Manoj Kumar and Kusum Lata, "FPGA Implementation of ADPLL with Ripple Reduction Techniques", International

Journal of VLSI Design & Communication (VLSICS), Vol.3, No. 2 April 2012.

- Manoj Kumar and Kusum Lata, "ALL Digital Phase-Locked Loop (ADPLL): A Survey", Proceedings of the 4th International Conference on Electronics Computer Technology (ICECT 2012), April 6-8 2012, Kanyakumari, India.

Participation in Seminars/Workshops/Conferences

- 10- days ISTE workshop on "**Solar Photovoltaics: Fundamentals, Technologies and Applications**" under the National Mission on Education through ICT (MHRD, Govt. of India) and Ministry of New and Renewable Energy organized by IIT-Bombay from December 12 to December 22, 2011.
- MOS-AK/GSA India 2012- International Workshop on "Device Modeling of Microsystem", organized by Indian National Academy of Engineering (INAE) on March 16-18 2012 at Jaypee Institute of Information Technology, Noida.

Particulars of Academic Work

- B.Tech-First Year First Semester-Physics Lab-3 Hrs/Week
- B.Tech-Second Year Fourth Semester-Semiconductor Technology-3 Hrs/Week
- B.Tech-First Year First Semester-Digital Electronics-3 Hrs/Week & 3 Hrs/Week
- M.Tech-First Year First Semester-Testing and Verification-3 Hrs/ Week
- M.Tech-First Year First Semester-Digital VLSI Design-3 Hrs/Week & 3 Hrs/Week (Lab)
- M.Tech-First Year First Semester-Modeling and Analysis of VLSI Devices-3 Hrs/Week

Extra Curricular Activities

- Worked as member of Security Committee, Noble Laureate Science Conclave 2011.
- Coordination of Faculty meetings and Research Seminar Series for the whole session.
- Participated in conducting the GATE 2012 exam @ IIIT-A.

Saurabh Mishra
Lecturer



Publications during the year

International Journal:

1. "An Assessment of ROI in online perspective leading to critical review and framework development towards standardization of ROI practices", Journal of Internet banking and Commerce.

2. "Currently Industry Approaches towards Marketing ROI an empirical study". **European Journal of Business & Management**.

National

1. "A Radical Approach To Develop Psychological Control Information Security". **ICRTCTA**, Dept of computer science and Information technology of JRN Rajasthan Vidyapeeth University, Udaipur
2. "Performance Measurement of Indian E-commerce Websites", 5th International Conference, Society of Management and Behavioral Sciences, Haridwar, Uttarkhand.

Details Attached

- Coordinator Ad Mania, Management Event Effervescence, 2011
- 4th Science Conclave, in charge of Accommodation.
- In charge of Comprehensive lab.
- In charge of the entire printing media of the division.
- Assisted in Organizing Brand Identity Competition.)

Particulars of Academic Work during the year

- MBAIT-2011, II Sem (January- May,11)-Human Resources Management
- B.TECH-2011, II Sem (January- May,11)-Principles of Management & Economics, 2011, 4th Sem (January- May,11)-Business System
- MBAIT-2011,3rd Sem (Jul-Dec 11)-DWT, -2011, 1st Sem (JUL-Dec11)-Business Law, 2012 (January- May)-Marketing Management, 2012 (January- May)-Advertising & Brand Management, 2012 (January – May)-Information Security Law.

Utkarsh Goel
Lecturer



Publications

International Journals:

1. "Quantifying Information Dynamics through new Valuation System", Information Management & Computer Security, Emerald
2. "Does Loan Loss Provision Signal Income Smoothing?: An Empirical Investigation of Indian Banking Industry", IUP Journal of Accounting Research and Audit Practices, ICFAI University India

International Conferences:

1. International Conference on Frontiers in Infrastructure Finance, IIT- Kharagpur, 29-30 December, 2011

Particulars of Academic Works

- MBA-IT-2nd Year, 3rd Semester-Corporate Finance
- MS-CLIS-2nd year, 3rd Semester-COBIT
- MBA-IT-1st Year, 2nd Semester-Research Methodology
- MS-CLIS-1st Year, 2nd Semester-Sarbanes Oxley Act
- B-Tech, (RGIIT)-2nd Year, 4th Semester-Business System

Shashi Kant Rai
Lecturer



Publications during the year

1. Building an Information Security Infrastructure – A Comprehensive Framework towards a Robust, Resilient and Dependable Infrastructure” International Journal of Computer Science Issues (IJCSI) Republic of Mauritius Vol 9 Issue 3 May 2012
2. Retail ownership influences on consumer buying preference an empirical study of Indian Consumer. Arabian Journals of Business & Management Review American University of Kuwait Vol 9 May 2012

Participation in Seminars/Workshops/ Conferences

1. E-governance in India: Time to go the ITIL way” International Conference on Public Policy and Governance 2012 Dept. of management studies IISc, Bangalore and Public Affairs Centre 4th – 6th September, 2012
2. Cloud Computing : A Holistic Approach To Cloud Security International Conference on Computer Science and Information Technology (ICCSIT-2012 Interscience Open Access Journals 10th June 2012
3. “ Leadership and social media marketing in IT organizations 5th International Conference of Management and Behavioral Sciences Society of Management and Behavioral Sciences, Haridwar, Uttarakhand (India 23-24 June, 2012
4. E- Governance in India: A comparative study with USA and Australia International conference on recent trends of computer technology in academia (ICRTCTA Dept of computer science and Information technology of JRN Rajasthan Vidyapeeth University, Udaipur 21-23 April, 2012

Research and Development

1. Research to reduce the wastage of perishable products in organized retail.

Particulars of Academic Work during the year

Sublet taught Principles of management Cyber crime and data protection act process management consultancy Information security audit.

Santanu Das
Lecturer



National

1. Does Loan Provisioning signal Income Smoothing? An Evidence from the Indian Banking Industry, ICFAI Journal of Accounting Research & Audit Practices, Vol. XI, No.2, 1-12

International

The Role of Leverage and Stock Based Variables in the Prediction of Cash Flows and Earnings – Some Evidence from India, in Afro-Asian Journal of Finance & Accounting Inderscience Publishers, Vol.3, No.1, pp. 1-14.

Particulars of Academic Work:

1. Taught Financial Accounting & Analysis to MBA (IT) Ist semester
2. Taught Cross Cultural International Management to MBA (IT) III semester
3. Taught Business System to B.Tech (IT) IV semester
4. Taught International Finance to MBA (IT) IV semester

2.4 RESEARCH, DEVELOPMENT – GROWTH & ACHIEVEMENTS

2.4.1 THE GROWTH OF ACADEMIC DIVISIONS

The Institute has four distinct Divisions viz:

- (i) IT Division
- (ii) Management and Cyber Laws Division
- (iii) Electronics & Microelectronics Division
- (iv) Applied Science and IRCB Division

These Divisions plan their academic activities jointly and severally under overall guidance and direction of Dean (Academics) under administrative & academic control of the Academic Council and Board of Management through the Institutional Head, i.e. the Director of the Institute. Their growth plans and developmental activities are governed by the above authorities to ensure that the academic activities are planned and scheduled, keeping in view and incorporating the latest developments in their various fields of academics.

As at present, their future growth plans are given hereunder:

(i). THE IT DIVISION

We started our journey in 1999 as a premier institute in the field of Information Technology. After more than a decade, Information Technology is still a very vibrant area of research, education and professional career building. The newer and newer trends like social networking, high performance computing, cloud computing are leading the transformation of our society and civilization to a new dimension. It is envisioned that this field will continue to dominate over all other fields for at least for another decade and continue to improve the quality of life of the common masses.

Since we put emphasis in the right direction, our institute could progress remarkably within its short span of life and establish a brand worldwide in producing first class Information Technology graduates.

We now need to strengthen the Information Technology by focusing the future growth in the following areas:

- High performance computing
- Cloud computing

- IT Security & IT audit
- Rapid Application Development

We can start with developing research groups in the Ph.D. level in the above mentioned areas followed by developing future M.Tech program in these areas.

- To strengthen our theoretical computing area we should start five years integrated matters program in mathematics emphasizing on theoretical computer science.
- To start 5 years integrated B.Tech / M.Tech Program in the areas of existing M.Tech specializations
- To start 4 years integrated M.Tech / Ph.D. Program in the areas of existing M.Tech specializations and gradually phasing out of existing M.Tech programs of two years duration.

Growth plan for the RGIIT Campus:

We should recruit faculty dedicated for the RGIIT Campus and start immediately M.Tech programs there in the core areas of IT (Software Engineering, Theoretical Computer Science, Cyber Physical Systems) At the beginning, we should think of 5 years integrated B.Tech / M.Tech program only since this program will have much better employability for our graduates and will create good brand name for the RGIIT which is absolutely necessary at the beginning.

(ii). THE MANAGEMENT AND CYBER LAWS DIVISION

Future Growth Plans of MBA-IT & MSCLIS Division

Propelling academic excellence through innovative pedagogy of blended learning inculcating all round self development by creativity, knowledge exchange, empowerment and enrichment of students and faculty members is the objective of the Division. The division offers two programmes MBA-IT & MSCLIS which are the backbone to cater to the objective of the division for attaining academic excellence by horizontal & vertical growth

The vision of the MBA-IT & MSCLIS division is to prepare managers & security professionals for global leadership roles. People to get ahead in today business & security world are those who can shift through massive amounts of information and pull out

the opportunities it brings. The Division has always been adapting to a continuously changing business world which requires flexibility, creativity and adaptively to change with discipline.

Keeping in line with the above vision the division aims to amalgamate the current shortcomings with the recent advancements and bring about a change in the packaging of the two programmes thereby reducing redundancy and coming forth with fresher ideas.

It is planned to bring thrust for future growth of the division categorically in the following domains:

- **Academics Growth**
- ✓ **Direct**
 - ❖ Initiation of new programs
 - ❖ Conducting certification courses
 - ❖ Foster Faculty Development
- ✓ **Indirect**
 - ❖ Holding Conferences
 - ❖ Conducting workshops and seminars
- **Infrastructural growth**
 - ❖ Development & establishment of a new High Tech IT & Security Lab
- **Overall growth of the division**
 - ❖ Brand Building
 - ❖ Better Outreach
 - ❖ Developing 360° feedback mechanism for better teaching quality & environment
 - ❖ Procuring & creating extensive databases, e-book, journal & other publication

Academics Growth (Direct)

Initiation of New Programs

New Programmes are planned to be initiated in the years to come. The survey of feasibility showed that the following programmes could be planned to be initiated:

- MBA in Healthcare Management
- M.B.A in Agribusiness Management
- MBA in strategy & IT
- MBA in Operations & IT
- MBA in International Management & IT

MBA in Healthcare Management

In order to meet the growing demand for Health Care Professionals/ managers and also to develop industry-ready professionals well versed in health care standards in India and the world- it is proposed

to open a two year full time MBA program in Healthcare Management with an intake of 30 students.

M.B.A in Agribusiness Management

Agriculture plays a prevailing part in the economic development of India. Consequently, the rising necessitate for specialized manpower to execute various functions in and around the agricultural sector has evoked the significance of agribusiness expansion and agribusiness management courses. Agribusiness encompasses multifaceted system of input sector, production sector, processing & manufacturing sector and transport & marketing sector. It is dependent upon the melodious connection with diverse segments of the society. The process of developing this melodious connection between agribusiness farms and various interest groups begins by acknowledging the existence of the responsibilities of managers. These responsibilities are towards consumers, suppliers, distributors, workers, financiers, government and the society.

Apart from the regular educational program & research in order to promote various societal programmes to develop and train manpower in other allied discipline with a touch of information technology knowledge that add effectiveness efficiency and increased productivity it is proposed to start a two year full time MBA program in agribusiness management with an intake of 30 students.

MBA in Strategy and IT

Scope and Program Design:

This course introduces and explores the unique aspects of creating effective management and investment strategies for technology-intensive businesses. The objective of this course would be to provides a series of useful concepts and frameworks to develop abilities for

- formulating effective strategies for winning in markets with strong network effects,
- to go about commercializing highly uncertain and science-based technologies,
- create and capture the value from intellectual property assets, and
- maintain their competitive edge and evolve in order to take advantage of new technological opportunities
- sustain value despite wide-spread imitation and convergence with substitute technologies.

Throughout the course, there will be a heavy emphasis on going from concepts and market analysis all the way to the formulation of concrete strategies.

Intake: 60 students

Deployability

The course should be particularly relevant to two types of students: 1) those who anticipate taking managing positions in businesses for which technology is likely to play an important role; 2) those who anticipate consulting or investing in technology industries and must analyze firm strategies. Industries covered include: consumer electronics (smartphones, DVRs, videogames, personal computers), software (operating systems, virtualization), Internet-based businesses (e-commerce, online video, social networking, browsers, app stores), semi-conductors, intellectual property, mobile communications, biotechnology, electronic ink, mobile payment systems.

MBA in Operations and IT

Scope and Program Design:

This course empowers the student with sharp engineering and scientific capabilities along with smart business management disciplines. It teaches the skills required for making judgments, taking operational decisions as well as operative, management and organizational skills and introduces the students with technical aspects of modern operating system in today's business environment. The students are dressed to tackle planning, development, and implementation tribulations that their organization might confront. The curriculum deals with topics such as supply chain management, project management, technology management, modeling dynamic systems, and quality management and sustain value despite wide-spread imitation and convergence with substitute technologies.

Intake: 60 students

Deployability:

The operations manager would be able to create budgets and make decisions on employee training and hiring, employee supervision, equipment procurement, administrative policy development and coordinate and confer with other departments and managers within the company, as well as contractors

and suppliers, outsourcing, pricing optimization, effective service operations and market optimization in manufacturing as well as service organizations.

MBA in International Management & IT

Scope and Program Design:

An **MBA in International Business** grooms working managers and executives for careers of increased responsibility with focus on diversity and multicultural concerns, International relations and business strategies sensitive to international issues introduces the students with technical aspects of modern operating system in today's business environment. This program is designed to give graduates the ability to adapt and lead in rapidly-evolving global markets, and give them the cross-cultural expertise that will set them apart from their peers. It helps the management professional to navigate the unprecedented global challenges and opportunities that lay before them, in addition to a solid foundation in key business functional areas such as: country and political risk analysis, social innovation investment, creativity and innovation in emerging nations, climate risks and corporate value, market research strategies for the base of the pyramid, and many others.

Intake: 60 students

Deployability:

International Marketing departments of companies engaged in exports (eg: multinational manufacturers such as automobile companies, electronics and computer companies, consumer durables manufacturers and FMCG companies etc.) Banks and securities firms, import/export companies, consulting businesses, Port & aviation services, Courier, airlines, cargo, steamship lines, global shipping companies, International placements in company offices abroad (eg: MNCs), Travel and tourism and hospitality sector, Foreign direct Investment and economic development agencies

Conducting Certification Courses

Certification courses are proposed to be held by the division with the aim of educating a large number of persons with basic IT skills to a better understanding of the same. The target persons would be School and College Students, Students preparing for competitive exams (*like civil services exam, banking, railways*

etc.), Housewives and Senior citizens. These courses would be ideal for:

- College students who can build IT skills during college vacations.
- Working professionals in IT who can get additional skills by doing a part-time, specialized course.
- Beginners who can pick up basic computer & Internet skills through these courses.
- Engineering & IT students who use these courses to fill the gap in their college education & to practice what they learnt in the classroom.

The certification courses proposed to be held are for the following topics:

1. Computer Fundamentals
2. Networking , Internet & Network Security
3. Office Tools
4. Operating Systems (Working with Windows & Linux)
5. Financial Accounting
6. Interactive Multimedia
7. Web Designing
8. Desktop Publishing
9. Database Technology
10. Cloud Computing
11. Computer Programming Languages & Information Management

Foster Faculty Development

Under the international collaborative Promotion initiative, faculty are regularly appraised to the research grants available at national and international levels. The staffs are also encouraged to update their skills and knowledge level by undergoing various training programmes and workshops. The faculty are encouraged to attend FDPs according to their area of interest so that they are abreast with latest trends and technologies. To support this cause, it is planned to regularly hold encouragement sessions at the divisional level.

Conducting Popular Talks

To expose the students to talks delivered by experts considered to be the best in their respective fields, so that they can appreciate and correlate classroom teaching with the practices in industry.

A careful planning is required to conduct a talk for the students and it is ensured that the expectation level of the students and the expertise of the deliverer are compliant.

Efforts are being made to conduct two popular talks every month each for MBA (IT) & MS CLIS students. Initially the talks are being delivered by academicians and corporate practitioners will also be invited at later stages.

Academics Growth (Indirect)

Holding Conferences

It is planned to hold an International conference on management and information security every two years.

Conducting workshops and seminars

At the division we firmly believe in enhancing the quality and upgrading the knowledge of both students as well as faculty. With this aim it is targeted to conduct refresher courses, workshops and seminars so that the faculty and students both get benefitted out of all the deliberations done in the same. Conducting of various workshops and seminars are planned to be held at least twice in a year.

Infrastructural Growth

Development & Establishment of a New High Tech IT & Security Lab

A new High tech laboratory is being developed with all smart multimedia gadgets to cater to the need of the current hour. Technology is constantly updating therefore every student needs to be kept updated and also an exposure to the latest technology would go a long way in educating the students

Overall Growth

Brand Building:

Efforts are on for brand building for both the programmes of the division. The endeavor involves strengthening the relationships at various levels. This is always taken up dynamically on a continuous basis through the following endeavors:

- Collaborative and funded Projects
- Providing consultancy to the industry
- Participation in surveys for brand recognitions
- Taking membership of professional industrial bodies
- Student participation in multifarious dimensions

Better Outreach

Ensuring wide spectrum of participation from all quarters & corners of the society & country a better outreach programme would be initiated, thereby

providing enormous opportunity for inclusion to all seeking knowledge.

This would result in extracting best talents across all discipline through our rigorous selection process. Selection panel would include prominent experts from academia, Industry including Alumni & Internal faculty members.

Developing 360° feedback mechanism

In order to get the involvement at all levels to attain formal and informal feedback a 360° Feedback is taken to ascertain the correct performance based on different perspectives. At the end of each semester a feedback form prepared by the divisional office would be circulated amongst the students. The feedback taken would be totally confidential.

Further, the feedback as given by the students would be tabulated and compiled confidentially at the division without any intervention.

The concerned faculties would thereafter be intimated about the same for further improvements if any.

Procuring & creating extensive databases, e-book, journal & other publication

The aim is to create a repository & archive of world class book, journal, caselets and enriched database.

(iii). THE ELECTRONICS & MICROELECTRONICS DIVISION

Contribution of the Electronics & Microelectronics Division

- 1) The Division has contributed to the evolution of the Science Conclave
- 2) Contributed to the development of the International Conference on Wireless Communication & Sensor Networks (WCSN)

The WCSN conference has promoted research in the area of sensor networks and its impact on the Indian research could be evaluated by comparing the number of papers received in 2007 to 2010 (from about less than 10 to about 250)
- 3) The research work on wireless sensor network has led to a number of significant projects of impact on the society

The projects that were undertaken are WSN for forest protection (NSF-DIT R&D project), WSNs for mine safety and WSN in home based Healthcare

- 4) Developed moderately good laboratories in the area of microelectronic fabrication technology, surface mount technology and embedded systems
 - a. The laboratories were used to train students in the areas of Device design & fabrication, and in the design of embedded systems
 - b. The laboratories are ready to support significant research activities in these areas in the next few years
- 5) Electronics Laboratories for UG course in Electronics and Communication Engineering and IT
State of the art electronics laboratories to support the teaching of Basic Electronics, Digital Electronic design, Electronics Workshop, PCB fabrication, Microprocessors and microcontrollers, Analog and Digital Communication, Radar, Microwave and Fibre optic communication were developed.

Development plans for the Electronics & Microelectronics Division

- 1) Develop the Division as an active and significant research centre that would attract faculty and students from abroad
 - a. Attract 2 to 3 faculty members from abroad on sabbatical every year
 - b. Attract 2 to 3 PhD. Students from abroad, if the rules permit
- 2) Evolve the Division as a centre for innovation and incubation
 - a. Facilitate two industries to set up their R&D centres at IIIT-A. The industry would conduct joint research in these centres & also promote sponsored research
 - b. The Division would take up industry/society oriented applied research besides the academic research
 - c. The Division will have an incubation centre for technology innovation
- 3) Evolve the PG courses Communication Engineering and Microelectronics as courses of national significance

- a. These courses would evolve as preferred destination for the students
 - b. The courses would support the research projects of interest to the industry
 - c. The division would conduct national level advanced training programmes in these areas for the teachers
- 4) Develop the following laboratories and expertise –
- (1) Device modeling
 - (2) Test & Verification
 - (3) Micro / Nano-electronic fabrication & characterization
 - (4) RF Engineering
 - (5) Fiber-Optics
 - (6) Embedded systems

State of the art laboratories would be set up / further developed in these areas for training the students and supporting research.

- 5) Contribution to the society through the research projects on protection of wildlife and forests, tribal & rural health care, science education & sensor development
 - a. Various solutions that would be developed for the protection of forests, human beings and animals under the NSF-DIT research Project would be implemented in Panna National Park
(This work is being done in collaboration with IISc, OSU-USA, Cornell University, UCLA under the NSF-DIT funded R&D project)
 - b. Implement sensor network based healthcare at home system for the tribal and the rural areas (likely collaborator Ohio state University, USA – applied for Indo-US STEF project grant)
 - c. Develop Science education experiments using motes & sensor networks for use in the rural areas (likely collaborator Ohio state University, USA – applied for Indo-US STEF project grant)
 - d. Development of sensors needed for the forest protection, health monitoring science education and mine safety using micro / Nano-Electronics
 - e. Development of fiber sensors to support forest protection

- 6) Develop Science Museum for rural areas and associated experiments and equipment for the museum

Would set up one model Science Museum

(iv). THE APPLIED SCIENCE AND IRCB DIVISION

Teaching

- New courses like System Biology, Machine learning approaches for Bioinformatics, Next Generation Sequencing, Medical Image analysis etc., will be introduced to strengthen the existing course.
- New ed based new soft war es tool s will be dev eloped or purchased and introduced in the course curriculum. New specialized labs will be established.
- High performance computing facilities with high end servers will be created and provided both for research, course work and training.
- Student's placement will be given high thrust by focusing on various industries, research and academic organizations.
- As Bioinformatics is having more research inclination, we would like to give special global orientation to the M.Tech students and encouraged to apply to best universities for their further studies.



Research

- Open source software tools will be developed at the department level
- Department level projects by involving all the eligible faculties will be taken up. They shall also be encouraged to publish papers, filing copyrights and patents
- Guest lectures & video conferencing will be arranged with eminent speakers from industries, research and academic organizations
- Research specific labs will be expanded to include various cutting edge areas like System Biology, Next Generation Sequencing, Health Informatics,

Genomics, etc. We shall submit projects both in national and international funding agencies

- Human resources research, including staff and research scholars, will be increased with support of internal and external funding
- Faculties will be given internal funding support from the organization as seed money
- Faculties will be encouraged to develop industrial links within the country and also abroad to give individual or department based consultancies
- Faculty will be encouraged to have collaborations with international scientists to have international funding projects. Also attend the National and International Conferences

- More National and International Conferences and Workshops will be organized
- Softwares, databases, products will be developed for the Agriculture and Health related areas which will have direct utility for society

Training

- Training programs will be conducted in the areas of Molecular Modelling of Proteins, Drug Designing, Sequence analysis and Genomics
- Science awareness programs shall be also organized for school children to make them understand the developments in Bioinformatics and related areas



2.4.2 RESEARCH PROJECTS OF THE INSTITUTE

S. No.	Name of projects	Coordinator	Funding agency	Allotment (Lakh)	Duration
1	To establish and Operationalize Biotechnology (Bioinformatics) Centre IRCB	Dr. M.D. Tiwari	DBT	62.1	2002-14
2	Establishment of Joint Indo-Russian Centre for Bio-Technology at IIIT-Allahabad	Prof. K. Mishra	DST	187	2003-14
3	Information Security Education & Awareness (ISEA)	Dr. Anurika Vaish	MCIT	82.52	2005-12
4	Development of English to Indian Language machine Translation System) – Phase II	Dr. Ratna Sanyal	MCIT	93.96	2011-14
5	Development of Indian to Indian Language Machine Translation System) – Phase II	Dr. Ratna Sanyal	MCIT	15.56	2011-14
6	Universal Digital Library- Content creation in Tibetan, Sanskrit and English	Dr. M.D. Tiwari	MIT	105	2010-12
7	Development of Robust document analysis and recognition system for printed Indian Scripts (OCR) – Phase II	Prof. S. Sanyal	MCIT	31.63	2011-14
8	Allahabad Michigan Collaborative Fund	Prof. K. Mishra	Michigan University, DST	28.1	2007-12
9	Fund for Improvement of Science & Technology infrastructure in Universities and higher educational Institutions (Fist program-2007)	Prof. R.C. Tripathi	DST	140	2008-13
10	Development of Algorithms using ECG Bio Signal & Bio Images (Moscow)	Dr. T. Lahiri	DST	31	2008-12
11	Technology incubation and Development of Entrepreneurs(Tide) Scheme	Prof. R.C. Tripathi	DIT	165	2008-12
12	Institutional Partnership Project (IPP) - Centre of Excellence in Microelectronics & Microsystems, EPFL, Lausanne under Indo-Swiss Project	Prof. M. Radhakrishna	DST	41.6	2008-11
13	Indigenization of Broadband over Power Line technology (BPL) from Corinex, Canada by connecting Adjoining villages around IIIT, Allahabad And RGIIT using Existing power Lines	Dr. M.D. Tiwari	DST	165.5	2008-11
14	Establishment of North Zone Resource Centre of Generating Contents, Mentors, Teachers etc. by Conducting Specialized Short term HRD Courses for IT / ITES Sector	Dr. M.D. Tiwari	MCIT	500	2007-12
15	Methods for compensation & localization of interferences in ultra wideband wireless sensor networks	Dr. Shirshu Verma	DST	25.04	2009-12
16	Setting up of an ASEAN-India Science & Technology Library	Dr. M.D. Tiwari	MEA	\$7.30	2009-13

17	Development of transgenic wheat plant against cereal Cyst Nematode (Heterodera Avenae and sunnpest (Eurygaster intergriceps puton) by using Bioinformatics and Genetic Engineering approaches	Dr. C.V.S. Shiva Prasad	DST	53.98	2009-13
18	Development of a Neuron-like system for Real Time Visual Object Detection	Dr. Abhishek Vaish		28.84	2009-12
19	Development of a computer aided microscopic pool for structural derivation of pathologically significant proteins	Dr. T. Lahiri		13.89	2009-12
20	National Mission on Education through Information and Communication Technology -(ICT)	Dr. M.D. Tiwari	MHRD	150	2009-14
21	Development of New method and algorithms to identify exon-intron boundary and finding signatory signal pattern for genetic abnormalities like autism	Dr. Prithish Vardwaj		20.71	2011-13
22	Inspire Awards – 2010	Dr. M.D. Tiwari	DST	700	2009-13
23	Disaster management system for large scale deployment of sensor network using a fault tolerant mechanism	Dr. Shirshu Verma		158.48	2011-14
34	Army Technology Board - Network simulation Testbed at MCTE, MHOW (MP)	Prof.MRK Prof. O.P. Vyas		144.4	2011-13
25	Indian Oil Corporation Ltd.	Dr. M.D. Tiwari Prof. G.N. Pandey		100	2011-2016

2.4.3 A BRIEF ABOUT RESEARCH PROJECTS

The Institute has taken up a number of new initiatives in the form of Projects that aim at far reaching consequences, not only to serve as bold advancements in academics but also to serve the interests of the country at large and the REAL INDIA living in the rural locales.

These Projects have been taken at the initiative of Govt. of India in different departments of Science and Technology and foreign collaborations so that the benefit of scientific, technical and technological advancement may be cultivated in the country.

Brief description of the major projects is given hereunder:

1. Allahabad Michigan Collaboration Project

This is a collaborative Project of DST and USA. It involves rational of the study of curcumin as a diarylheptanoid prenylphenolic compound derived from rhizome of the dietary spice turmeric. Curcumin as a lead molecule has been known for diverse pharmacological activities like antioxidant, anti-tumor, anti-bacterial and antifungal known since Ayurveda. In the last two decades, several other therapeutical values have been documented like anti-Alzheimer, antimalarial, cardiovascular diseases, diabetes, arthritis and HIV inhibitor etc.

2. Indo-Russian DST-ILTP Project

This is a Project for development of new methods and algorithms for pathophysiological characterization of coronary blockage by processing ECG and similar quasiperiodic biomedical signals and images. It aims at designing chip for utilization of results obtained from previous Project in hand held pocket ECG system developed by Russian collaborators.

3. Technology Incubation and Development of Entrepreneurs (TIDE)

This is a DIT funded Project. Its objectives are:

- 1) To encourage the students and Faculty/Teachers of IIIT-A to conceive of and develop electronics and ICT software and / or hardware, which have marketability potential. Thus, this project helps individuals to transform themselves from job-seeker into job-creator.
- 2) To examine and screen the above software and hardware produced in IIIT-A for ensuring that they are free from plagiarism/infringement/imitation of patents and other IPR's.
- 3) To scrutinize their quality features to see that they are patentable.
- 4) To search Angel Investors for the models produced in IIIT-A Incubation Centre.
- 5) To do all other basic jobs as may be conceived of essential for future marketability and sustainability of developed software and hardware.

4. Indigenization of Broadband over Power Line (BPL) Technology

This is a DST-Canada collaborative Project from Corinex Canada to connect adjoining villages in India.

Its objectives are:

Objective of this project is to use electrical transmission lines to carry IP signals for data and voice both. Though the technology has been in use for sometimes in few European countries but its implementation in Indian conditions demands research oriented indigenization as Broadband over Power Line uses PLC by sending and receiving radio signals to provide access to the Internet. Institute hopes that the success of this project would revolutionize the Indian mission of extending cyber services across the rural population equipped with power line infrastructure.

5. Methods for Compensation and Localization of Interferences in Ultra Wideband Wireless Sensor Networks

Wireless communication and MEMS - the two technologies which have revolutionized the way we live have also resulted in the development of wireless sensor networks. For futuristic scenarios, there remains a concern for such unattended sensors to operate and collaborate in the process of sensing, data collection and reporting. Following are some of these concerns:

Scalability: The placement of the sensors in an area should be so as to maintain a balance between number of sensors and coverage required.

Stability: Since sensors are likely to be installed in outdoor or even hostile environments, their failure is an issue of concern always.

Power: Energy conservation is a prime concern at all times.

6. Indo-ASEAN Science & Technology Digital Library

This is an MEA and DST Project with the vision of transmission of our cultural heritage, paper documents of more than 10 million books and editions before the year 1900 and about 100 million since beginning of recorded history with new digital technology.

This is an extension of UDL's Project aiming at "A Million Books To The Web Assembling The World's Biggest Library on Everybody's Desktop".

The IIIT-A has been designated as a Mega Centre in the country.

Identification of Nodal persons from each ASEAN country and ASEAN Secretariat was completed in the first step. There are several presentations by the different experts and three seminars by the ASEAN participants during the workshop. After the completion of first phase of training on full process for digitization, the next step is the 'developing Basic infrastructure Content Digitization Centre for National Languages of ASEAN Member States'. For that purpose, a questioner was sent to all member states as i) The site for hardware to set up the Digital Library ii) Policy regarding access right, iii) Policy regarding copyright, iv) Creation of Linguistic resources and v) Meta data specification.

Scanner and server specifications have been prepared. Indian Institute of Information Technology – Allahabad, India has arranged the installation of scanners at Member States Locations and ASEAN Secretariat H.Q. and in India.

7. Development of Transgenic Wheat Plant

This is a DST-Russian Project aiming at development of transgenic wheat plant against cereal cyst nematode and Sunnpest by using bio-informatics and genetic engineering approaches.

The objectives of the Project are:

1. Sunnpest and Nematodes essential genes predictions and cloning.
2. Computational analysis of genes and proteins (Protease inhibitors and Lectins), siRNA based genes predictions and manipulations.
3. Novel genes development by using Site directed mutagenesis and siRNA approaches. Also cloned in to the suitable vectors.
4. Wheat tissue culture and transformations. Evaluation of Putative genes.

Importance:

Wheat is the major global staple food. Wheat crop yield losses have been incurred due to attack of pests. The major affecting pests in India and Russia are Cereal Cyst nematode (*Heterodera Avenae*) and Sunnpest (*Eurygaster intergrices* puton) projecting Wheat crop is the main concern of this project. Most of the times these pests are controlled with the help of chemical pesticides. These pesticides are hazardous for human being and environment. Biotechnological methods are the safest way to control these problems. In this connection transgenic wheat development becomes inevitable by incorporating Wheat Cyst Nematode and Sunnpest resistant genes.

Progress:

This work includes identification of suitable genes, modeling and validation of proteins, protein- protein docking to identify the required mutation in proteins, RNAi based gene construct development and agrobacterium mediated gene transformation. Plant produces various defense proteins like Proteinase inhibitors (PIs) and Lectins which protect plant against pests. PIs function as pseudosubstrates of digestive proteinase that controls proteolysis of pests. Protease inhibitors and Lectin genes were manipulated by in-silico methods, after analyzing their genomic composition, 3D protein structures and their binding interactions (Figure1), which made them more specific against Nematodes and Sunnpest. Experimentally mutation of amino acids have been

performed by using site directed mutagenesis and suitable genes were developed. Insecticidal activities of the manipulated proteins were determined by conducting different bioassays test. On the other hand we have targeted the proteolytic enzyme Serine proteinase, membrane V-ATPase of Nematode and glycol protein, salivary hydrolyze gene of Sunnpest. siRNA of targeted genes have been designed using various softwares. The multiple siRNA delivery cassettes of these siRNA were built by using different methodologies of RNAi technology. Gene construct cassettes got synthesized and cloned into pG5941 vector (Figure 2 d), having Bar and Kanamycine reporter genes. Wheat callus generation, regeneration of callus and formation of shoots were obtained (Figure 2 a, b & c) by using plant tissue culture techniques. Agrobacterium mediated transformations of each gene constructs have been performed into callus of DBW-17, PBW-550 and DPW-621-50 Wheat varieties and putative transgenic plants development is in progress.

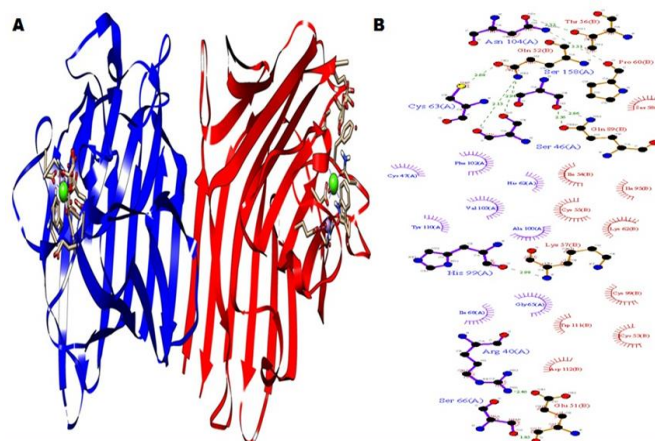


Figure 1:(A) Cartoon representation of docked dimer structure of two monomers modeled structure of *Cicer arietinum* protein lectin contains two metals ions (Mn^{2+} and Ca^{2+}) with D-Glucopyranonse (B) Molecular Interaction plots of docked complexes of *Vigna mungo* with Serine proteinase inhibitor of *Heterodera glycines*. Hydrogen bonds with their bond length between protein interface residues shown in green dotted line.



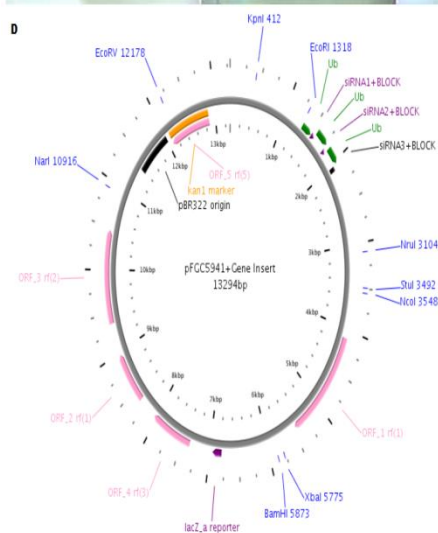
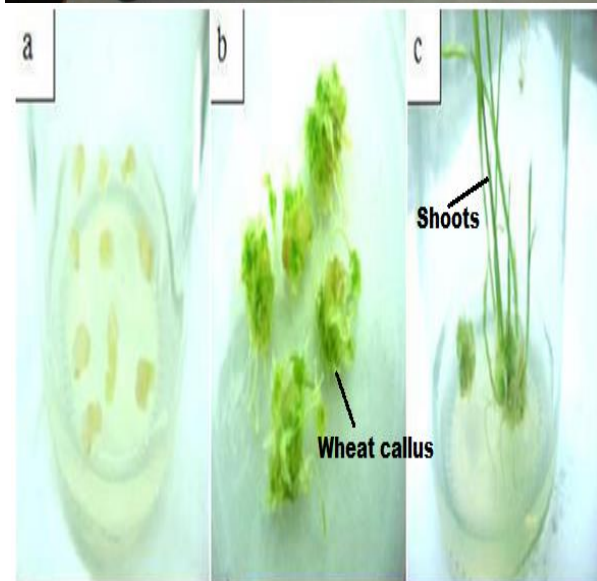


Figure 2: Plant regeneration from callus of Wheat DBW-17. (a) One month old wheat callus induction on MS medium supplemented with 2.0 mg/L 2, 4-D; (b) two month old wheat callus with leaf like green spots; (c) Shoots regeneration on MS basal Medium from callus; (d) Vector map of pFCC5941 with gene insert.

8. Disaster Management System for development of Sensor Network using fault tolerant mechanism

This is a DST Project. Wireless communication and MEMS comprise of relatively inexpensive sensor nodes capable of collecting, processing, storing and transferring information from one node to another. These devices will be able to monitor a wide variety of ambient conditions: temperature, pressure, humidity, soil makeup, vehicular movement, noise levels, lighting conditions, the presence or absence of certain kinds of objects, mechanical stress levels on attached objects and so on. These devices will also be equipped with significant processing, memory and wireless communication capabilities.

9. Science and Technology Discovery Park at RGIIT-Amethi

This is a DST and Purdue University, USA Collaborative Project. The ultimate aim of all academic programs and pursuits is the promotion of welfare of the people. Science & Technology and other branches of knowledge all aim at achieving the same. A delegation of Scientists engaged in the S&T Discovery Park, Purdue University visited India and met the Hon'ble HRM when he was Minister, Science & Technology, Govt. of India about two years back. With his permission and early initiative, a Detailed Project Report for establishing S&T Discovery Park by the Institute at its RGIIT-Amethi Campus was sent to DST with an estimated budget of about 300 Crores which was approved in principle in July 2007. Science & Technology Discovery Park was established for the following segments:

- E-agriculture and traditional agriculture
- Cyber Center
- E-education: Vocational, Medical, Legal
- Employment Generation
- Bio Informatics
- Bio Fuels
- Rural E-enterprise
- Rural Healthcare including Oncology
- Infrastructure Development for Rural India

Considering the poor status of rural population in backward areas of UP, a project entitled S&T Discovery Park Project sanctioned by the Department of Science and Technology, Ministry of Science and Technology, Govt. of India, New Delhi, has been initiated in the segments of E-agriculture and Traditional Agriculture, Bio-diesels & Bio-fuels and Bio informatics.

This project is being implemented at Rajiv Gandhi Institute of Information Technology, Amethi very effectively for following Blocks: Bhader, Bhetua, Amethi and Sangrampur

Objectives of S&T Discovery Park

The work on Discovery Park was started in July, 2009 at Rajiv Gandhi Institute of Information Technology, Tikermafi, a Campus of Indian Institute of Information Technology, Allahabad.

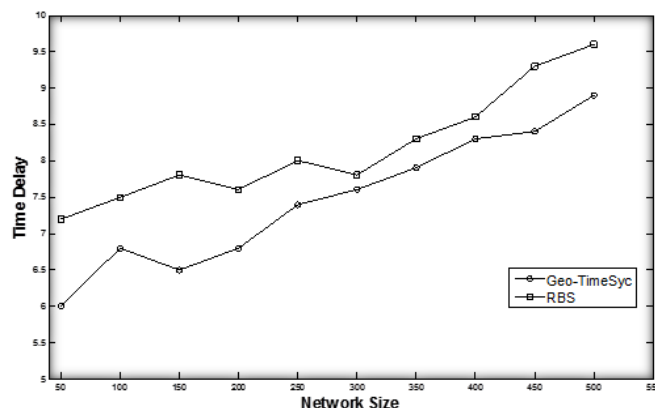
S&T Discovery Park Project has been initiated at Amethi, CSM Nagar with the end of object of rural empowerment in this most backward region of Eastern UP with major focus on Agriculture, Irrigation, seeds, fertilizers, dairy technology, fisheries, soil testing, education and various information

10. "Disaster Management System for large scale deployment of sensor network using a fault tolerant mechanism."

Co-Investigator- Dr. Shirshu Varma

Sponsor-Department of Science and Technology, Govt. of India

Global climate change is increasing the occurrence of extreme climate phenomenon with increasing severity, both in terms of human casualty as well as economic losses. Authorities need to be better equipped to face these global truths. Efficient disaster detection and alerting system could reduce the loss of



life and properties. In the event of disaster, another important issue is a good search and rescue system with high level of precision, timeliness and safety for both the victims and the rescuers. Recently, Wireless Sensor Networks (WSNs) have

regarding health, hygiene, crops, fuels, manures etc. The emphasis has been placed on the following points:

- 1. E-agriculture and Traditional Agriculture**
Herbal, Vegetable, Inter-cropping, Fruit crop Floriculture, Cereals & Pulses Crops, Farmers' Training Programs/Workshop
- 2. Bio-diesels & Bio-fuels**
Bio-fuel, Farmers' Training Programs/Workshop, Inter-cropping
- 3. Bio informatics**
Bio-fertilizer, Dairy management and Animal Husbandry, Poultry development, Bee-Keeping, Fisheries-development, Bio-Pesticide control, Farmers' Training Programs/Workshop, Food Processing Program

become mature enough to go beyond being simple fine grained continuous monitoring platforms and become one of the enabling technologies for disaster early-warning systems. Event detection functionality of WSNs can be of great help and importance for (near) real-time detection of, for example, meteorological natural hazards and wild and residential fires.

A WSN used for disaster detection and alerting system could sense for any significant changes in the environment and send an

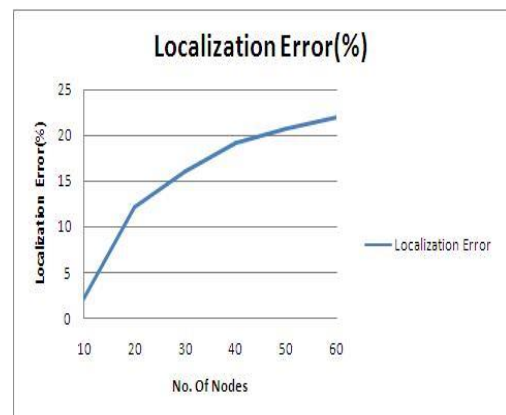


Fig 1: Localization error due to Interference and NLOS

appropriate alert signal, for example sensors sensing water level at a river bank and tiltmeters at a hill side could alert the authorities and public for possible flood and landslide. In search and rescue application the deployed WSN scan the disaster area and locate the victims via the numerous sensing

modes. The WSN can then provide the search and rescue teams with the identified locations of the victims needing rescue. The WSN can also provide the teams with crucial information such as the surrounding of the disaster site, obstacles that they need to overcome and avoid, etc. Thus, the search and rescue teams will be able to plan their operation with higher level of precision, timeliness and safety for both the victims and their members.

Furthermore, Cross-layer design states that parameters of two or more layers can be retrieved and/or changed in order to achieve an optimization objective. The concept of cross-layering has been first proposed for TCP/IP networks, when wireless links were deployed. Since the TCP/IP stack has been proposed for wired connections, there was a loss of performance when wireless technology became part of existing networks. Lately, cross-layering is a field that has been attracting more attention in WSNs research and it is still in its early development in this type of networks since it has not been deployed on many test-beds or networks yet. However, different solutions have already been proposed in the literature, and at least in numerical frameworks or simulations, they have proven to achieve better performance gains than their layered counterparts. Common goals of cross-layer optimizations in WSNs are reduction of energy consumption, efficient routing, QoS provisioning, and optimal scheduling, as can be verified throughout this work.

Some of the results showing the time delay with the size of the network and the localization error for the deployment strategy for the application of disaster management has been simulated as follows: (this takes care of cross layer management for the optimization of resources)

11. Digital Library Mega Center: Content creation in Tibetan, Sanskrit and English – Phase II

Total nos. of digitized pages is approximately 7.5 million pages till March 2012. The libraries which are involved during this

period: Allahabad University, RKM, Allahabad, NASI, Allahabad, GIDS, Lucknow, IIPA, New Delhi, IAMR, New Delhi, USI, New Delhi, IDSA, New Delhi, Bundelkhand Uni. Jhansi, ASI, New Delhi, Bharti Bhawan Library, Allahabad and Ewing Christian College, Allahabad. Metadata creation in a new format and pdf of each document are also in process.

12. English to Indian Language Machine Translation System (Till March 2012)

There are two types of work under EILMT consortia: i) Develop linguistic rules and resources and ii) technology development.

For the first part, Language resources are completed as i) Translated 15,000 sentences, ii) Elementary TAG trees, iii) 1921 synsets, iv) lexicon sets – 1 to 6, v) Collected testing data for different places from different web sites and vi) Translated 6,200 sentences

For the second type, i) development of Linguistic Resources Management Tool, ii) LRMT maintenance, iii) Morph synthesizer, iii) tested EILMT system for Urdu sentences, iv) Enhance the LRMT for new languages, v) Preparing and analyzing the requirement and design for enhancement of LRMT as a Web-based tool and system requirements for the integration of annotation module with LRMT tool, vi) TAG Grammar Creation, vii) SMT Language Model and Evaluation

13. Indian language to Indian Language Machine Translation System (Till March 2012)

The tasks have been completed as i) Tagged 6300 Urdu sentences containing total 101444 words from tourism domain. We have used 12 tags (NEP, NEO, NEL, NEN, NED, NEM, NEA, NEB, NETI, NETO, NETP & NETE) in Urdu sentences. Total number of NE is 7521, ii) Tested and given the grade to the 200 Urdu to Hindi sentences and 200 Hindi to Urdu sentences for IILMT output according to their accuracy, iii) Evaluation report for language pairs (Hindi to Urdu 801 sentences & Urdu to Hindi 954 sentences) on the basis of grade scale, iv) 16 Urls for Urdu home page are identified, v) Clause boundary identification using classifier and clause markers in Urdu language and vi) using linguistic rules, manually tagged and chunked 5000 Urdu words. Participated in i) workshops on Clause Boundary Identifier, Monolingual Lexicon and Multi Word Expression and ii) in developing standards for linguistic annotation of the Indian language corpora and then develop language specific Tag sets based on the general tag set (BIS POS Tag set : Urdu).

14. Development of robust document analysis and recognition system for Indian Scripts – Nepali and Tibetan (till March 2012)

As per tasks defined by the consortia, various parts are completed like 1. Annotation of Tibetan text completed 2. Initial version of the OCR is given for testing 3. Results of error reports being investigated 4. Work on HoG based classification

15. Wireless Sensor Network support for Wildlife Research and Management

The research work on wireless sensor network has led to a number of significant projects of impact on the society. One of them is Wireless Sensor Network for Forest Protection which is an NSF-DIT R&D Project. Various solutions are being developed for the protection of forests, human beings and animals under the NSF-DIT research Project.

Forest Dept faces many challenges or problems and needs solutions to these problems due to their impact on society, climate and ecology.

Some of the Project objectives given below flow from these needs:

- Ecological & behavioural studies of wildlife, their habits, calls, communication & habitat in order to take care of them
- Map wood biomass & vertical eco-structure of forest
- Prevent Human-animal conflict by protecting humans and their property from animal intrusions and protect animals from being killed by trains & disturbed by vehicular traffic
- Detect and prevent damage to the forest through Logging, intrusion, encroaching etc. – man made; and due fires, floods, landslides – nature made
- Protection of wildlife from Poaching, monitor guards & protect them from poachers etc.
- Design non-intrusive Ecotourism
- Monitor the health of captive Zoo animals
- Study the behaviours, communication of animals, map biomass, and vertical eco-structure of forest – monitoring and tracking animals, habitat and eco structure mapping – Doppler radar, RFID, Camera trapping, frequency spectrum analysis of animal communication and its processing
- Prevent Human-animal conflict & protection of animals against rail & road traffic – Virtual Fence – Doppler/ Microwave radar,

has been initiated based on the suggestions received during consortium meeting 5. Work on nearest neighbor based classifier started 6. Work on stroke based classifier started 7. Creation of confusion matrix based on the current OCR. Using the confusion matrix, to build a second level of OCR is another task and this is in progress.

Ultrasonic, RF Absorption/ reflection, WSN, SW algorithms

- Logging, encroaching, disturbing the forest environment, forest fire, floods –monitoring for movement, sound, Virtual fence, PIR/US/ Doppler, temperature sensor, WSN, DSP for blind source separation, rain and/or water level gauges & flood prediction & handling models
- Poaching – space monitoring for human presence & activity at sensitive places at certain times – microphone, PIR/US/ Doppler, accelerometers, ground vibration sensors – mote assembly
- Ecotourism without disturbing forest/animals – monitoring the forest guards, tourism vehicles, tourists, animal movements, warnings – control design of tourism transport vehicles & procedures, detection of animal movements and information availability, monitoring violations of the procedures
- Monitoring health of Zoo animals – Health monitoring through vital parameters – Medical sensors and development of a processors data

Thesis Title

“Receptor based computational studies on designing novel drugs for treatment of cancer and some endemic diseases”

Cancer is a public health problem and leading cause of mortality worldwide, with 7.6 million deaths (around 13% of all deaths) as reported in 2008. It is a disease characterized by uncontrolled growth of cells and their ability to invade other tissues. From the recent publications it appears that curcuminoids are playing a significant role in combination therapy of tumors and cancers. Curcuminoids occurs in turmeric as a mixture with four of its analogs viz. curcumin, demethoxy-curcumin (DMC), bis-demethoxycurcumin (BDMC) and cyclocurcumin (CC). There are more than 5000 publications and approximately fifty patents documented till 2012 on curcumin applications. The objective of this thesis work is to design novel potent curcumin based analogues/conjugates/congeners against this deadly disease by using structure and ligand based hybrid approach and study of their QSAR, e-pharmacophore and pharmacokinetics.

Name of Guide / Faculty:

Prof. (Mrs.) Krishna Misra

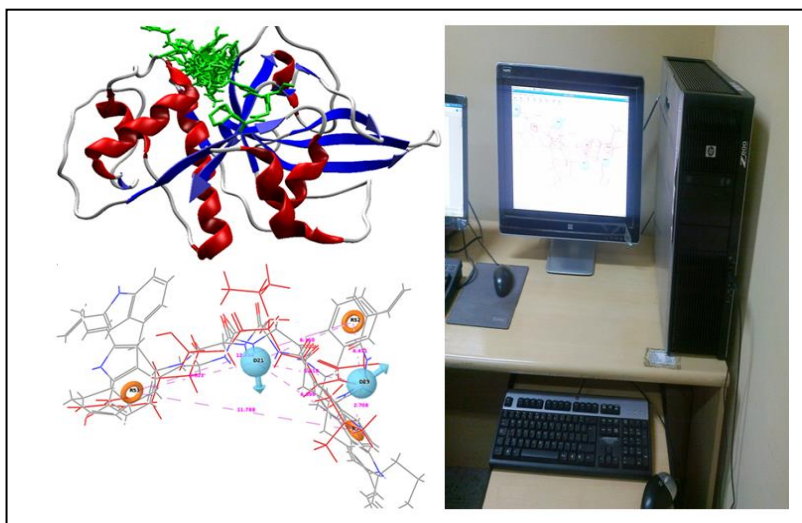
Name of Research Scholar:

Rajesh Kumar Kesharwani

(Roll No.): **RS68**

Name of Division where working:

(APPLIED SCIENCE AND IRCB DIVISION)



Cloud enabled Robots

In conventional robots, every task like building a map, navigation, path planning, grasping an object and recognizing a face requires a considerable amount of processing and pre-programmed information. As a result of this, sophisticated systems like humanoid robots, PR2 robots, Robo-dogs, aerial unmanned vehicle (AUV) are required to carry powerful computational units and large batteries to power them. Cloud-enabled robots can offload CPU-heavy tasks to remote servers, relying onboard computers that are smaller in size and that consume lesser power. Even more promising, the robots can turn to cloud-based services to expand their capabilities. With new advances in cloud enabled robotics, it is also possible that in future, when robots feed data into a "knowledge base" where they can share their interactions with their world and learn about new objects, places, and behaviors. SOA is a key framework used to provide robotic services, whereas, ROS (Robot Operating System) provides the abstraction over robots.

The goal of this research is to create a framework that can offload data intensive and computationally intensive workloads from the onboard resources of robots to cloud. Moreover, the cloud can be used for exchanging useful data/information, and give rise to robots to work as a team. Apart from this, a robot can also demand for services like path planning, navigation etc. through cloud, which it is not able to carry out due to its limitations.

Name of Guide / Faculty:

Dr. Pavan Chakraborty

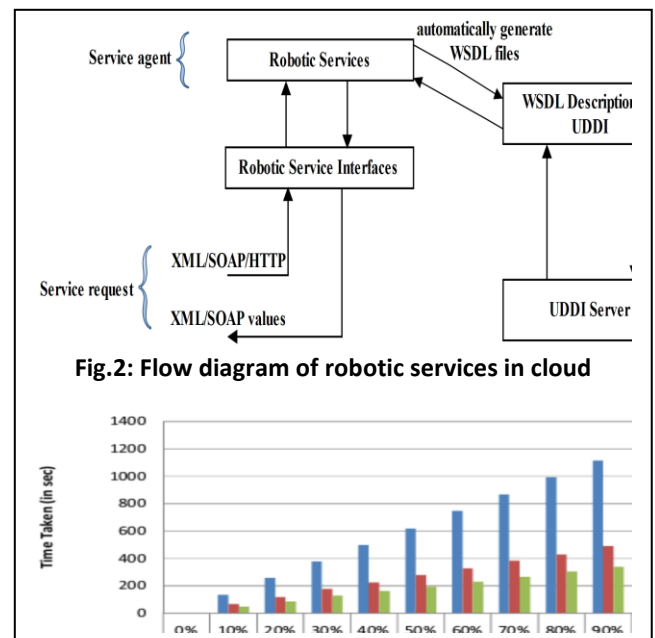
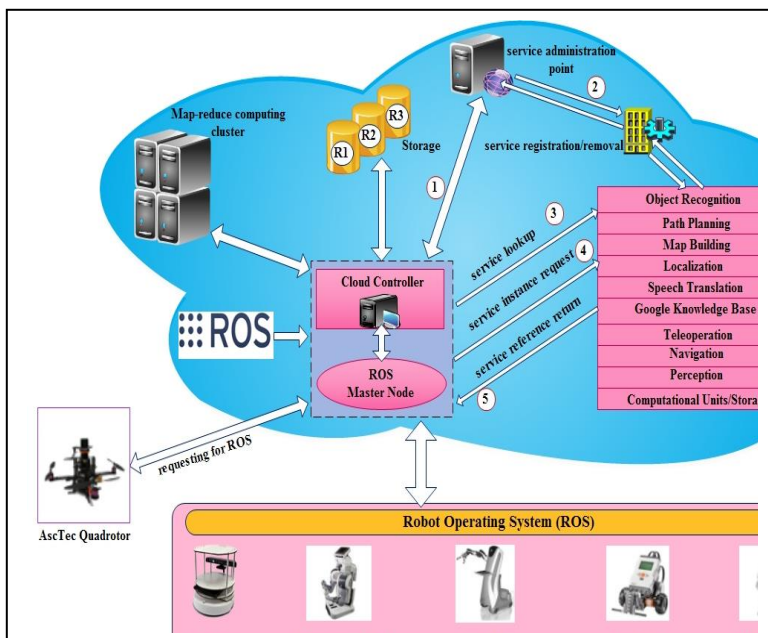
Name of Research Scholar:

Rajesh Doriya

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Name of Division where working:

IT DIVISION

Development of a New Scheme for Enhancing the Mobility in 4G Wireless Networks

Currently, standardization (e.g., International Telecommunication Union-ITU [1], European Telecommunications Standards Institute-ETSI) and related bodies are looking for answers to the following questions of next generation radio systems: definition, closely related radio technologies and their functionalities, key technical characteristics, requirements, performance, benefits, the potential applications, the operational implications, capabilities that facilitate coexistence with existing systems, possible spectrum-sharing techniques and the effect on the efficient use of radio resources. For example, according to the evaluation process of ITU-R, International Mobile Telecommunication-Advanced (IMT-A) candidate proposals need to fulfil a set of 13 minimum performance requirements and provide coverage in a number of deployment scenarios, namely: indoor hotspot, urban micro-cell, urban macro-cell, rural macro-cell and suburban macro-cell [2]. The IMT-A systems are meant to support low to high user mobility, various data rates, support for multiple environments while having capabilities for high quality multimedia applications and provide a significant improvement in performance and quality of service, and their research and development was prompted by an ever increasing number of mobile traffic and devices using Internet Protocol (IP) services [3]. The overall trend is that new radio access systems are getting deployed, while the legacy systems are also maintained defining the telecommunication systems environment as very dense and highly heterogeneous.

Name of Guide / Faculty

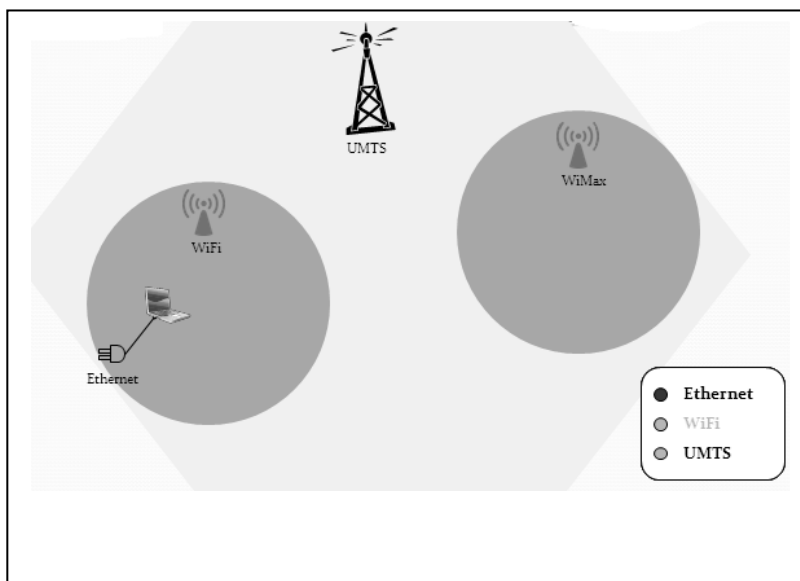
Prof B.R.Singh & Dr Neetesh Purohit

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Engineering Division**



Machine Translation: Statistical Approach Augmented with Intrasentential Information

Machine translation (MT) refers to the use of computers to automate the process of translation from one language to other language. Statistical machine translation translate documents according to the probability distribution $p(e|f)$ in which string e in the target language (for example, Hindi) is the translation of a string f in the source language (for example, English). Statistical machine translation requires three components:

$$p(e|f) \propto p(f|e)p(e)$$

- Translation model $p(f|e)$: It is the probability that the source string is the translation of the target string.
- Language model $p(e)$: Kind of sentences that are likely in the target language.
- Search algorithm: Finding the best translation is done by picking up the one that gives the highest probability.

In translation model, we do word alignment by using parallel corpus and a statistical algorithm. The performance of a word alignment model for statistical machine translation system depends on size of available bilingual training corpus. On the other hand, acquiring a large high quality bilingual parallel corpus for a language pair of the desired domain requires a lot of time and effort, and even for some language pairs, it is not possible. Besides it, small sized corpus has certain advantages like low memory and time requirements for the training of a translation system. Therefore, investigation of word alignment with small amounts of bilingual training data is receiving more attention. POS (part of speech) tagger helps to improve the performance of word alignment even when the corpus is not too large. The results on the right side illustrate the same. Performance of the word alignment is evaluated by using F-measure and AER (alignment error rate). IBM Model 1 is the basic word alignment algorithm.

Name of Guide / Faculty

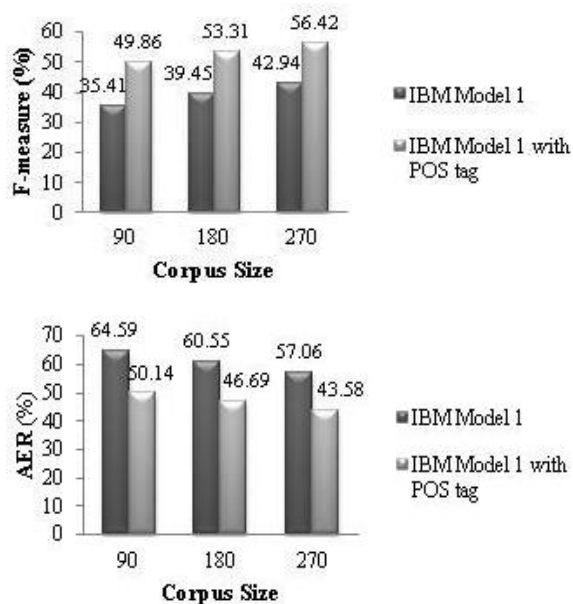
Prof. Sudip Sanyal

Name of Research Scholar

Jyoti Srivastava

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Name of Division: IT DIVISION



Impact of performance appraisal system of academic Institution: A study

Name of Guide / Faculty	Dr.Anurika vaish
Name of Research Scholar	Seema Singh
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Performance management, mainly in terms of academics in higher education has not received enough attention from Government and policy makers in the past. Its contribution to enhance institutional performance and quality appear to have been neglected. Consequently, universities adopted a *laissez-faire* approach to performance management and thus, operated on a “high trust” basis within an ethos that emphasized independence of thought and scholarship, academic freedom and collegiality.

Currently, performance appraisal at a majority of the universities still consist of the conventional annual work report and the assessment after a tenure is completed, which is generally a quantifiable description of an academic staff’s teaching and research work. The deficiency of such a method lies in a lack of overall assessment of the staff’s performance; therefore it is of great significance to design a new system of performance appraisal.

Effective appraisal system positively affects employee’s morale, motivation, commitment, satisfaction and productivity also. In organization performance appraisal mainly focus productivity but in educational institution appraisal system is focus on qualitative measurement. Therefore in this research I will undertake in depth study of private and public universities of U.P and Delhi to analyze their performance evaluation system by exploring challenges and influential factors associated with implementation of systematic performance evaluation system and analyzing appraisal effect on motivation and satisfaction of faculty in higher education



Fabrication, Characterization and Reliability Study of Atomic Layer Deposited HfO_2 , a High-k Gate Dielectric for next generation MOS Technology

The challenge of continuous downscaling of CMOS devices and the fundamental limit of SiO_2 gate dielectrics being further scaled down has led to the investigations regarding the use of high dielectric constant materials to replace conventional silicon dioxide and silicon nitride films. Higher dielectric constant oxides permit the use of physically thicker gate insulator, keeping same gate capacitance while reducing the gate leakage. The gate leakage has exponential dependence on insulator thickness. Hafnia (HfO_2) and other hafnium based oxide family are the most promising candidates for replacement of Silicon based family as insulator. Hafnia is still a subject of comprehensive research and many aspects of the fabrication process are yet to be explored for the processing of high-k materials. Control over interfacial layer growth, and interface trap charges, and suitability for higher temperature processing are critical issues.

The purpose of present research work is to establish a process flow for the atomic layer deposition of thin HfO_2 and study the reliability of these oxide films under temperature, voltage stress and radiation environments.

Name of Guide / Faculty

Prof M Radhakrishna & Prof B R Singh

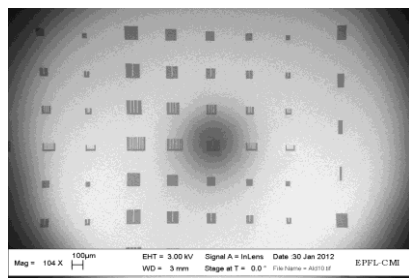
Name of Research Scholar

SAVITA MAURYA

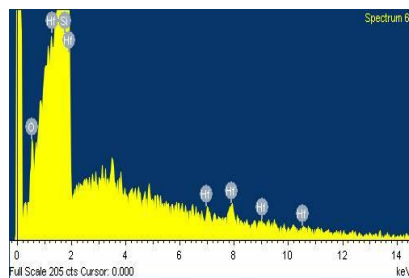
(Roll No.) *RS83*

Name of Division where working:

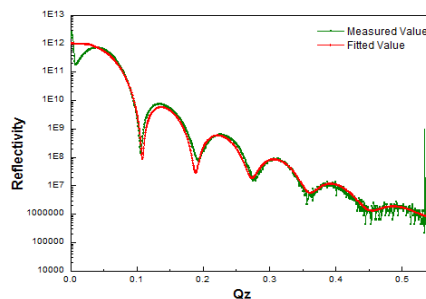
Electronics Division



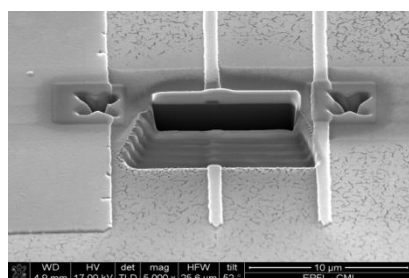
SEM Image of final devices



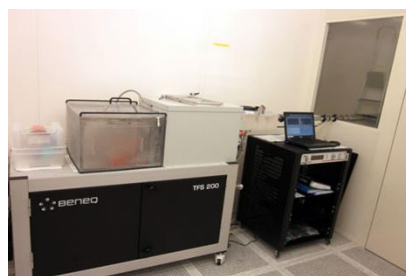
Energy Dispersive X- Rayanalysis



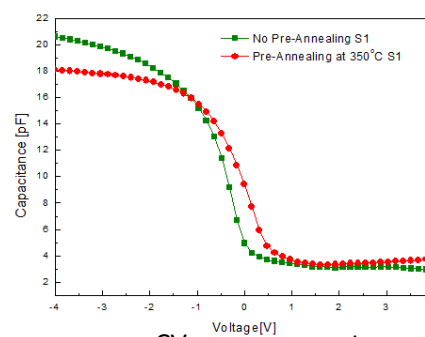
X- Ray Reflectivity measurement



FIB cut at Si / HfO_2 interface



ALD System used to deposit HfO_2



CV measurement

Investigating High Dimensional Data Mining for Descriptive & predictive Analytics with special Reference to Outliers

The amount of electronic available data and information with the use of advanced technology in application is growing in breathtaking speed. This is mainly caused by digitalization, automation and integration of application process. This flood of data gives a competitive advantage for research and to do analysis and use it in goal oriented way. In this, the High Dimensional data poses a great challenge due to the curse of dimensionality and specificity of similarity between points in high dimensional space. We have developed a hybrid approach to find the outlier in sparse High Dimensional data. The approaches for Outlier Detection are: To determine the outliers with no prior knowledge of the data, Model both normality and abnormality and Model only normality.

In High dimensional datasets there is a large number of attributes, here the main challenge is to reduce the given dataset in the way so that the knowledge it contains should be preserved. In the conventional algorithms we can see the tradeoff between complexity and accuracy. My aim is to analyze high dimensional data with the help of Data Mining techniques to present it in a more visualized form so that end user can easily operate them for extracting more hidden patterns in the way they want and maintain the balance between accuracy & complexity of algorithm.

Name of Guide / Faculty:

Prof. O. P. Vyas

Name of Research Scholar:

Bharat Singh

(Roll No.): RS97

Name of Division where working: (1). IT DIVISION

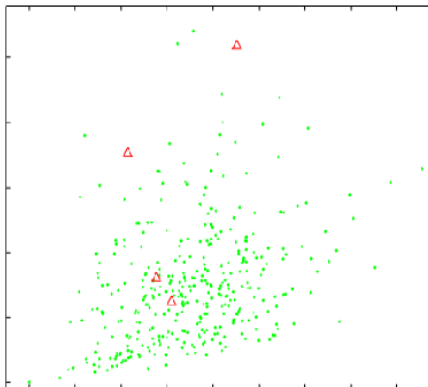


Fig 1

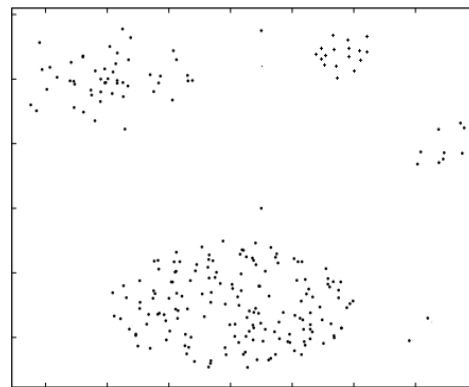


Fig 2

Wisconsin Diagnostic Breast cancer data having 32 attributes is a High Dimensional data. In the Fig 1 2D projection of cancer data set and Fig 2 point distribution of synthetic data.

Title: A Study to Develop Appropriate Tools and Methodologies for Searching and Vetting of Originality in New Copyrights and Patents

The major issues of the basic Intellectual Property Rights are proposed for the research areas which consist of Copyrights, Patents. The only consideration for the search and retrieval of the most relevant prior art for the aforesaid areas in context of textual matter is proposed.

To study and develop the methodologies for the retrieval of the relevant data from the internet as well as local databases for the text given has been proposed which count the issues of the copyright and technology infringement like references cited in the research papers, patents, free websites used for the content and in-house matter taken on record.

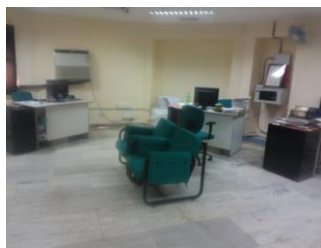
**Name of Guide / Faculty- Prof.
R.C.Tripathi**

**Name of Research Scholar- Mr.
Ranjeet Kumar**

(Roll No.)- RS98

Name of Division where working:

- 1. IT/IPR DIVISION**
- 2. ELECTRONICS DIVISION**
- 3. MANAGEMENT AND
CYBER LAWS DIVISION**
- 4. APPLIED SCIENCE AND
IRCB DIVISION)**



The Role of Information Technology in Enhancing Human Resource Development in Organizations and Its Limitations

An Analysis of National and Multinational Organizations

The discipline of Human Resource Development (HRD) grows in significance and influence to eventually manifest itself as business savior if employed effectively. We can all sense that in the emergence of key concepts such as Learning Organization, Knowledge Management and Human Capital which are frequently being mentioned by corporate leaders who still struggle to formulate practical strategies to incorporate them in organizational settings.

Many medium and large size corporations tend to confine human resource development to training activities as if it's the perfect remedy for all managerial and operational problems faced by business. The time has come to move beyond viewing training as the sole measure to sustainable competitive advantage and to focus instead on applying a wide range of human resource development initiatives, for instance, promote learning and development and utilize the available volume of information by managing organizational knowledge.

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Citation Network of India Patents

Patent do not necessarily signal innovations, as some of them are never applied on to the market, but remain as inventions. Patents cite other patents. All of these citation links form a complex highly-interconnected network linking patents to each other. These networks tend to have similar properties and are governed by simple but generic laws. Patent citation help to gauge the importance of different patents in technological evolution. My Research is to develop a citation network based on the abstract provided by patent office India, using semantic information retrieval. The work will involve first extracting the citation network from the patent database in a format readable by the software. This should then be analyzed to find hub patents and there after technology road mapping of innovation activity.

**Name of Guide Prof. R. C.
Triapthi**

**Name of Research Scholar:
Pawan Sharma**

(Roll No.) RS102

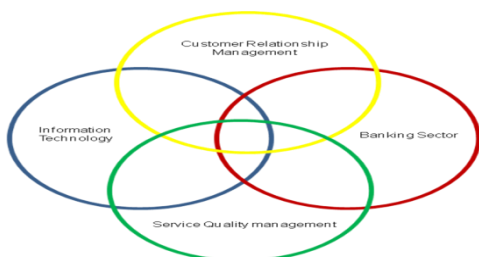
**Name of Division where working:
PATENT REFERRAL CELL (PRC)
MSCLIS DIVISION**



Factors affecting the adoption or acceptance of Internet Banking Services in India

Overview:

Internet has brought a tremendous change in the banking sector with the emergence of internet banking in mid 90's, which enabled electronic services, fund transfers, payment of bills from one part of the country to the another end of country and now it has gone global. Internet banking also facilitates customers with quick fund transfer and 24*7 services. The involvement of Information Technology has been the main reason behind the economical growth of Indian banking industry.



This can be done by making improvement in each factor related to internet banking directly or indirectly. Our work will attempt to study the various factors related to online banking that produce positive or negative impacts on Indian internet banking customers and our focus should be laid on the viewpoints of both the customers as well as the managers for the successful adoption and acceptance of internet banking services. The research will illustrate the combination of internet banking service and factors influencing the acceptance of internet banking, with the real world implementation of an IT service at the banking industry. The IT services will be compared with the service expected by the customer on the basis of different dimensions like Reliability, Assurance, Tangibility, Empathy, and Responsiveness.

Name of Guide:

Dr. Vrijendra Singh

Name of Research Scholar:

Vaibhav Mishra

(Roll No.): RS 106

Name of Division:

MBA & MS-CLIS

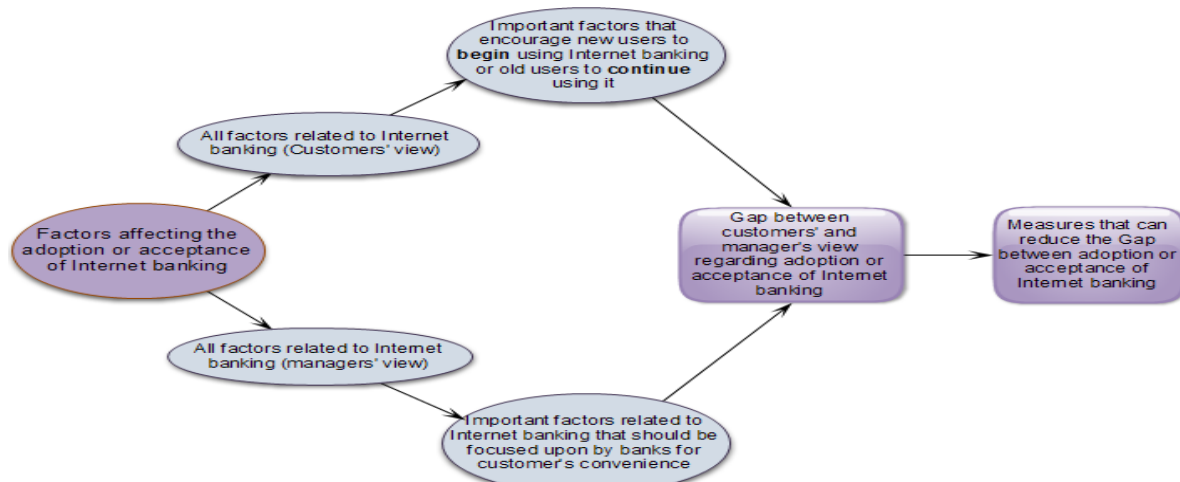


Fig: Proposed Model to reduce the gap between customer-manager perspectives for internet banking

Protein Structure Validation: a study based on semi-empirical methods

Extraction of information on various properties of protein has great pathophysiological importance. Among them, to deal with side effects of drugs, current approach of drug design thrives on formulating a drug which should be specific to the target. Eventually, targets are quite often being a protein (foreign or internal) the drug binding sites of a protein comes out to be a fundamental point of interest for researchers dealing with enumeration of functional site or more specifically active site of a protein. Moreover, functional site of a protein is an integral part of surface of a protein. Therefore, study on protein active site comes out to be equivalent to study on protein surface only. However, in this regard, the tragedy is that, surface of a protein is currently derivable from its known structure only, e.g., PDB accepted structures (87279 entries upto 8th January, 2013) which comprises of nearly 16% of total pool of protein sequences (538,849 UniProtKB/Swiss-Prot entries upto 9th January, 2013) only. These known structures account both experimental methods (e.g., X-ray crystallography, NMR and very few by Atomic Force Microscopy) and predictive methods (e.g., homology and threading model).

More importantly, predictive methods are not much accurate while the fact that many models obtained for a particular template of interest, makes the task of selecting the right model or best model more challenging. For approx. 90% of proteins, there is virtually no way to get the structure of a protein which is the primary step to find its active site. The drawbacks of these current approaches are as follows:

1. Derivation of protein structure: Experimental methods are time consuming and also not applicable for most of the proteins.
2. On the other hand, predictive methods are not so accurate.
3. Derivation of protein surface: The current surface finding methods can hardly include all active site residues.

Therefore, in this thesis work the main focus is to:

1. Design simple experiments to extract Structure Signature Parameters of a protein, for example, utilization of roughness properties of protein assemblies of the concerned protein for the same purpose etc.
2. Extract information on protein Surface Parameters, for example, Surface Roughness Index, 3D Zernike descriptors etc.
3. Predict Surface Parameters from Structure Signature Parameters of a protein.
4. Use of Surface Parameters as a validation parameter for selection of best structural model of the concerned protein out of confusion set of various predicted models of the same protein.

Name of Guide: Dr. T. Lahiri

Research Scholar: Kalpana Singh

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Name of Division: Applied
Science and IRCB division



UV & Phase Contrast microscope



UV-Spectrophotometer

A Systems Biology Approach to Understand Regeneration and Differentiation Mechanism of stem cells

Stem cells have the capability to self-renew and maintain their undifferentiated state or to differentiate into one or more specialized cell types. Stem cell expansion and manipulation ex-vivo is a promising approach for engineering cell replacement therapies, and endogenous stem cells represent potential drug targets for tissue repair. Before we can harness stem cells' therapeutic potential, we must first understand the intracellular mechanisms controlling their fate choices. These mechanisms involve complex signal transduction and gene regulation networks and their features.

To understand networks of various regulatory factors systems biology comes in picture. Systems Biology applies computational and experimental approaches to investigate the behavior of collections of molecules and to explain how these numerous components interact to regulate molecular, cellular and organismal behavior. Here we focus on systems biology, and in particular computational efforts to understand the intracellular mechanisms of stem cell differentiations and regenerations. However various regulatory factors like miRNAs, transcription factors etc have been reported which play important roles during differentiations and regenerations

Name of Guide / Faculty

Dr.C.V.S.Siva Prasad

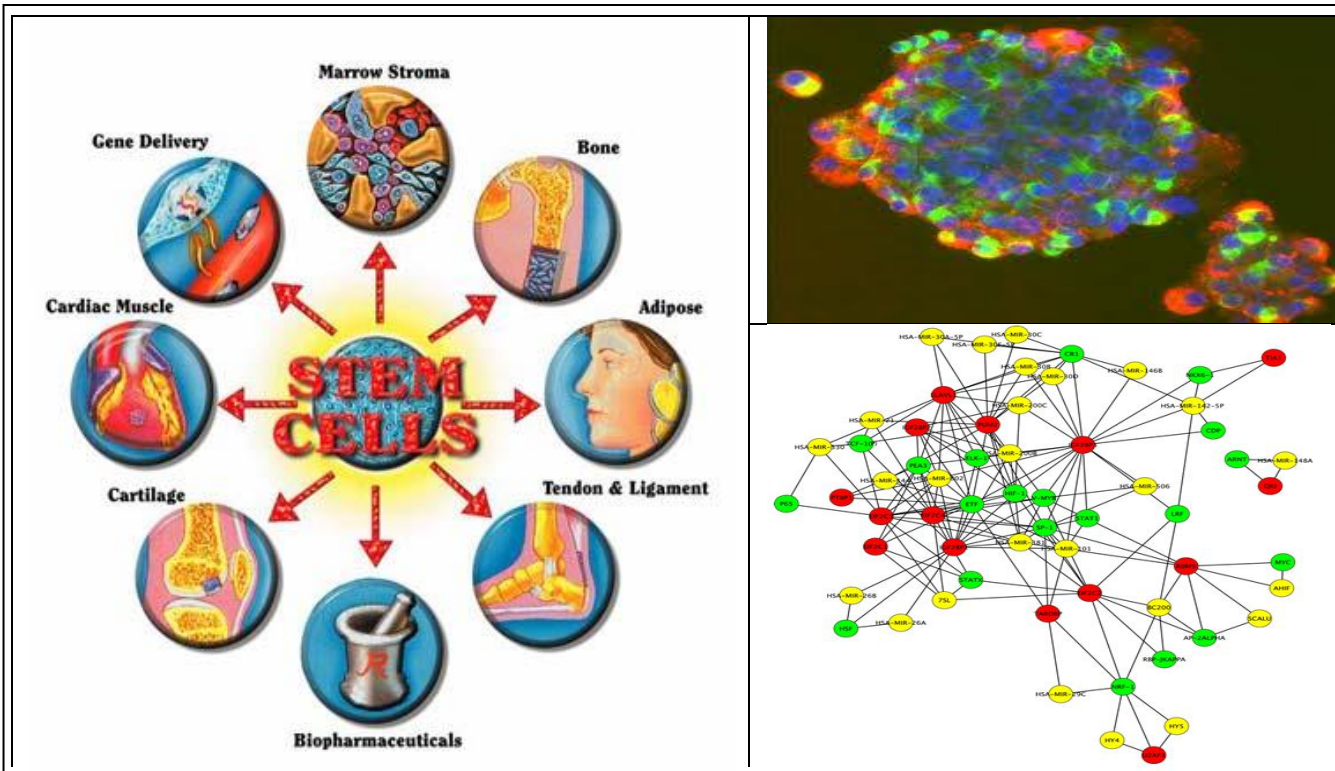
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Title of the Research

Analysis of commodity market & price fluctuations in non-ferrous metals: A study for hedging risk

Commodity price fluctuations has always been a point of concern for every economy whether developed, developing or underdeveloped economy. The idea of uniform price in the market is totally unrealistic in nature and therefore, results in the destabilizing of the economy.

Since 2002, the future market of non-ferrous metal commodities in India experienced an unprecedented boom in the number of modern exchanges and number of commodities allowed for derivatives trading. Recently, India has achieved sixth rank in turnover of global commodity derivatives exchange which was seventh until 2009.

The objective of research is to analyze the market trend of the non-ferrous metals especially gold, platinum and silver and study the price volatility of the precious metal and its various parameters responsible for price volatility and its sensitivity during the past decade in the global market. Suggest a mathematical model/framework for hedging the various risks like exchange risk, volatility risk and political risk etc.

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Dr. Anurika Vaish

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Name of Division where working:

MANAGEMENT AND CYBER LAWS
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Effects of Radiations on High-k/Si Interface Properties

The objective of my work is to study high-k dielectrics' to reduce off-state leakage currents in highly scaled devices and influence of different radiation responses on high-k dielectrics to be incorporated in future IC's.

Study of the influence of radiation on the MOS structures with high-k dielectrics. For zirconium oxide gate dielectric stacks, the density of oxide trapped charge dependence on the film thickness and processing conditions will also be studied. Studies on how the various processing methods used to fabricate devices with alternative high-k dielectrics will affect the radiation response of these materials will be done. Study of changes in defect characteristic of MOS structures induced by irradiation. The samples will be irradiated with different radiations for different time. The distributions of radiation induced interface traps, located at the high-k/Si interface will be obtained from capacitance-voltage characteristics. Study of threshold-voltage dependence on interface trap and oxide-trapped charge for different oxides. However, it is not yet known how irradiations with energetic particles will affect the long term reliability of MOS devices with high- k gate dielectrics in a space environment.

Name of Guide / Faculty

Prof.B.R.Singh

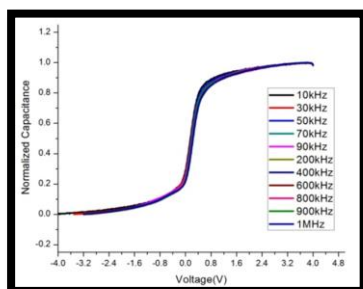
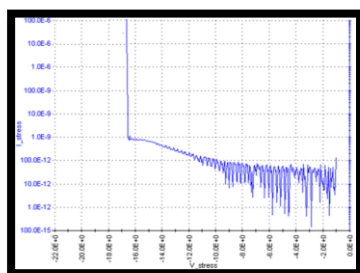
Name of Research Scholar

AshwathRao

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ELECTRONICS DIVISION



1.Voltage breakdown characteristic of nitrogen incorporated ZrO_2 MOS capacitor. 2.Flat band shift in CV curve with varying frequency in nitrogen incorporated ZrO_2 MOS capacitor. 3.Semiconductor Characterization System



Application of Game Theory to solve issues of Communication Networks

In everyday life, it is common to be in situations where the outcome of a situation depends not only on what we do, but also on what other people do. This is clearly the Case when participating in an auction on the Internet, voting at a presidential election, negotiating a price with a seller, trying to find a seat in a bus or in the metro, etc. All these situations are referred to as a “game” in game theory. Game theory has recently been applied to Networking & telecommunications area My research objective are

- To design an economic framework for cognitive radio networks so that the spectrum can be utilized in a better manner.
- To design 4G wireless networks for future wireless communication.
- To design intelligent algorithms for dynamic spectrum access & management for wireless communication networks.
- To analyses a game theoretic view for today’s most promising technology Cognitive Radio Networks

Name of Guide / Faculty

Guide- Prof. B. R. Singh

Co-Guide- DR.Rajat Kumar Singh

Name of Research Scholar

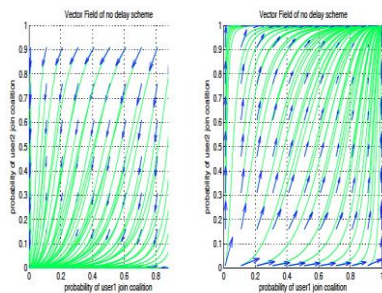
Amit Kumar Gupta

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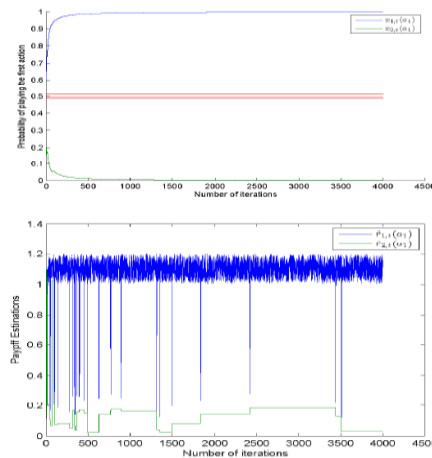
Name of Division where working:

**ELECTRONICS
DIVISION**

Case 1: $p_1 p_2 < \epsilon_C$, Case 2: $p_1 p_2 > \epsilon_C$.



Result: $p_1 p_2 < \epsilon_C, x_{C,t}^1, x_{C,t}^2 \rightarrow 0$.
 $p_1 p_2 > \epsilon_C, x_{C,t}^1, x_{C,t}^2 > 0$ then $\min_j x_{C,t}^j \rightarrow 1$



Development of a Framework for Autonomous Robotic Manipulation and Grasping

When assessing a robot in terms of social performance, we must consider the larger goal of the robot in its application context. For creating a robot that can interact socially in our daily lives the robot should be featured with some capabilities that may cut off some of our human efforts. Towards the end, we will be in the process of developing a robot which bears a personality, and which can behave according to social conventions. The main objective of this attempt includes the development of an efficient and cost effective method of interaction between the end user and a robot which can assist directly in our daily life by grasping and manipulating objects for elders or physically handicapped with least physical intervention. We are already familiar with robots devoted to the tasks in industrial manipulation where they are providing satisfactory progression. But the industrial environment is highly uncluttered simulated environment where the task of repetition and precision gets greater priority than collision-awareness and novice trajectory planning ability. Autonomous Robotic Grasping and Manipulation in cluttered

Name of Guide / Faculty: Dr.Pavan Chakraborty

Name of Research Scholar: Abhijit Makhal

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Title of the Thesis Work: Quantification of Readers' Visual Attention on Digital Text Documents to Analyze Their Behavior

Introduction:

An **Eye tracker** is a device for measuring eyes- position and eyes- movement on a digital display device e.g. monitor. Eye trackers are used in research on the visual system, in HCI, in psychology, in cognitive NLP, in In-vehicle Research, in Vehicle Simulators, in product design etc. An eye movement contains three type of event: Eye-fixation, Eye-saccade and Eye-blink. The eye-tracker available at SILP lab in IIIT-A is of SR-Research Ltd. and model name is EyeLink, 1000 generates real-time digital data containing these events according to the user's eye movement during looking to the monitor. It contains a CCTV camera with IR light source, a computer system linked with a Host-Computer-System.

The proposed thesis work is to develop "**Eye tracking based Text-document Comprehension system**" which uses eye movement data as input to catch the situations when a reader—while reading text written in English—seems to have comprehension difficulties. Currently, the system is able to map the fixations of a reader onto the words (Gaze Words) being read and accordingly displays related information on the screen.

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Santosh Kumar Barnwal.

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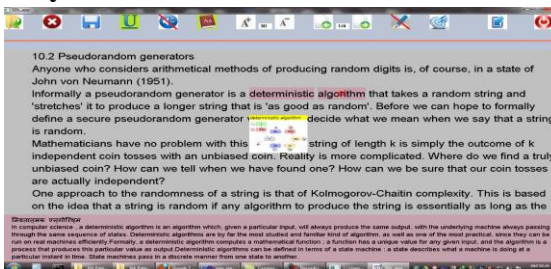
RS128 (session 2012-13)

Name of Division where working:

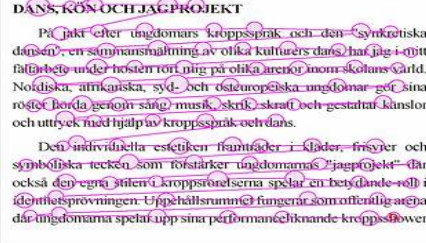
IT DIVISION



EyeLink 1000 at SILP Lab in IIIT-A



Displaying related information



Eye-movement during reading



Displaying Questions for comprehension



INVESTIGATION OF SECURITY AND AUTHENTICATION FOR SERVICE ORIENTED NETWORK ARCHITECTURE

One of the recognized deficiencies of the Internet is that security was not considered in the Internet design early on to the extent it is required today. Although the architecture of the internet is based on a number of principles including self-describing, datagram packet, the end-to-end argument, diversity in technology, and global addressing, but experts highlighted end-to-end arguments amongst the most influential of all the communication protocol design goals. Hence there is a requirement of new architecture to be developed based on SOA needs to meet the next generation demands. One architecture which is based on this concept is Service oriented Network Architecture

Service Oriented Network Architecture (SONATE) has proposed the flexibility for the various network functionalities implementation, the framework is based on Building Blocks (BB's) offers a service through S&C (Service Selection & Composition). The proposed architecture needs to have Security considerations 'within' the architecture. The proposed Flexible architecture may be candidate as Future Internet (FI) offering various flexible services which bestow many issues of security. The work deals with various issues of security while performing a service exchange over the network. The security deals with authentication, access control, confidentiality, integrity and availability of the services to mitigate many challenges and threats thus enabling secure communication.

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Name of Research Scholar:

Bhawana Rudra

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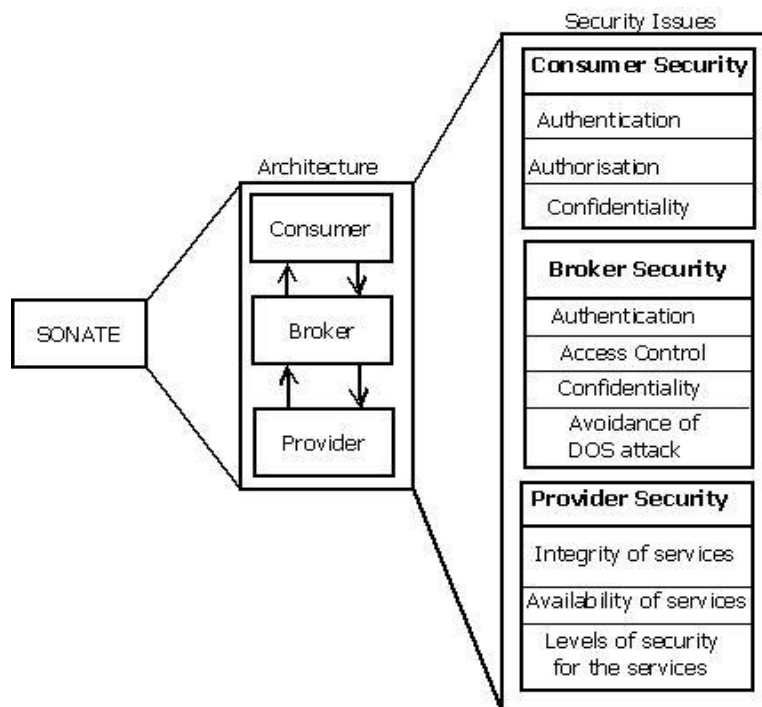


Fig: Security issues of Service Oriented Network Architecture (SONATE)

ASIC Implementation of Variable Resolution ADC

Recent trends in mixed-signal design for wireless application require high speed, power-efficient ADCs. Speed, resolution and power dissipation are the three main parameters for ADC and they can't be changed once an ADC is designed. However for wireless applications (particularly in worst case channel conditions which mostly occur at hilly and underground places where signal strength is low and results in call drop), a variable resolution ADC can be a suitable option as it can save huge amount of power and at the same will adjust its resolution according to the signal level. The prototype (ASIC) will be highly applicable not only in wireless devices but also in general digital devices like,cellular phone, camcorder, pager etc.

Name of Guide / Faculty

Prof. B. R. Singh & Dr. Manish Goswami

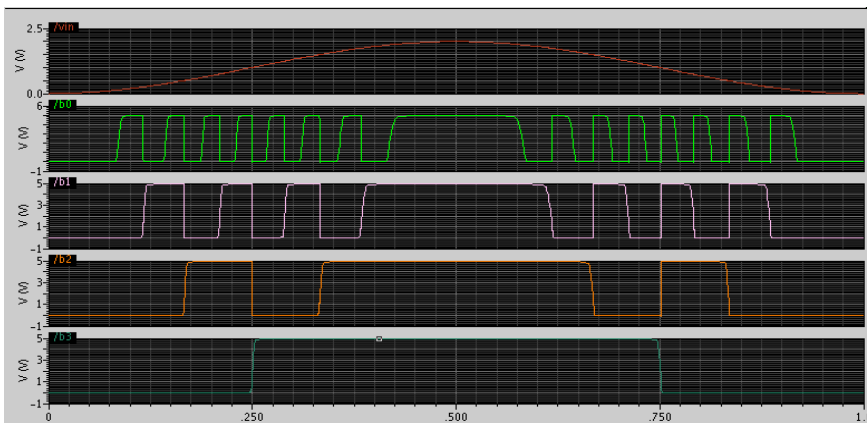
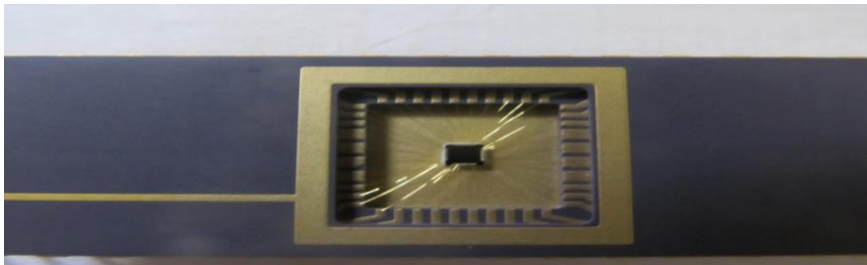
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Saloni

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ELECTRONICS DIVISION



Methodologies to Improve File Sharing in Peer-to-Peer Networks

Peer to peer (p2p) networks have been a major source of file sharing since the last decade. These networks are basically of two types: Unstructured and Structured. While on one hand, where the structured networks that have fixed topologies work by deploying the algorithms and protocols of their domain and architectures, on the other hand, the unstructured networks operate and share files through flooding. The mechanism of flooding is basically used in the unstructured p2p networks to share and find files because the network is dynamic and has no upper limit to the number of nodes that can be accommodated in the network.

Gnutella is an example of unstructured p2p networks in which searching and sharing of files is done through flooding. We consider this mechanism of flooding as a major problem in p2p networks since it leads to the generation of heavy network traffic and congestion in the network. We therefore deploy mobile agents in our model instead of the mechanism of flooding and try to make searching and sharing of files faster with least congestion in the network during this process.

Name of Guide / Faculty:

Dr. V.K. Chaurasiya and Dr. S. Venkatesan

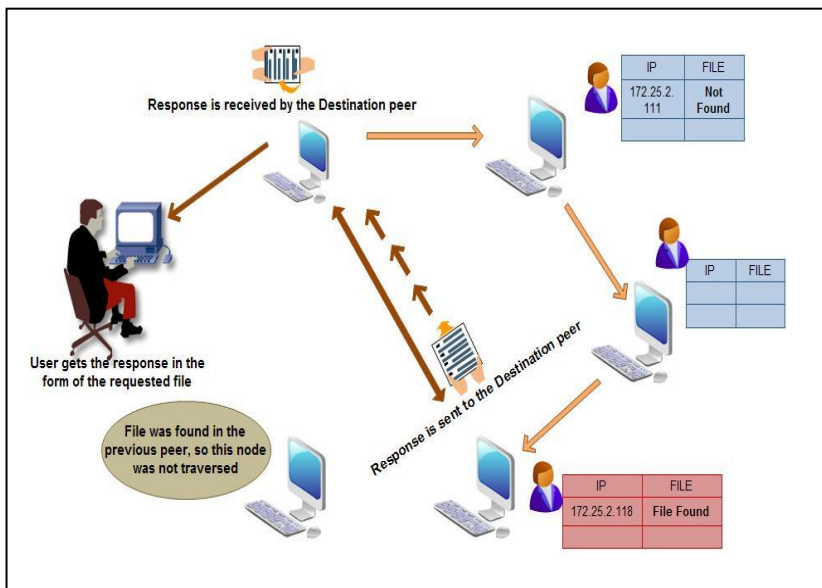
Name of Research Scholar:

Shivangi Raman

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**Division of Cyber Law and
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Return behavior & its antecedents for sustaining organization and environment through e-waste management: An empirical study

Name of Guide / Faculty: Dr. Anurika Vaish

Name of Research Scholar: Saumya Dixit

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Name of Division where working: MANAGEMENT AND CYBER LAWS DIVISION



Increasing population, affluence and urbanization are precursor to waste generation. It is therefore, imperative that progress be made towards a better understanding of the relationships between society, economy and the environment for a sustained environment. Sustained environment can be achieved only if the industries tent to be cautious in their approach. Reverse logistics implemented by the organizations for end – of – life product returns would create a formal pathway for electronic disposals thus preventing environmental pollution as shown in Figure 1 below. In addition it results in the cost cutting and also an increase in the efficiency, productivity and performance of the company, thereby strengthening the organization both strategically and image-wise. To develop effective reverse logistics and waste management, it is important to identify the antecedents of consumer behavior that would check their intent to return end of life e-waste like mobile phones for proper disposal.

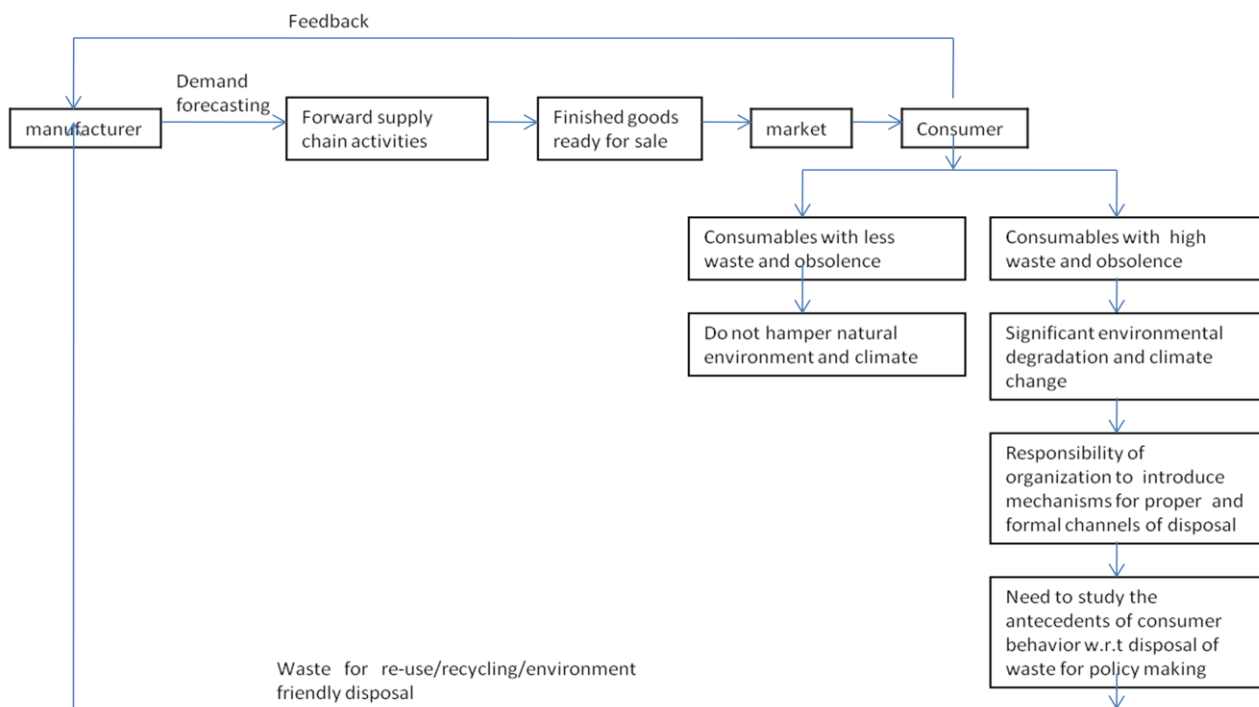


Figure 1: Flow of supply chain activities for waste management.

Design & Implementation of a Framework for Age Estimation in Cyber Space

Name of Guide / Faculty	Dr. Vijay kumar Chaurasiya
Name of Research Scholar	Aditya Kishore Saxena
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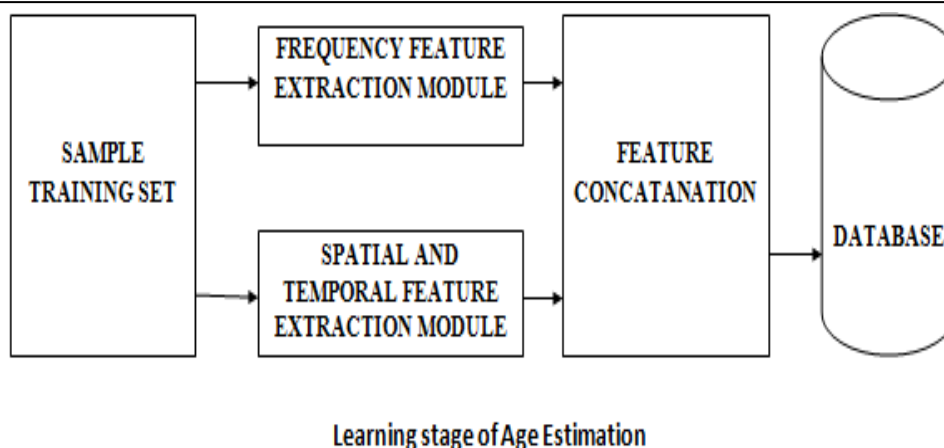


Cyber - the world of applications and services over computer networks or Internet is prone with security issues. Ease of access to attack tools that are freely downloadable and easily usable, and anonymity that is easily achievable by the attacker are the roots of the problem. Thus, the field of cyber security has come into being. The cyber security itself is a vast area covering security of everything that relies on Internet and computers. Out of the number of issues, child protection over cyber world is one of the important aspects.

Immature users, usually children, who are unknown to dark side of the cyber world, are easy targets for attackers, meaning thereby that Children who are active on Internet can become easy prey to attackers (or predators). Therefore several countries around the globe have cyber security study and standards focusing on children.

The UN Convention on the Rights of the Child (UNCRC) identifies adults as responsible to protect children from all forms of physical and mental violence, injury and abuse. Children's involvement in the cyber world and rapid growth of Cyber crimes signal an urgent call to action for prevention and protection of children. Today's young wired generation increasingly relies on the internet and other forms of technology for entertainment, information, personal help and advice, and more importantly for social connection and interactions. It is essential that adults acknowledge, understand, accept and differentiate between the features internet and communication technology as a viable and real means of cyber crimes related to children and those that are beneficial to the children.

My work will consist of developing a framework for identification of children(Age Estimation) over internet using biometric and behavioral attributes considering demographic variables, based on which the content for children will be classified.



Extraction of Multiword Expressions from Unstructured Text Documents

The main objective of our thesis work is to derive a novel approach for extraction of Multiword Expressions for better accuracy. In our work we are working on hybrid approach which is based on linguistic property, statistical property and semantic property of multiword expressions.

A multiword expression is a single lexeme which is the combination of two or more independent lexemes. The semantic meaning of a multiword expression cannot be derived from the combination of semantic meanings of its constituent words. E.g.

Kick the bucket

These expressions are very commonly used in all the languages. It is estimated that between 30% to 45% in spoken language and 21% in academic prose are multiword expressions. Most of the times in spoken language the number of multiword expressions is same as the number of single words. Multiword expressions play an important role in many NLP applications like: Machine Translation, Information Retrieval, Alignment of Parallel Corpora, Text summarization, Speech recognition, etc.

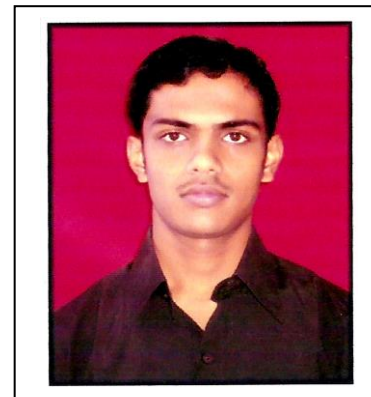
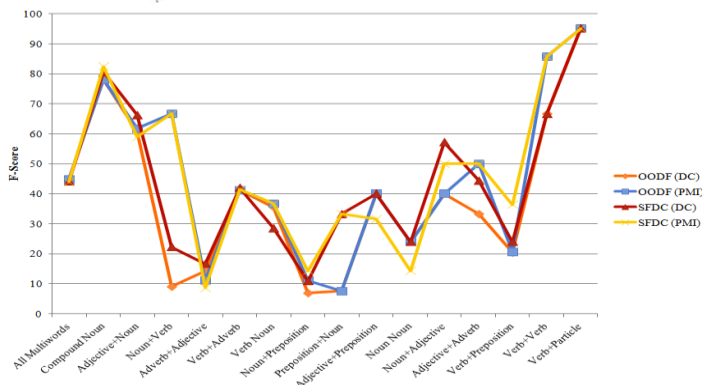
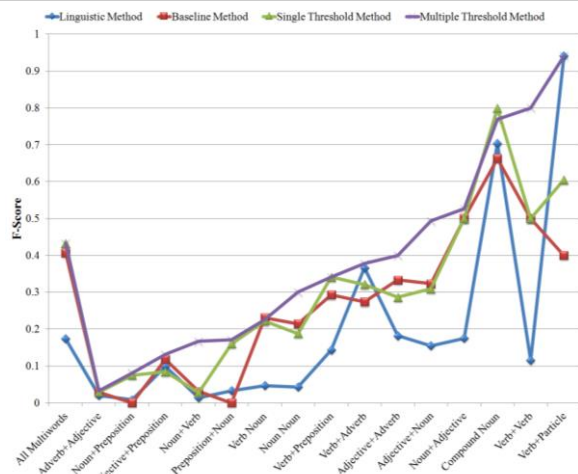
Name of Supervisor: Prof. Sudip Sanyal

Name of Co Supervisor: Dr. Ratna Sanyal

Name of Research Scholar: Shaishav Agrawal

Roll No.: RS77

Name of Division where working: IT DIVISION



Users group identification through internet usage in cyberspace

The issues of child security in cyberspace realized that there are several problems that have to be explored. The internet is a platform for the children to improve the quality of learning that can change into knowledge. As for as social development is concern, internet are providing them to form a new cyber world, where child is being in touch with other person via email, chat, social networking site and instant messaging, etc, which is increasing the communication and social skill set

The significance of internet usage, there is a dark side of internet as well where children's thinking ability of in wrong direction is manifested in early age and easy access to a vast amount of uncontrolled information in cyberspace. Information which is resided on internet is lawless and the information which is not fruitful for their cognition mind, there is no way to check the reliability of uncontrolled information on the internet, children are not aware or able to discriminate about, what is real and what is not real and unable to test the reality in virtual world, even artificial Intelligence algorithms are also not more effective to identifying the children over the internet uses. As we know that children who are below 18 years age using internet is not all of them aware about the security measure of internet. Our attempt through this research is to develop a system that can identify the child user group over internet and protect the children from the misuse of internet in cyberspace.

Name of Guide / Faculty

Dr. Shrishu Verma (Supervisor)

Dr. Abhishek Vaish (Co-Supervisor)

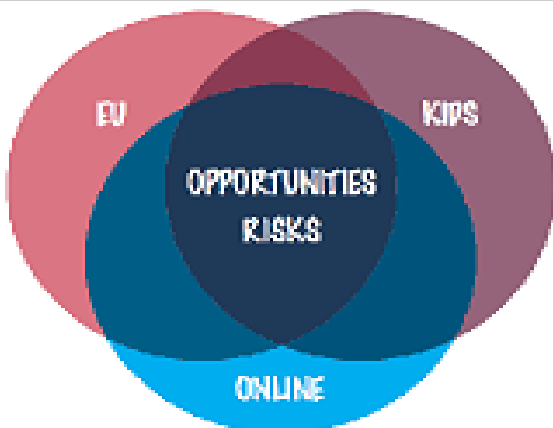
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Satya Prakash

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ACOUSTIC EVENT DETECTION IN THE PRESENCE OF FOREST CLUTTER USING SIGNAL PATTERN RECOGNITION

Humans play critical roles to protect the integrity of our forests and wildlife. But it is practically impossible to continuously surveillance the forests. People are hunting tigers for tiger skin, oil, feet nails and bones to sell at high price. That's why the number of tigers in India decreases to 1,200 in 2012 from 3773 in 2001. Due to continuous increase in hunting events of extinctive animals, it is required to have a real-time surveillance system for forests.

My objective is to develop a system which can identify a gunshot in presence of forest clutter using acoustic signal pattern recognition. This system will be a FPGA based hardware which consists of an algorithm for gunshot signature identification.

Name of Guide / Faculty

Prof. M Radhakrishna

Name of Research Scholar

Preetam Suman

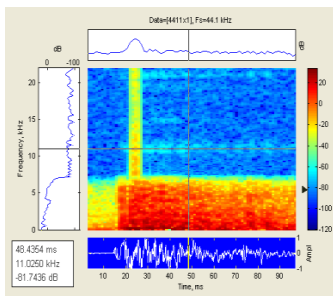
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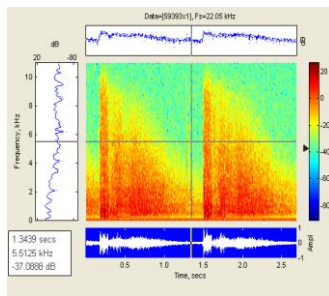
ELECTRONICS DIVISION



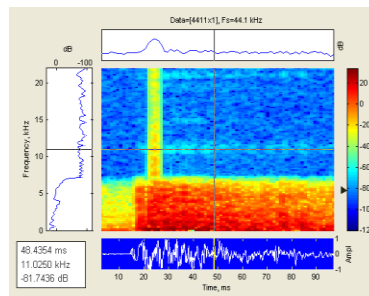
Gunshot testing at Panna Tiger Reserve, MP



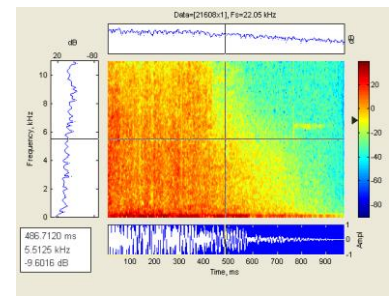
Spectrogram of
gunshot by Pistol



Spectrogram of
gunshot by Rifle



Spectrogram of
gunshot by Sniper



Spectrogram of
gunshot by Shotgun

Knowledge Discovery in Dynamic Social Network

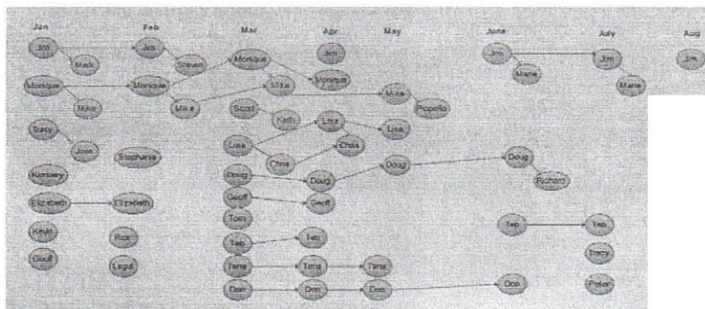
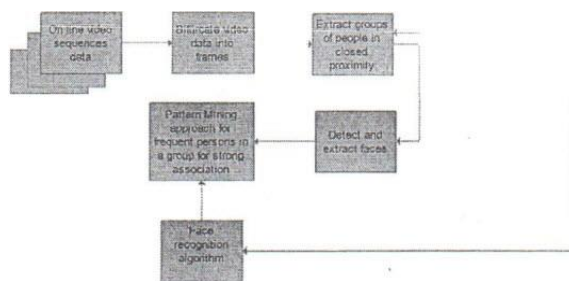
A network structure is the perfect epitome provides a formal way of representing data that emphasizes the association between entities. This representation has a substantial importance gives the insight of knowledge into the data. Since for the work to be done many systems these days are interconnected and behaviors of individuals reflect the function of whole system at large extent. Networks are primarily studied in mathematical framework i.e. graph.

Understanding the behavior of individual and group, social networking methods assuage the analysts to revealing hidden patterns and knowledge from social communication. This discovered knowledge can be useful in law enforcement, homeland security, organizations, and closed world environment. There are several modern means of communications, like email, chatroom, web logs, and telephone. We can imagine the new emerging means of communication and interaction is computer vision. Since computer vision techniques are being used tremendously in many areas of surveillance systems, face recognition, crowd tracking detecting, recognizing and analysis of activities and events.

This work addresses the important, problem .of discovery and analysis of social networks and link between frequent people from surveillance video where large amount of video data is collected routinely. A computer vision approach enabled to solve this problem at lower and with the help of video data obtained from the fixed camera. The node of social network is captured human faces and link between them is monitored on the basis of their frequent appearing with each other.

The target of this work is to contribute as follows:

1. We addressed the problem of discovering frequent group within the new framework of interaction for link mining between social networks in, possibly closed world, surveillance environment.
2. Modeling a group who should have set of individuals who is divulging similar characteristics, i.e, some proximity measurement or some orientation.
3. Analyzed the frequent persons appearing in group using pattern mining approach.

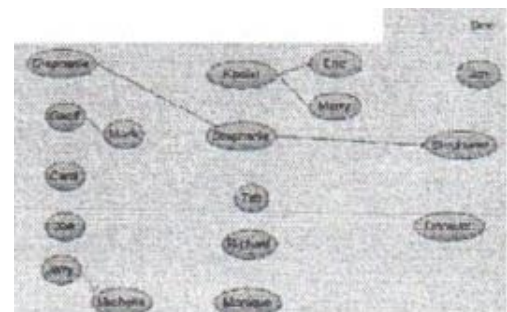
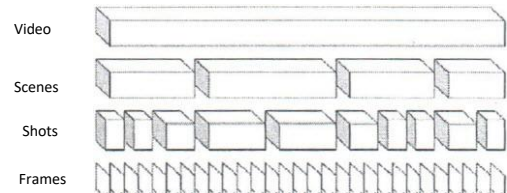


Name of Guide / Faculty
Prof. G.C. Nandi

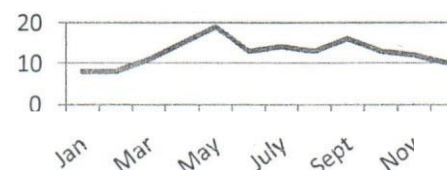
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Number of communities over months



Exploring Knowledge with Linked Open Data Cloud for Recommendation System

Web 3.0 era is also known as Web of Data age, where the data over the page is connected across multiple heterogeneous data sources. This collection of datasets is coined by sir Tim Berners Lee the inventor of Internet. Linked Open Data (LOD) has heterogeneous domains datasets that are in structured format. Linked data is about employing the RDF (Resource Description Framework and HTTP to publish structured data on the Web. Data sources are connected effectively by allowing data in one data source to be linked to another data source. 32 billion RDF triples constitutes to form LOD (2011) with various heterogeneous data like companies, government, libraries and other environmental agencies. Here, open data means that the data is freely available to everyone to use and republish as they wish, without restrictions from copyright, patents or other mechanisms of control. Currently more and more companies realize that LOD Cloud is the cost efficient way to integrate knowledge that they want to provide to their customers.

This rapidly growing information can be used as Knowledge Based for Recommendation System. The key goal of the use of LOD cloud is to provide easy interaction between user and the huge Knowledge Base. Also, the tool and application should be scalable and can use mixed quality of dataset. These interfaces are more than the retrieving and storing of the dataset. Current approaches are highly dependent on the data which is available on LOD that means if the data is present on LOD then only we extract its linkage. We can say that the quality of RS depends on the growth of LOD and mapping of objects (person, items) to the URIs of LOD. I have described some recommendation system from below figures. First figure is related to Tourism Recommendation & 2nd is Drug information extraction from Linked Life Data.

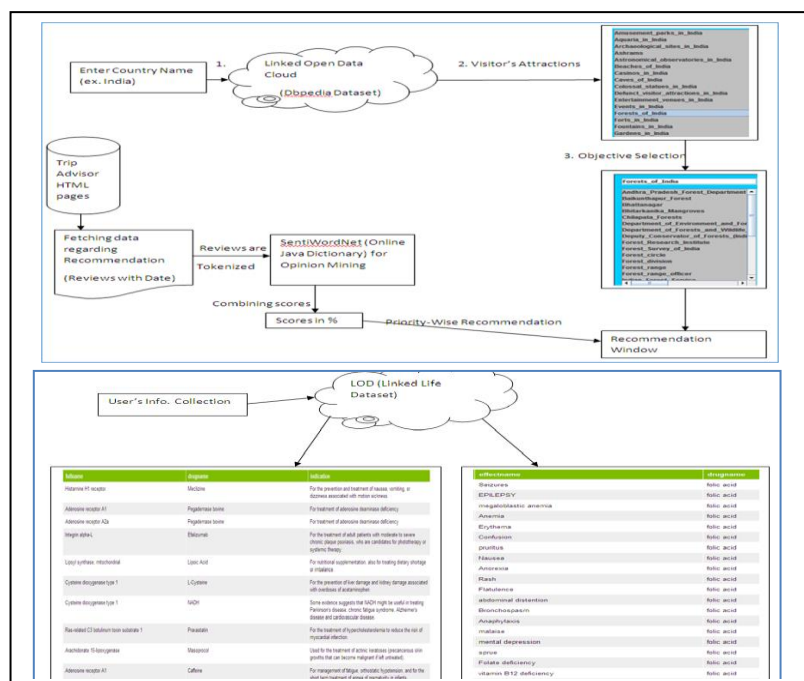
Name of Guide / Faculty:

Prof. O. P. Vyas

Name of Research Scholar: Nidhi Kushwaha

(Roll No.): RS96

Name of Division where working: (1). IT DIVISION



Cross Layer Optimization for Wireless Sensor Network for Localization Application

Name of Guide / Faculty: Dr. Shirshu Varma

Name of Research Scholar: Rajeev Ranjan (Roll No.): RS-99

Name of Division where working: IT DIVISION



Write up: Cross-layer design and optimization is a new technique which can be used to design and improve the performance in both wireless and wired networks. The central idea of cross-layer design is to optimize the control and exchange of information over two or more layers to achieve significant performance improvements by exploiting the interactions between various protocol layers. With the development of large scale integrated circuits and wireless communication technologies, the application prospective of wireless sensor networks by interconnected tiny sensor nodes becomes more and more attractive. However, applications that take advantages of these technologies are yet to appear due to unsolved issues, i.e. Scalability, Network lifetime, Functionality, QoS, Security, and many more. Summarizing the existing issues and considering currently available technologies, there are challenges to make tradeoffs and optimizations between several pairs of parameters. In this paper, we argue that a new dimension for the optimization, in addition to the existing tuning of individual protocols, which is cross-layer optimization, is necessary to be introduced into the research to overcome the challenge. The overall goal of this study is to provide a feasible and flexible means to solve the conflicts between the requirements and the constraints of current wireless sensor networks. It will be a key step to make actual WSN applications into reality.

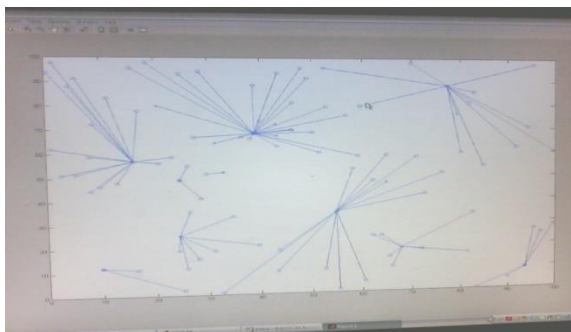


Fig 1: Cluster Formation

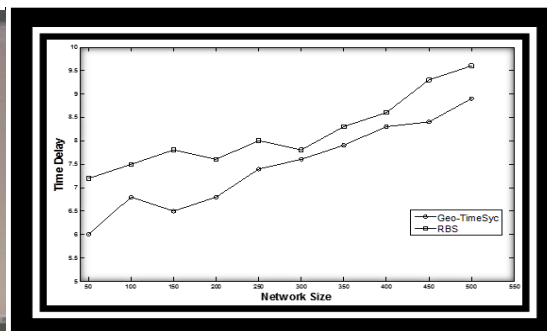


Fig 2: Time Synchronization graph



Fig 3: Telos Mote

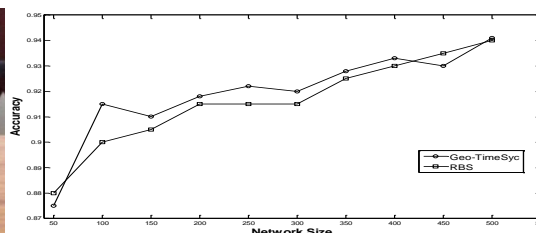


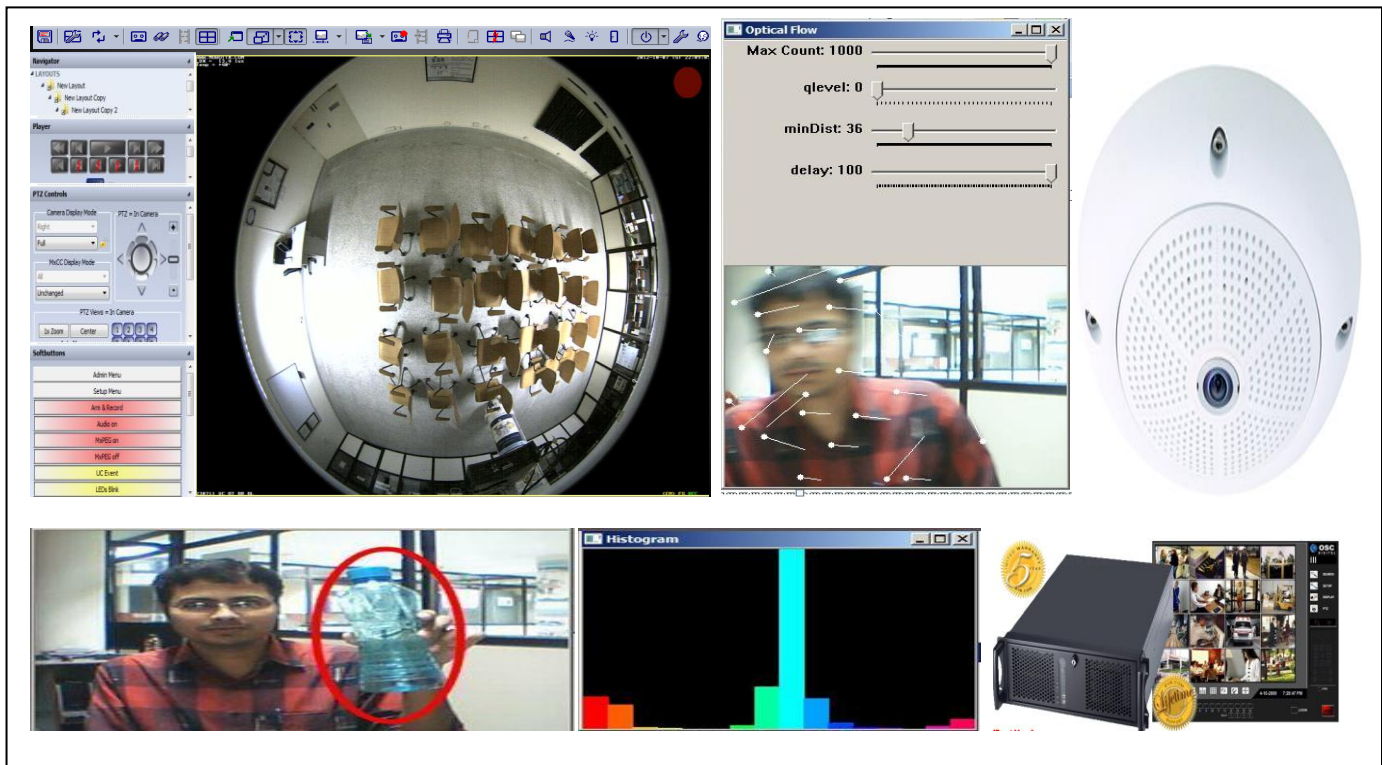
Fig 4: Effect of Network Size on Accuracy

Development of Anomalous Behavior Recognition Technique through Video Data Source

Summary: Visual surveillance is an active research topic in image processing. Transit systems are actively seeking new or improved ways to use technology to deter and respond to accidents, crime, suspicious activities, terrorism, and vandalism. Human behavior-recognition algorithms can be used proactively for prevention of incidents or reactively for investigation after the fact.

In this research work, we will try to focus the area of malicious behavior detection based on pattern recognition covering the posture analysis in moving video captured through CCTV. The area may cover on relevant human behavior-recognition methods for transit surveillance. Recognition methods include single person (e.g., loitering), multiple-person interactions (e.g., fighting and personal attacks), person-vehicle interactions (e.g., vehicle vandalism), and person-facility/location interactions (e.g., object left behind and trespassing), firearm detection, and alarming of the situation depending on some parameters.

Name of Guide – Abhishek Vaish
Research Scholar – Nitish Kumar
(Roll No.) – RS 100
Name of Division where working:
Management and Cyber
Laws Division



“Web based service to provide trademark search report for image and audio trademarks”

A lot of work has been done in the field of trademark retrieval systems but when it comes to employing an automated technique for judging genuineness of a new draft of a trademark comprising of mixture of graphics, text, audios, images and voice, many countries including India still are dependent on manual efforts. Currently all trademark retrieval systems in use, are manual systems, hence are both labour intensive and time consuming and they use keyword search, for example, Tess, and the UK trademark search (The UK patent office 2001; United state patent and trademark office, 2004). Therefore, there is a need of a more effective and automatic system.

The central aim of the thesis work can be stated as: ***Developing a web based service comparable to many advanced countries to provide trademark search and examination report for both image and audio trademarks that are registered in India as well as for well know marks known worldwide.***

Name of Guide / Faculty- Prof. R.C. Tripathi

Name of Research Scholar- Akriti Nigam

(Roll No.)- RS103

**Name of Division where working:
IT DIVISION (IPR)**



Trust Based Modeling and Prediction of Socio-Technical Attack in Cellular Environment

In the era of globalization and technological advancement, everybody wants to remain connected through social networking sites, blogs, emails, web pages and mobile phones as per their motives which may be malicious or non-malicious. This intention of a person leads them to form a community with a person having same mind set.

Socio-technical is an organized approach which is defined by the interaction among people with technology. This may be disrupted through misuse of technology by some of the malicious intent people to attack on the social structure based on trust and faith. Wrong interpretation of message and manipulating the integrity of information may create pandemonium in the society and can be one of the reasons for social riots, political misbalance etc. It includes defamation of person, organization, group, attacks on religious belief, awful advertisement over internet and mobile phone etc.

Our goal is to design an algorithm to predict socio-technical attacks in the society.

Name of Guide:

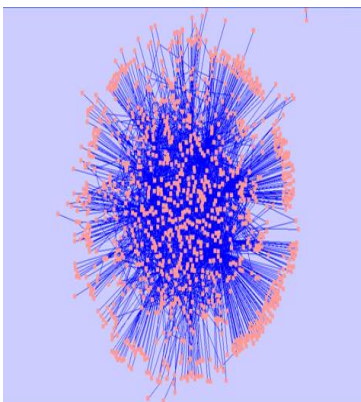
Dr. Abhishek Vaish

Name of Research Scholar:

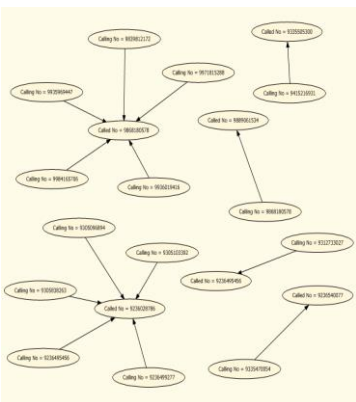
Preetish Ranjan (RS105)

Name of Division where working:

**MANAGEMENT AND CYBER
LAWS DIVISION**



Cytoscapic view of social network



Social network based on relative value of importance



GPU-based Large scale Volume Rendering in Immersive Environments

The term visualization means the construction of a visual image in the mind. Volume rendering is the technique of visualizing three dimensional arrays of data. Normally, volume of data is used for visualizing. Therefore, volume rendering is popular for visualization. The visualization is required to be interactive. It doesn't matter that it is 2D, 3D or multidimensional data for visualizing on a 2D screen. When it has been represented the 3D volume data on the 2D screen, this is called the volume rendering. Data may belong to either medical domain or seismic domain or some other domain. The title is depending on the three areas:

- Large Scale Volume Rendering
- GPU (Graphics Processing Unit)
- Immersive Environments

My Objective is to handle the large scale data in several GBs used to visualize on the 2D screen is a challenging task. Therefore, to visualize large scale volume datasets on a 2D screen, some important points should be considered. These are:

- Interactive frame rates in combination with direct volume rendering and a stereoscopic view are challenging tasks.
- The volume data may be static or time-varying or multiscale depending on a particular application.
- In an interactive system, user can able to manipulate or operate the 3D virtual objects in an immersive environments.

I am working in Graphics and Visual Computing Lab with Nvidia Tesla C1060 card with CUDA toolkit 4.1 is used in i7 950 CPU system.

Name of Guide/ Faculty:

Prof. Anupam Agrawal

Name of Research Scholar:

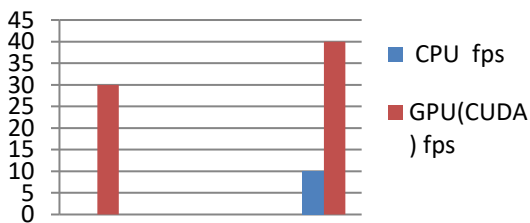
Piyush Kumar (RS109)

Name of Division where working:

IT DIVISION



Tesla C1060 Computing Processor	
Processor	1 x Tesla T10
Number of cores	240
Core Clock	1.33 GHz
On-board memory	4.0 GB
Memory bandwidth	102 GB/sec peak
Memory I/O	512-bit, 800MHz GDDR3
Form factor	Full ATX: 4.736" (H) x 10.5" (L) (L) Dust slot wide
System I/O	PCIe x16 Gen2
Typical power	160 W



Exploration of Flexible Service Oriented Architecture for Wireless Sensor Network

Wireless sensor network are increasing with heterogeneity in applications such as health monitoring, target tracking, mobility of object and environmental change etc. Sensors being small devices used to “sense and send” the change in environment according to specific application and under various constraints. These devices have been developed from organizations and vendors thus leading to many architectural arrangements. To provide a common interface between the sensor node and its requirements, sensor network middleware architecture is being proposed, which is capable to tackle the heterogeneity without requiring to change the specification and its platform.

The objective is to develop Flexible Service Oriented Network Architecture which will be capable to manage the requirements in the form of request, storage of data and constraints. This architecture can support a range of machines which have different configuration. Our proposed architecture will provide a platform solution for interoperability, loose coupling, flexibility and reusability.

Name of Guide:

Prof. O.P.Vyas and Dr. Shirshu Varma

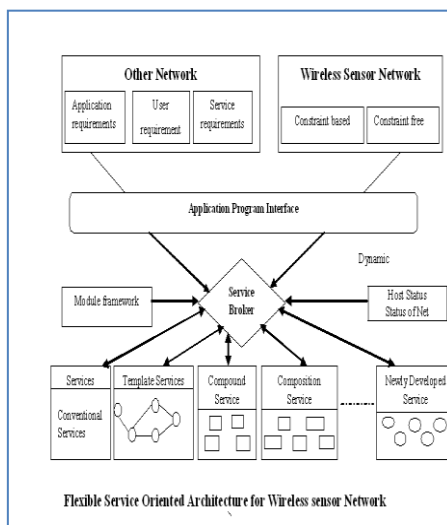
Name of Research Scholar:

Akhilendra Pratap Singh

(Roll No.) : RS - 112

Name of Division where working:

IT DIVISION



Gait Biometrics: Person Identification from Walking Style

Bi-pedal locomotion is a complex task for a human. It requires a strong coordination of different joints of human body which generates the rhythmic motion. A normal walking is involved with balancing ability and proper stability through the synchronous oscillations of different body joints of a person. The **rhythmic motion** is called as **GAIT** which holds biometric signatures of human's behavioral walking pattern. A simple and a common human gait can provide an interesting behavioral biometrics. A robust human identification method can be derived from the features extracted from this behavioral biometrics. The human gait analysis will provide us with an insight on human bipedal locomotion and its dynamical stability. The human gait data can be obtained without the subject's knowledge through remote video imaging of the people walking. This technique will have an immense impact in remote surveillance for security and health. The major advantages of gait biometric over other biometrics are, it can be captured from a distance dealing with low resolution gait videos and without the prior knowledge of the subject and it does not require costly hardware. To validate the vision based technique which has projection errors, we studied the human gait acquired from a wearable sensor based biometric suit, **HGOD (Human Gait Oscillation Detector)**, developed by us. This suit measures simultaneous gait oscillation from eight major joints (two knees, two hips, two elbows and two shoulders) of a human body. Techniques for analyzing, understanding and classifying the human gait patterns were developed using this non vision based approach. We also applied a computer vision based technique to understand the challenges of human gait analysis in real environment. Gait signatures are being extracted from the sequence of silhouette frames, extracted from human gait video. We will also like to extend this work towards biomedical problems seen through gait disorder.

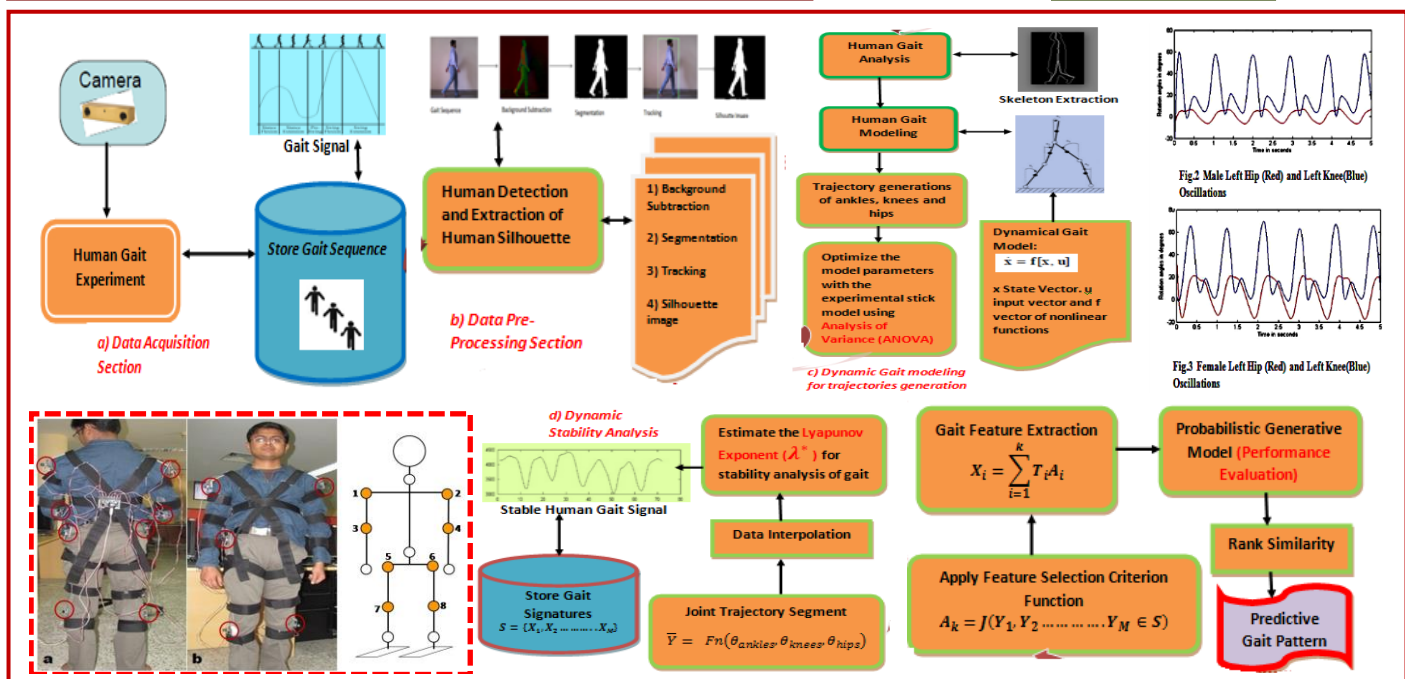
Name of Guide / Faculty: **Dr. Pavan Chakraborty**

Name of Research Scholar: **Anup Nandy**

(Roll No.): **RS-113**

Name of Division where working:

6. IT DIVISION ✓
7. ELECTRONICS DIVISION
8. MANAGEMENT AND CYBER LAWS DIVISION
9. APPLIED SCIENCE AND IRCB DIVISION)



Human Robot Interaction in Multimodal Environment

The world is passing through the era of information and communication technology, where life of every person is so fast and busy means men and women both are working. Therefore women will not give proper time for household work. Humanoid Robot is a good tool for solving all these problems. But today humanoid robots are not very interactive; this is big drawback of using humanoid robot. Therefore scientists tried to make robot human friendly, so that people can easily interact with robot. Human robot interaction is the study of humans, robots and the ways in which they interact with each other.

There are various modes like speech, gesture, behavior etc. through which human can interact with robots. Establishing interaction using speech is more difficult as compare to gesture etc because human auditory system is more sensitive than human visual system. To solve all these challenges, a multi-model technique has been introduced.

We have proposed a real time speech recognition technique where MFCC is used as a feature obtained after DWT decomposition. Principal Component Analysis (PCA) is applied for reducing the dimensionality of mel-second frequency cepstral coefficients (MFCC) obtained after DWT decomposition of speech databases. All the experiments are performed on Hindi words. Comparative study is performed with the existing technique by calculating word error rate. A gesture based HRI technique is performed where hidden markov model (HMM) is used for recognizing appropriate gestures.

Name of Guide / Faculty

Prof. G.C.Nandi

Name of Research Scholar

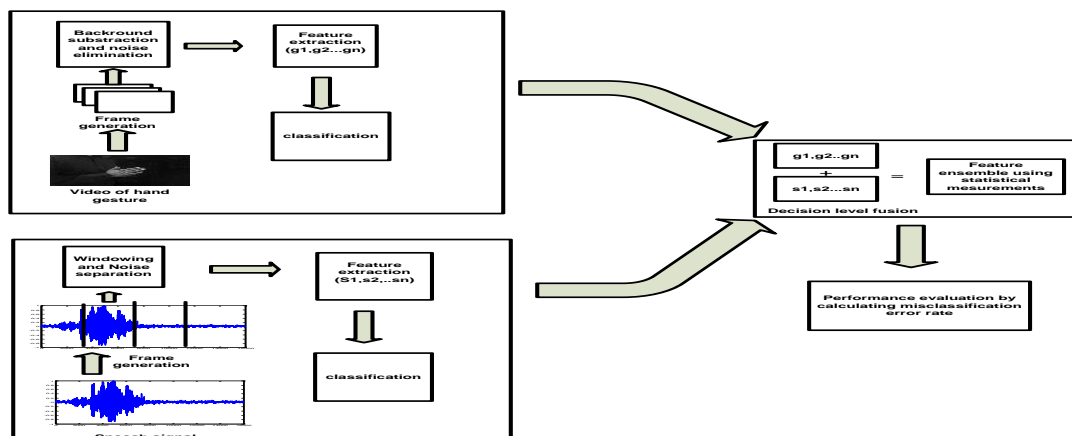
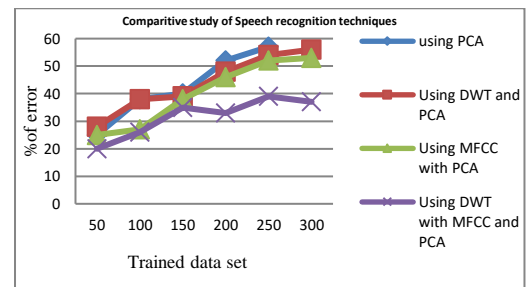
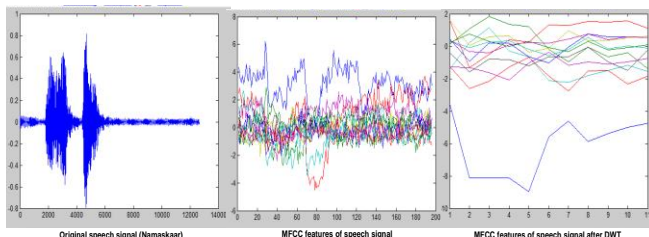
Neha Baranwal

(Roll No.)

RS-115

Name of Division where working:

IT DIVISION



Reliable detection of tree cutting and felling in forest with presence of forest clutters

An acoustic signature can provide valuable information about an intruder and their activity. A tree cutting activity is associated with abnormal sound levels in the nearest area of tree. Impact and abrasion acoustic signals are produced by tree cutting tools like axe, and handsaw or chainsaws.

My objective is to develop a system which can identify tree cutting sound with the help of acoustic signal recognition. A statistical pattern recognition approach is considered to detect tree cutting event automatically.

The recorded acoustic signal from different tree cutting techniques (axe, hand saw and chain saw) is a quasi-periodic acoustic signal. Quasi-periodic signal is defined as a signal that evolves in time approximately repeating its shapes and period.

The forest clutter like water fall, birds chirping, monkey chatter are the disturbing noise which can effect signal identification in forest environment. So, a robust system for tree cutting event identification will be outcome of my research.

Name of Guide / Faculty

Prof M Radhakrishna

& Prof B R Singh

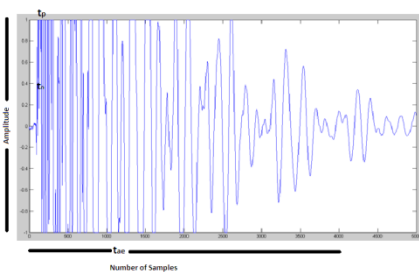
Name of Research Scholar

Gajendra Sharma

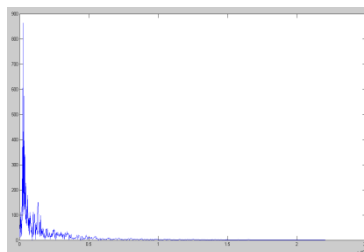
(Roll No.)*RS118*

Name of Division where working:

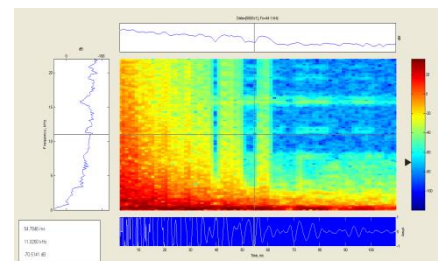
Electronics Division



Tree Cutting acoustic signal in time domain



Tree Cutting acoustic signal in Frequency domain



Spectrogram of tree Cutting acoustic signal

An approach for establishment of large area sensor network for area monitoring and acoustic source localization in forest environment

This work attempts to design and deploy a large area wireless sensor networks in forest areas for the continuous monitoring of the forests using multiple sensors such as microphones, temperature sensors, ground vibration sensors (accelerometers, PIR sensors, Doppler radars, and distributed sensors such as fibre optic lines, processor and then an RF radio (transmitter & receiver). The sensor network design also includes considerations such as sensing range of the implemented sensor and the communication range between the sensor nodes and the sensing objective.

All target events such as gunshot, distress call of animals, digging of ground, wood cutting and tree felling in forest are based on the concept of acoustic source localization. Sound waves propagation is characterized by velocity of sound, direction of propagation, sound pressure, and sound intensity. Distance between source and receiver can be estimate by some mathematical relations in the given medium by the velocity of sound and direction and the arrival time of signal at the receiver. Due to dynamic change in wind and temperature gradients it becomes necessary to get the effective value of sound velocity and direction. The change in sound velocity and direction will lead to change in arrival time of signal and finally the estimated distances gets affected and have errors. The final implemented algorithm should be able to detect sound events under the influence of wind and temperature changes in forest environment.

Prof. M. Radhakrishna

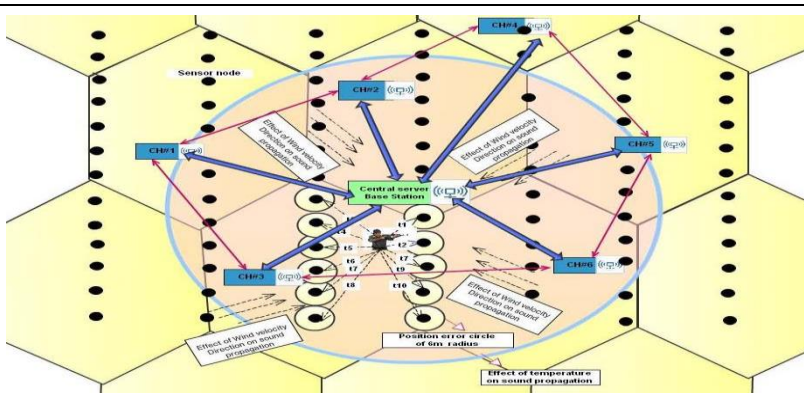
&

Dr. Shirshu Varma

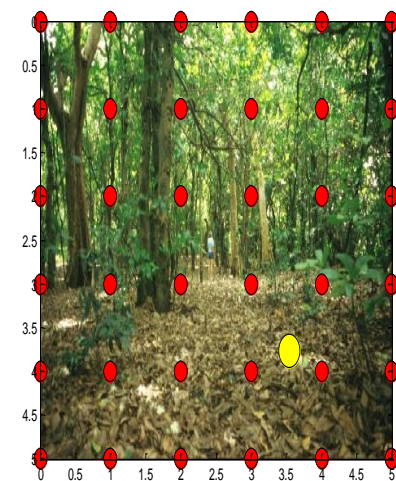
Renu Kachhoria

RS-124

ELECTRONICS DIVISION



Effect of wind velocity and direction and temperature on acoustic sound localization in large area sensor network



- Sensor node
- Acoustic source location

Simulations result of network development and acoustic source localization algorithm

Exploring Linked Open Data Cloud Mining

The web today is a tomb of information that is yet to be harnessed; with a lot of data flowing around but little knowledge generated from it. The vision of transforming the current “web of documents” to future “web of data” opens enormous opportunities & many challenges. The data on the web is often disconnected and without relationship, these data become isolated, irrelevant and obsolete. Semantic web (LOD) aims to establish appropriate connection between these data, forming a web of related data that can be readily interpreted by machines, to harvest knowledge. The data in the LOD cloud is in the form of RDF. The increasing availability of large RDF datasets offers an exciting opportunity to use such data to build predictive models using machine learning algorithms.

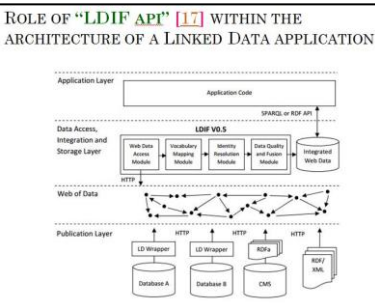
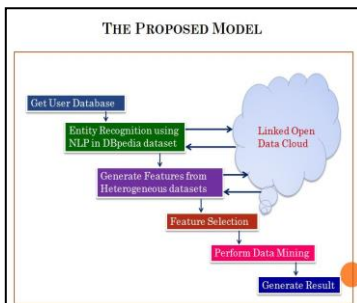
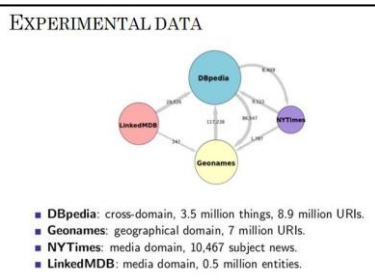
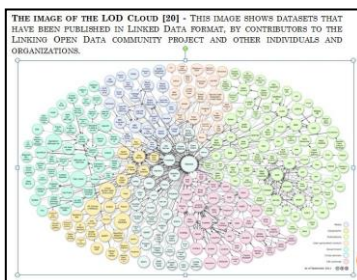
The objective is to use the LOD in an efficient way by enabling knowledge generation from the “Web of Data” by applying the appropriate data mining techniques.

Name of Guide / Faculty : Prof. O.P.Vyas

Name of Research Scholar: Rajesh Mahule

(Roll No.) : RS - 127

Name of Division where working: IT DIVISION



Name: Shagun Srivastava

Title of the Research/Thesis Work: Forecasting Future Technologies for Mobile Telecommunication Industry in India: An Assessment for Strategic Growth

Telecommunications is one of the few sectors in India, which has witnessed the most fundamental structural and institutional reforms since 1991. In recent times, country has emerged as one of the fastest growing telecom markets in the world, particularly by the unprecedented growth in mobile telephony.

Technological forecasting deals primarily with the fairly long term and seeks to determine what technology will likely be available and what the influence of important technological developments and innovations will be.

The study would try to cover the entire gamut of the mobile telecommunication industry pan India, over a period of time, with respect to the end to end technologies involving potential entities into the industry. The objective is to provide insight, forward-looking perspective, and points of view that can help understand, anticipate, and deliver the competitive advantage to be gained from new and emerging mobile telecommunication technologies in India.

Name of Guide / Faculty

Dr. Madhvendra Misra

Name of Research Scholar

Shagun Srivastava

(Roll No.) RS121

Name of Division where working:

MANAGEMENT AND CYBER
LAWS DIVISION



Remote Vibration Monitoring Using Sensor Networks for Health Assessment of Rotary Equipments

Objective:

Condition Monitoring of Rotary Equipments such as Pumps/ Compressors through Remote Vibration Signature Analysis using Sensor Network.

Introduction:

A large amount of industrial machineries requires condition based monitoring to increase availability and safety of the equipments. One such monitoring technique is based on vibration analysis, vibration signature received from different sensors deployed on those machines, that will enable to take decisions regarding the repair or replacement of a different machine parts, overhauls etc. Continuous monitoring of machineries like pump systems is the most effective practice to insure competent operation, able to prevent unexpected machinery failures, lessen repair costs and downtime, and also able to provide early warning to avoid loss of machinery.

This research work ponders upon Condition Based Monitoring of machines as a predictive maintenance through Vibration Signature Analysis using Wireless Sensor Networks.

Name of Guide: Prof. G.N.Pandey

Name of Research Scholar:

Krishna Kant Agrawal,

Ph.D. Research Scholar,

RS-92

Name of Division where working:

IT DIVISION



“Computational Approaches to study the Host-Parasite Protein-Protein Interactions and their applications”

Infectious diseases such as Malaria, Leishmania, Tuberculosis and Japanese encephalitis result in millions of deaths each year. An important aspect of any host-parasite system is the mechanism by which a parasite can infect its host. One method of infection is via protein–protein interactions (PPIs) where parasite proteins target host proteins. Developing computational methods that identify which PPIs enable a parasite to infect a host has great implications in identifying potential targets for therapeutics.

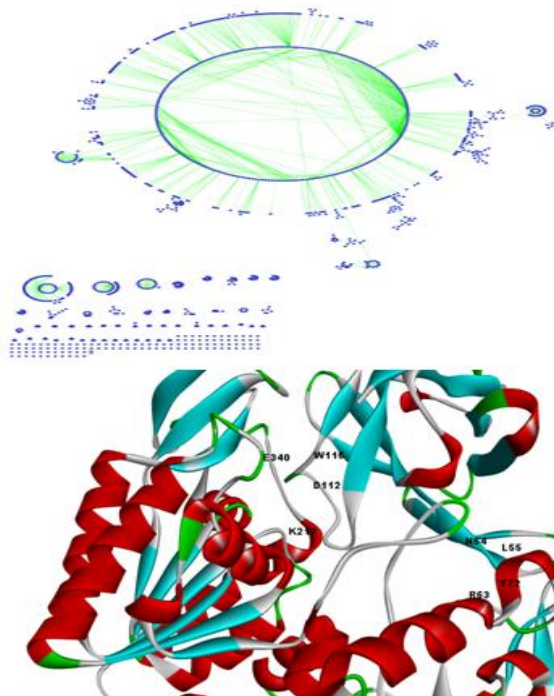
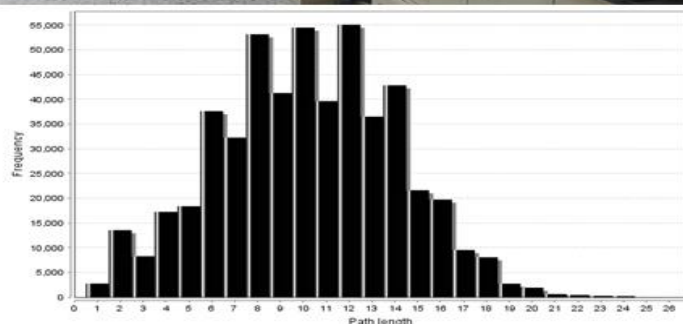
Find out new drug targets for parasitic infections would be of great utility for humanity, as there is a large need to develop new drugs to fight infections due to the developing resistance and side effects of current treatments. Current drug targets for parasite infections involve only a single protein. However, proteins rarely act in isolation, and the majority of biological processes occur via interactions with other proteins, so protein-protein interactions (PPIs) offer a realm of unexplored potential drug targets and are thought to be the

Name of Guide / Faculty: -
Dr. C. V. S. SIVA PRASAD

Name of Research Scholar: -
KAMAL KUMAR CHAUDHARY

Roll No.:- RS107

Name of Division where working:-
APPLIED SCIENCE AND IRCB
DIVISION



Statistical Approaches for Passive-blind Multimedia Forensics

In present scenario it is very easy to edit any pre-existing photographs or video by using freely available commercial image/video editing tools. Any alteration in an original image or videos in bad faith is regarded as image/video forgery. To detect such forgery is a challenging task in the field of crime, journalism etc. Fake photos many a times are used to publicize in magazines or news papers. Now days, many cases are noted in regard to the defaming business as well as political opponents by using fake photographs and videos. This makes, it very essential to know about the integrity of the photos and frames in the video clippings so as to detect the truth.

The main motive for detecting tampered digital content in the form of image, video and audio is to check the real authenticity of content. Since we cannot expect that all these contents are always recorded with a watermark, we need tools that can detect digital forgeries without the help of watermarks.

Name of Guide / Faculty

Prof. R. C. Tripathi

Name of Research Scholar

Vivek Kumar Singh

(Roll No.) RS117

Name of Division where working:

IT DIVISION(IPR)



Study on siRNA-peptide interactions

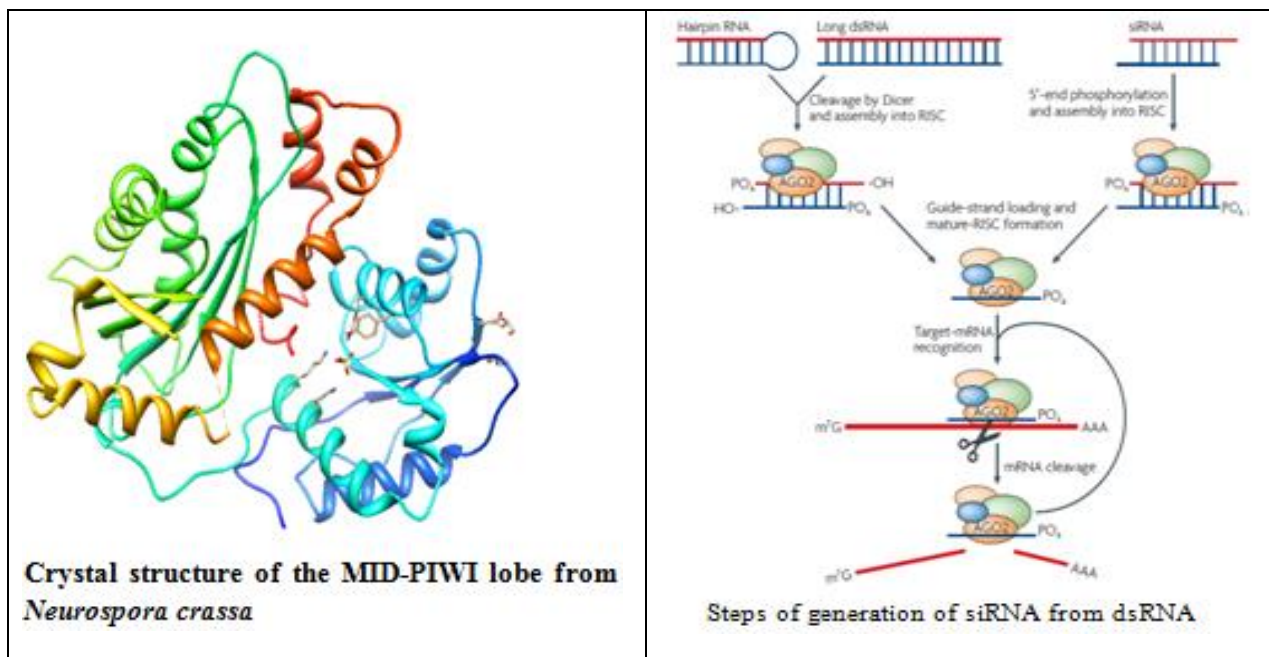
Name of Faculty : Dr. B.S. Sanjeev
Name of Research Scholar : Richa Anand (RS125)
Name of Division : Applied science and IRCB Division



RNAi is a biologically conserved phenomenon which regulates the expression of genes through post-transcriptional gene silencing mechanism. Short Interfering RNA (siRNA) is a key molecule in the RNA Interference (RNAi) pathway, a post-transcriptional gene silencing mechanism. This siRNA forms complex with the protein in the cytoplasm which is called RNA Induced Silencing Complex (RISC). If an mRNA having complimentary sequence with a loaded siRNA is found then siRNA cleaves the mRNA and degrades it. In this fashion, siRNA inhibits the translation of target gene.

The goal of my Ph.D. research is to study siRNA in fungal system. My research methodology is computational. During my research, I will perform Molecular Dynamics Simulation experiment to study the effect of various factors such as hydration and macromolecular crowding on siRNA-peptide interactions.

Photographs of Experiment:



Study on Effective Human Robot Interaction based on Recognition and Association

Extensive research is going in the area of robotics, especially towards developing Humanoid Robots, who can interact with us socially. Such robots will be extremely useful for many household applications in near future. To make it happen several challenging problems related to Recognition and Association needs to be solved. Robot should learn interacting with the environment and also interacting with the people. Faces play a magnificent role in human robot interaction, as they do in our daily life. Due to inherent abilities of human mind it is very easy to recognize a person, even in bad illumination, after a long time and in partial occlusions. But this is not as such easy for robots to recognize the identity in such situation. Although the face recognition literature is old and rich, but regarding its implementation in robotics is very limited. This is also due to the fact that robotic eyes have motion in itself (like human) and existing literature deals with those situations where the source is fixed. The second problem in face recognition is the face spoofing, in which a system is not able to distinguish between a person and an imposter. The problem will become more detrimental when robots are used as an authenticator. Hence in our research work, we aim to design a framework for robotic eye which would be able to recognize the identities accurately and intelligently.

Name of Guide:
Prof. G.C. Nandi

Name of Research Scholar:
Avinash Kumar Singh

Roll No.
RS-110

Name of Division where
working:
IT DIVISION



Figure 1: Face Spoofing: A problem in Face Recognition



Figure 2: Solution Proposed by using Challenge and Response Method (Blocking a photo imposter Attack)

2.5 THE INFRASTRUCTURE

SITE PLAN – IIIT-A

2.5.1 Infrastructural Facilities

The Institute is established in a sparkling new campus at Jhalwa, on the outskirts of Allahabad. The institute is situated on a campus of 100 acres. The architecture aims to transcend established design conventions and make a statement about the similarities between atoms and bits. Instead of the traditional geometric lines, the campus and other buildings have been styled on patterns developed by internationally acclaimed scholar and mathematician; ROGER PENROSE giving the Jhalwa Campus a picturesque aerial view of a flying kite. Its exquisite gardens provide a great escape to the exhausted. Its spacious facilities, remarkable resources, intimate courtyards, open lawns reinforce both the individual concentration and the group interaction that are critical to the transformational learning experience that the Institute provides. All academic, administrative and residential areas are fully air conditioned and connected to the Institute's network (LAN) with 24 hrs services by 1 GBPS leased line.

Sprawling on 100 acres lush green



lawns and expanse of rich flora and devise floriculture, the Campus includes Visitors Guest House, Faculty Guest House, VIP Guest House, 4

Boys' Hostels with capacity of 275 inmates each, 2 Girls' Hostels, 60 Residential Quarters of Type I, II, III & IV, Married Scholar Apartments, Students Activity Centre, Bank, Post Office, Health and Shopping Complexes, Squash Courts, Tennis Courts, Badminton

Courts, Pavilion & Playgrounds and Girls' Hostel, Boys' Hostels and academic Staff Quarters at RGIIT-Amethi Campus of IIIT-Allahabad.



The Campus is fully residential in nature. The Institute has a comfortable Visitor Hostel (Guest – House) with 75 Air-Conditioned and Non- Air-Conditioned rooms. Besides this there is a residential complex meant for the faculty members both senior professors and other staff along with a small children park for the respective families. Faculty hostels with two-room and one-room units meant for visiting Professors. There is a separate well-equipped hostel facility for both the boys and girls supported with a quality mess and canteen. There is an optical fiber network connecting all buildings on campus including the hostels. The indoor and outdoor physical facilities provided to the students give them opportunity to an all-round development. The spacious accommodations are provided with computers, along with 24-hour backup power supply. Every room in the hostel is provided with a telephone set giving the students intercom facility inside the campus, also is provided STD/ISD facility for out-campus calls through prepaid cards. The students have access to a regular bus service from the Jhalwa Campus to Central Allahabad (the Nehru Science Centre City Campus of IIIT-A).

The air conditioned classrooms on campus featured curved desks arranged in tiered rows, a design that was particularly amenable to what was then a novel approach to teaching business through the case method, but the learning experience extends far beyond the walls of our classrooms. The campus abounds with places where students gather for projects, discussions, study groups, and club activities. There are meeting spaces where small groups of students perform the daily ritual of preparing together for upcoming case discussions. Projector systems are placed in every classroom to facilitate the teaching and learning methodologies. Discussion lobbies are available with round table facilities along with LCD display of latest stock market & Business trends.

Some of the major buildings are:

- Six-Storeyed Academic Complex – C.V. Raman Bhawan
- Fully furnished Auditorium having capacity for 1500 people
- Seven Storeyed Boys' Hostel with capacity of 710 students
- Four Storeyed Girls' Hostel with capacity 310 inmates
- Extension of Administration Block
- Extension of Dormitory into Community House Complex

Salient Features

- Fully furnished separate Hostels for Boys & Girls is available
- 24 Hours Internet Connectivity through 1 GBPS Leased Line
- Normally each student allotted P4 and above computers
- All computer points backed by 100% Uninterrupted Power Supply
- All students are encouraged to undertake Projects in cutting-edge areas under active supervision of faculty members. Students are also encouraged to undertake Industrial trainings/projects during vacations
- Academic Regulations as being practiced at other IIT's are broadly followed at the Institute **mutatis mutandis**
- All courses are envisaged to be delivered by experts
- State-of-the-art facilities for all labs
- All academic and administrative areas are fully air conditioned
- Unique opportunity to participate and contribute in leading National and internationally sponsored projects
- Selected students may also get the opportunity to work in foreign Universities under special institutional MoU's with them. Academic Exchange of students program with international educational institutions of repute
- Different sport facilities like volleyball court, basketball court, football court, snooker, cricket ground, swimming pool, GYM facilities, etc are available for all the students
- Banking & ATM facilities available in the Institute premises itself
- Medical facilities available on the Campus at any hour of the day and night. However, selected students must have Insurance before taking admission
- State of Art A/C library covering different books,

magazines related to Computers, Management, Electronics, etc. Electronic library available for academic and general mental development of the students

- Messes in the Hostels are fully air-conditioned
- Institute is having canteen providing hygienic foods / snacks
- One of the salient features of the training imparted to the students is the hands-on computer assembly training. The students themselves have assembled almost all of the Institute's computers, under guidance of the specially trained technical staff. This has not only enabled the Institute in bringing down the cost of new computers, but also made almost 100% instant trouble shooting of any faults, resulting in no requirement of any computer related AMC's
- IIT-Allahabad is the first academic campus in the country to implement BPL (Broadband over Power Line)



Technical Facilities

Hardware: Computer laboratories and the administrative buildings are derived from selected tessellated blocks in the star pattern. Out of IIITA's 35 labs the computer labs provided to the MBA/MS division comprises of Latest PCs having Core 2 Duo, Quad Core, i5 ,i7 with a 24 hours Internet access through 1 GBPS Leased line. Scanners, CD-DVD writers, Laser printers are also available in the Labs.

Software: The PC's use mainly Windows XP and Linux. The labs have a very rich repository of software ranging from integrated development environments for C/C++, Java, Visual Basic, to RDBMS like Oracle 9i, MySQL. Several specialized software for core labs or projects like Statistica, Rational Rose, SPSS 10.0, Argo UML, Systat 12 and various software for Testing and Decision Purposes for Managers have been acquired with adequate user licenses. ERP prototype packages are being acquired for facilitating the students with the latest in enterprise applications.

Services

All kinds of required network services, like DNS, NIS, NFS servers, Windows Domain Controllers, Mail and Web servers are managed and maintained by the lab staff and students. Services for Intranet and Internet are separated by firewall. The web and mail services are also appropriately divided for external and internal use. Further, efforts are ongoing to enable the campus with Wi-Fi Networks;

Residential

It is fully residential in nature and hence is a self-contained unit. The institute has a comfortable Visitor Hostel (Guest – House) with 75 Air-Conditioned and Non- Air-Conditioned rooms. Besides this there is a residential complex meant for the faculty members both senior professors and other staff along with a small children park for the respective families. Faculty hostels with two-room and one-room units meant for visiting Professors. There is a separate well-equipped hostel facility for both the boys and girls supported with a quality mess and canteen. There is an optical fiber network connecting all buildings on campus including the hostels. The indoor and outdoor physical facilities provided to the students give them opportunity to an all-round development. The spacious accommodations are provided with computers, along with 24-hour backup power supply. Every room in the hostel is provided with a telephone set giving the students intercom facility inside the campus, also is provided STD/ISD facility for out campus calls through prepaid cards. The students have access to a regular bus service from the Jhalwa Campus to Central Allahabad (the Nehru Science Centre City Campus of IIIT-A).



Classroom

The air conditioned classrooms on campus featured curved desks arranged in tiered rows, a design that was particularly amenable to what was then a novel approach to teaching business through the case method, but the learning experience extends far beyond the walls of our classrooms. The campus abounds with places where students gather for projects, discussions, study groups, and club activities. There are meeting spaces where small groups of students perform the daily ritual of preparing together for upcoming case discussions. Projector systems are placed in every classroom to facilitate the teaching and learning methodologies. Discussion lobbies are available with round table facilities along with LCD display of latest stock market & Business trends.

Auditorium

An auditorium with high level infrastructure that can accommodate around 1200 people with the latest state of technology is soon to be ready.



ABSTRACT OF INFRASTRUCTURAL FACILITIES AT IIIT-ALLAHABAD & RGIIT-AMETHI

IIIT-Allahabad

Sl. No.	Particulars	Covered Area (In Sq.m.)	Cost (Rs. In Crores)
1.	Buildings Completed	64,127.00	65.99
2.	Buildings under Completion	22,695.00	51.82
3.	Buildings Proposed	42838.15	93.45
	TOTAL	129,660.15	211.26

RGIIT-Amethi

Sl. No.	Particulars	Covered Area (In Sq.m.)	Cost (Rs. In Crores)
1.	Buildings Completed	10,411.31	12.48
2.	Boundary Wall Under Completion	1600.00 Running Meter	0.99
3.	Buildings Proposed	29,506.60	101.41
	TOTAL	39,918.00	114.88

GRAND TOTAL Covered Area = 169578.15 Sq.m.
Cost = Rs. 326.14 Crores

INFRASTRUCTURE CREATED DURING THE ELEVENTH PLAN (AMOUNT IN RS. CRORE)

Item of Expenditure	Nos. / Brief description			Expenditure
Hostels (no. of seats created) (1280 – Ann-01)	Sl. No	Detail	Occupancy	Cost (Rs. in Crs.)
	IIIT-A Jhalwa & RGIIT-A Campus			
	1.	Girls' Hostel – II	88	1.35
	2.	Girls' Hostel – III	248	19.52
	3.	Boys' Hostel – III	264	6.98
	4.	Boys' Hostel – IV	352	11.49
	5.	Married Scholar Apartments	50	3.54
	6.	Boys' Hostel (Amethi)	218	6.50
	7.	Girls' Hostel (Amethi)	60	2.30
	8.	TOTAL	1280	51.68
Faculty housing (no. of units by type created)	Type	Sqm.	Quantity	Cost (Rs. in Crs.)
	A	55	08	7.15
	B	85	28	
	D	120	24	
	E	165	06	
	F	200	05	
	Total		71	
Laboratory facilities (no./type) (Names & Particulars of Labs given in Ann - __)	Name of Building		No. of Labs	Cost of Equipments (Rs. in Crs.)
	Computer Centre – 3		30 Labs, 12 Lecture Halls & 35 Faculty Rooms	24.57
	Computer Centre – 1 (Top Floor)		02	
	Computer Centre – 2 (Top Floor)		02	

	Lecture Theatre (Top Floor)	02	
Library facilities	CD-ROMs, Online databases, audio-video cassettes, books, e-journals, patents, e-standards, theses, project reports and Newspapers etc.		5.30
Technology infrastructure and facilities	Swimming Pool		1.07
	Auditorium		14.46
	1) Pavilion 2) Volleyball Court 3) Lawn Tennis Court 4) Athletic Track		1.07
	Squash Court		0.60
	Cafeteria		1.09
	1) Health Centre 2) Bank & Post Office 3) Telephone Exchange 4) Shops, Dormitory 5) Student Activity Centre		1.65
	(RGIT-Amethi) 1) Auditorium 2) Canteen		1.5
	A. Computer Centre – 3 1) Lecture Halls 2) Faculty Rooms 3) Meeting Rooms 4) Laboratories 5) Essential Services Rooms		47.93
Others	B. Director's Residence & Camp Office		2.82
	C. HVAC & associated work		9.50
	D. Internal Furnishing for academic buildings, Hostels and Auditorium		10.00
	E. Office equipments		2.50
	F. Upgrading of Internet & Wi-Fi Facilities		2.25
	G. Sewage Treatment Plant		1.30
	H. Spillover of 10 th Plan		11.00
	I. Expenditure towards Ongoing Constructions 1) Boys' Hostel – V 2) Residences Type II, III, IV		7.70
Total amount spent			205.14
Unspent Amount (a/c infrastructure development)			NIL

Proposed Constructions

Name of the Building	Covered Area (in Sq.m.)	Estimated Cost (Rs. in Crores)
Boys' Hostel – V	19836.0	41.00
Girls' Hostel – III	10607.0	19.10
Additional Residences (54 nos.) [Type – I (06 nos.) Type – II (16 nos.), Type – III (20 nos.) and Type - IV (12 nos.)]	6424.15	12.84

Extension of Administrative Building	3660.00	16.92
Construction of Community Centre	705.00	1.34
Construction of Security Office cum Reception Complex	150.00	0.35
Construction of Bus Stops at Campus	186.00	0.30
Construction of 69 no. 4-wheeler and 109 no. 2-wheeler parking place at CC-3 building	1270.00	1.60
SUBTOTAL (ii)(c)	42838.15	93.45

Hostel Facilities

The Institute has state-of-the-art Hostel facilities for both Boys and Girl students with good ventilated rooms equipped with computers, fully air-conditioned modular Mess with electronic equipments and playing facilities.

Hostel	Single Rooms	Double Rooms	Total Rooms	Occupancy Capacity
Girls' Hostel – I	10	21	31	52
Girls' Hostel – II	10	39	49	88
Girls' Hostel – III	128	48	176	224 (+ 24 single suites)
Boys' Hostel – I	108	78	186	264
Boys' Hostel – II	108	78	186	264
Boys' Hostel – III	108	78	186	264
Boys' Hostel – IV	168	92	260	352
Boys' Hostel – V	347	210	557	767 (+ 64 single suites)
Married Scholars' Apartments			50	50

Residential facilities

Sl. No.	Existing Accommodation	No. of Rooms
1.	Number of Faculty houses (F type, 200 Sqm.) (E type, 165 Sqm.) (D type, 130 Sqm.) (C type, 110 Sqm.) (B type, 85 Sqm.)	65 05 14 28 02 16
2.	1. Visitors' Hostel I*: AC Room suites (Refrigerators, TV, computer facilities in six suites), all double beds AC Rooms (TV, All Double beds) Non-Ac Rooms (*Dining Hall, cyber café-3 computers, gym facilities) 2. Visitor Hostel II: (For VIP / International Visitors mainly with all essential facilities) 3. Visitor Hostel III: AC Suites, AC single (All double beds, refrigeration in 17 suites, TV with computer in all 30)	10 20 10 - 28 02

Coming up Residential Accommodation				
Sl. No.	Type of Quarter	Area	No. of Quarters approved by the Board	No. of Quarters to be constructed in the First Phase
	Type – I	55 Sqm.	12 (2 blocks)	06
	Type – II	85 Sqm.	32 (2 blocks)	16
	Type – III	100 Sqm.	40 (2 blocks)	20
	Type – IV	120 Sqm.	24 (2 blocks)	12
			108	54

Classroom Infrastructure

1	Campus area in acres	100 Acres
2	Total number of class rooms Computer Centre CC1 Computer Centre CC2 Lecture Theatre LT Nehru Science Centre NSC C.V. Raman Bhawan (CC-III)	05 05 10 03 12
3	Number of Faculty cabins Computer Centre CC1 Computer Centre CC2 Lecture Theatre LT Nehru Science Centre NSC C.V. Raman Bhawan (CC-3)	22 22 10 05 54
4	Number of laboratories Computer Centre CC1 Computer Centre CC2 Lecture Theatre LT Nehru Science Centre NSC C.V. Raman Bhawan (CC-3)	16 16 05 05 01 30



**CAMPUS BUILDING
PHOTOGRAPHS**

2.5.3 LABS AND RESEARCH FACILITIES

Computer laboratories and the administrative buildings are derived from selected tessellated blocks in the star pattern. A lot of emphasis is laid on research and learning via project work. This is exemplified by the numerous laboratories setup for research and projects pertaining to various emerging and contemporary fields like image Processing, Wireless Communication, Neural Networks, VLSI, Robotics and Bio-Informatics to name a few. They house softwares from widely used to be state-of-the-art technology. Laboratories that have been set up can be classified into two categories – general and specialized laboratories. Students have been provided independent systems in at least one general laboratory. Students can use laboratory facilities all round the clock. Laboratories open at their request, so students can conveniently work even when it is a public holiday. They can use these systems to install and run programs of their choice, carry out assignments and project works under course curriculum.

The computer labs comprise of latest PCs having Core 2 Duo, Quad Core, I5 with a 24 hours Internet access through 1 GBPS Leased line, Scanners, CD-writers, Laser printers are also available in the Labs. Multimedia projectors, Webcams, Video Cameras are extensively used for communication skills labs and various Presentations. Efforts are on to provide students with the latest Laptops. All computer points are backed by 100% Uninterrupted Power Supply.

Software: The PC's use mainly Windows XP and Linux. The labs have a very rich repository of software ranging from integrated development environments for C/C++, Java, Visual Basic, to RDBMS like Oracle 9i, MySQL. Several specialized software for core labs or projects like Statistica, Rational Rose, SPSS 10.0, Argo UML, Systat 12 and various software for Testing and Decision Purposes for Managers have been acquired with adequate user licenses. ERP prototype packages are being acquired for facilitating the students with the latest in enterprise applications.

The Institute maintains licensed copies of all software (systems, applications and academics) that students

require and ensures that the licenses are kept up to date. It discourages the use of illegally procured software. Students have the prerogative to request the Institute to procure any software or hardware that they require in their assignments, projects or research activities.

RESEARCH LABORATORIES

The Institute has about 35 specialized labs for B.Tech & M.Tech students and research labs in the following specialized areas for Ph.D. students. Some of them are:

- Signal Processing Laboratory
- Computer Graphics Laboratory
- Digital Data Communication Laboratory
- Robotics Laboratory
- Bio-informatics Laboratory
- Electronics Laboratory
- Wireless computing Laboratory
- Embedded Systems Laboratory
- VLSI Design Laboratory
- VLSI Fabrication Laboratory
- MBA-IT Computing Laboratories
- Research Laboratories (MBA / MSCLIS)
- MSCLIS Computing Laboratories
- Information Security Lab
- Forensic Lab
- Data Center Lab
- Project Laboratories

Facilities

1. 4 sets Virtual Reality System
2. 2 sets VR Platform
3. Neural/ brain Signal Capture System
4. Smell, Taste Sensor & associated
5. 3D Projector system
6. 3D Scanner system
7. Other supportive devices

MICROELECTRONICS LAB

A new microelectronics laboratory has been set up at IIIT/A recently with modern fabrication tools. Students get comprehensive training on design, fabrication and analysis of VLSI circuits and systems. Special emphasis is given to design at the FPGA level. Simulation of tasks for designing microelectronics circuits at micron and sub-micron level can be done.

The Institute has signed MoU with EPFL, Switzerland for establishment of centre of excellence in Microelectronics supported by Department of Science and Technology Govt. Accordingly the lab has been developed to become one of the best labs with up-to-date facilities in Microelectronics.

ROBOTICS AND ARTIFICIAL INTELLIGENCE LAB

The main vision of the laboratory is to nurture young minds towards creativity and steer their talents towards high quality research in different areas of Robotics and Intelligent Systems using Information Technology.

The laboratory provides state-of-the-art facilities to learn complex concepts of Artificial Intelligence. Students are encouraged to learn by doing it through many available development environments like Humanoid Open Architecture Platform (HOAP), Interactive Graphics Robot Instruction Program (IGRIP), Humanoid & Mobile Robot Simulation Platform, WEBOT, where students can create and control different kinds of robots using both C++ and Java. Apart from that we have hardware robots which include Humanoid robot HOAP-2, manipulating robots like Robix, SCARA and LEGO Mind storm kits. Our mission is to create an international standard for research and teaching, excel in the area of robotics and cognitive sciences, produce high quality engineers having self confidence and who can take part in nation's knowledge building endeavor and create a brand name for the Institute as a temple of learning. At present the laboratory has a number of collaborations like with Bio inspired robotics group of EPFL, Switzerland, Artificial Limb Manufacturing Corporations (ALIMCO), Kanpur.

Following are some of the project modules –

- Development of Adaptive Modular Active Leg (AMAL)
- Maneuvering Robotics Arm using Robix Software

FINANCE LAB

Many databases are subscribed for Research & Development eg. Capitalline, india stat, Systat etc.

INFORMATION SECURITY LAB

- ❖ A full-fledged Information Security Laboratory is set up for manpower training.
- ❖ A number of useful software's have been managed and installed.

- Implementing technology on Humanoid Open Architecture Platform (HOAP)
- Implementing Programmable Logic Controller (PLC) for designing industrial automation
- Simulation and fast prototyping of humanoid robot actions on Webots

COMPUTER FORENSICS LAB

This lab is the first of its kind in an academic institution in the country. It houses much proprietary software and hardware's including mobile forensic work stations.

North Zone Resource Centre for generating Contents, Mentors/Teachers etc. by conducting specialized Short term HRD Courses for IT/ITES sector

The centre has developed e-content in twelve designated areas ranging from computer science and e-services.

VLSI DESIGN LAB

This lab gives a unique opportunity to work in a clean environment towards development of VLSI designs and also exposes students in area of etching and related practices. Students have the prerogative to request the Institute to procure any software or hardware that they require in their assignments, projects or research activities.

MBA-IT & MSCLIS COMPUTING LABS

These are the general purpose programming labs meant for programming and research for the students enrolled in MBA (IT) and MSCLIS Program.

RESEARCH LABORATORIES (MBA/MSCLIS)

This is a specialized research lab wherein research scholars are working.

FORENSIC LAB

Advance Mobile Forensic Workstation has been set up with various sophisticated equipments.

DATA CENTER LAB

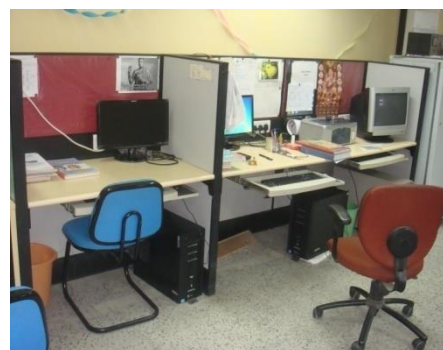
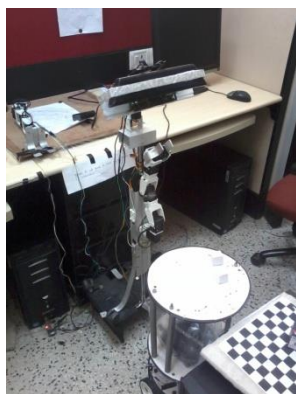
Besides the Information Security Lab a full-fledged Data Centre Lab is being set up.

PROJECT LABORATORIES

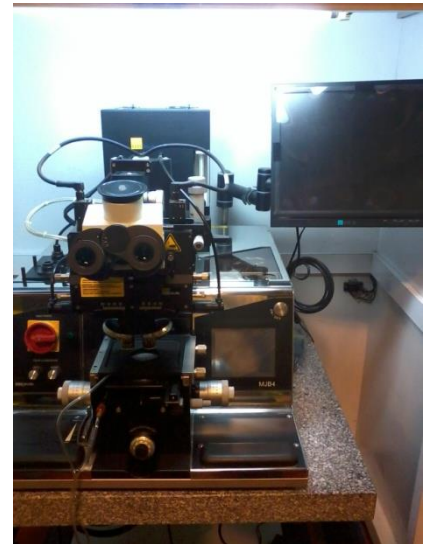
❖ National Mission on Education through ICT

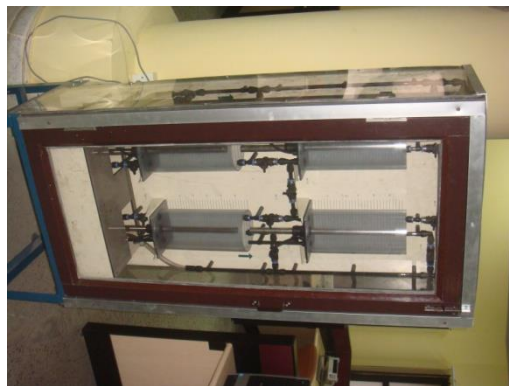
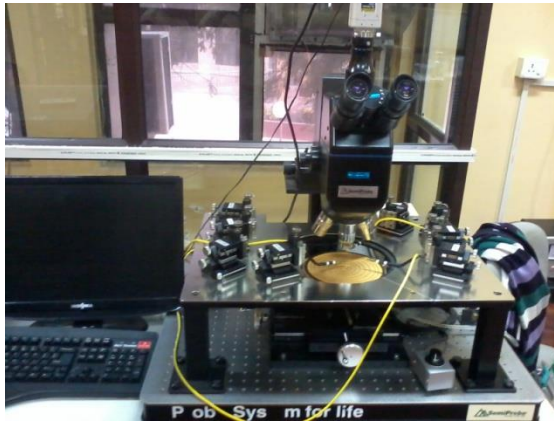
❖ North Zone Research Development Centre in IT /
ITES Lab

LABS - AT A GLANCE









2.5.4 LIBRARY FACILITIES

The sun pattern has been chosen for laying out the library. The IIIT library is stocked with books that cater to the student's academic and research requirements. Audio and multimedia versions of some course modules are also available. In addition, dictionaries, journals, thesaurus and encyclopedias are provided for reference purposes. Present is an electronic library that provides students with connectivity to the latest technological material through networked workstations. There are a total of 140 systems distributed over two floors. Reading space is also provided at convenient locations. There is a premier section of Books for the MBA/MS students. This new library has already acquired more than 30,000 books on various courses along with IT related latest titles. The library uses web-based software, developed in-house, for maintaining the database and circulation related daily operations. Besides, Institute is also the member of INDEST consortium, through which all ACM Digital Library, IEEE Digital Explore, Elsevier, Springer, Capitaline, Emerald Full-text, ABI Business Dateline, ABI Trade & Industry, EBSCO Business Sources, JCCC Case studies, Harvard Business Review etc. and various tutorials and journals are accessible throughout the campus, in digital form.

LIBRARY Functioning

- Before the beginning of each semester a mail is floated to Faculty members and students for procurement of books, journals, magazines, database based on current Industry trends and practices.
- The various requisitions are processed and finally the order is placed in consultation with the competent authority.
- The library has optimum blend titles, covering reference interests and also text books.
- If required special orders are also placed during the mid semester

Peripheral Activities in the Library

- Tracking of Usage Rate and Renewing the Subscription of Journals, Magazines, Databases accordingly.
- E-Books repository is being created
- Database Subscription- Capital line, India stat.

- Archiving of Thumb impression Library
- Subscription for Plagiarism Checking Website

a). The Conventional Library

The mission of the IIIT-A Library is to provide information services and access to bibliographic and full text digital and printed resources to support the scholarly and information needs of the Institute Community. The Library is well equipped with modern facilities and resources in the form of CD-ROMs, Online databases, audio-video cassettes, books, e-journals, patents, e-standards, theses, project reports and Newspapers etc. The library homepage provides electronic access to various full text & bibliographical databases & e-journals. Links from the library homepage provide the information on library policies, hours, collections, services, sections and the location of materials. The library hosts all its catalogues online through web interfaces for search and status of documents and readers. It is also equipped with auto generated mailing services to the members for reservation of documents, issue / return notification, loan status, overdue status and new arrivals in the library. Students can locate the books of their choice from their desktop on a few clicks. The web-enabled MIS used in the library is a software product and copyright of IIIT-A itself.

The IIIT-A Library is stocked with books that cater to the students' academic and research requirements. Audio and Multimedia versions of most of the course modules are available in electronic section. In addition dictionaries, thesaurus and encyclopedias are provided for reference purposes.

Procurement

Books or any other document for the library can be procured on the recommendation of faculty members Cross checking of the book(s) with requisition details given by the faculty member(s)
Registration / Stock Entry of the received books

Database Entry and placement of the books

- Database entry of each and every book is done online according to the accession number which also indicates the location of book

- Books are placed in various shelves according to the shelf number
- At least one copy of every title is kept in the library for reference purpose

Circulation Process

Opening of library account and issuing of the books on the basis of Institute's Identity Card

Online book reservation facility is available through OPAC if the book is not readily available in the library

Auto generated e-mail alert facility for New Arrivals, Loan Status, Overdue Reminder and availability status of reserved books etc. is sent to every registered member.

Full Text Online E-resources

Online e-resource like – IEEE, ACM Springer, Elsevier – Science Direct (Computer Science), Elsevier – Science Direct (Management), Emerald Management, Thomson Reuters and Sage Publication etc. subscribed by the Institute with IP authenticated (user name and password is not required), multiple user accessibility with unlimited download facilities are available within the Campus.

Following are brief details of Library:

Sl. No.	Details of Books	Details of Journals			Magazines	CDs / Softwares	Lectures / Video Courses	Cost (Rs. In Crores)	
		National	International	Online				Books	Journals
1.	34307	53	76	3466	40	1575	1005	5,28,98,571.00	68,68,526.00

Following online full databases are being subscribed by the Institute based on IP authenticated (Username and Password is not required) multiple user accessibility, full text of current and archival issues with unlimited download facilities –

1. ACM Digital Library
2. IEEE / IEE Electronic Library (Journals)
3. IEEE / IEE Conference Proceedings
4. IEEE / IEE Standards
5. Springer Link
6. ProQuest Science – ASTP
7. Nature
8. Emerald Management
9. Elsevier – SD (Computer Science)
10. Elsevier – SD (Business, Management & Accounting)
11. Sage Publication (Management and Organization Studies)
12. Sage Publication (Criminology and Criminal Justice)
13. D-Line Journals
14. ISACA Journals
15. JCCC (J-Gate Custom Content for Consortia – Bibliographic Database)
16. HEDBIB (International Bibliographic Database)

b). Universal Digital Library (UDL) Mega Center

The Universal Digital Library has the vision “A Million Books to The Web Assembling – The World's Biggest Library on Everybody's Desktop”. The basic motive of the Universal Digital Library (UDL) project is to provide access to the rich repository of knowledge to everybody. The initiative was taken by a group of institutions spread across different parts of the country together with the

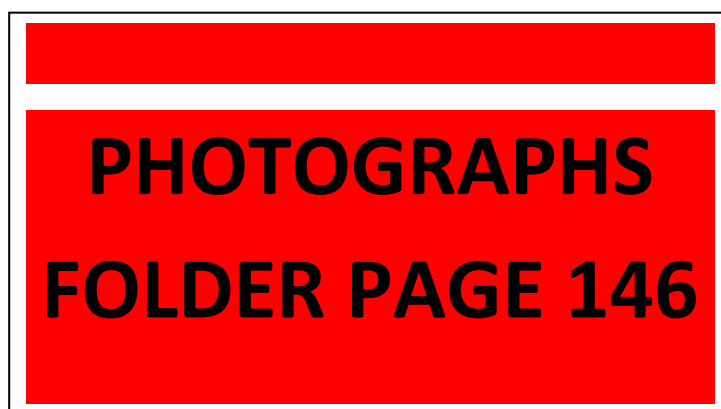
Carnegie Mellon University (USA). The IIIT-A was designated as a mega-center in the project. The major objective is to capture and store more than a million books in the digital format and to develop the required language technologies.

The UDL project also involves a significant amount of research and development work in all areas related to

Digital Libraries. These include development of optical character recognition systems for Indian scripts, development of machine translation systems, document summarization, information retrieval, development of

workflow for digital libraries etc. on the basis of achievement of this Lab Institute has been given responsibility of developing S&T digital library of all member states of ASEAN (10 countries).

Glimpses of Library Arena



2.5.5 SCHOLARSHIPS / FELLOWSHIPS / ASSISTANTSHIPS

There are various scholarships/financial assistantships provided by the Central & State Government to the students of the Institute. A brief overview of some of the various Scholarships is as follows:

Sl. No.	Name of Scholarships/ Regular Educational Aids	Executed by / Funded by	General Conditions / Eligibility	Amount Reimbursable (In Rs.)	Remarks If any,
1.	POST MATRIC SCHOLARSHIPS (ALL INDIA)				
	B.Tech / MBA / MSCLIS	Govt. of India, Ministry of Social Justice & Empowerment	<p>Annual Income Limit (for Post Matric Scholarships):</p> <p>For SC/ST Category – Rs. 2.0 Lakhs</p> <p>For General Category – Rs. 2.0 Lakhs (applicable only for students of U.P. origin)</p> <p>For OBC Category – Rs. 2.0 Lakhs (only U.P., Bihar States are sanctioning as at present. Students of other States may enquire from their Native States)</p> <p>For Minority Category (U.P. State Scheme) – Rs. 2.0 Lakhs</p> <p>For Minority Category (Central Scheme) – Rs. 2.0 Lakhs</p>	<p>For SC/ST Category – Full Fee + Maintenance Charges = 1200/- p.m. x 10 months</p> <p>For OBC / General / Minority Category U.P. Govt. Rates Plus Maintenance Charges = 1200/- p.m. x 10 months</p> <p>For Other States (OBC/Minority) – Reimbursement on respective State Govt. Rates</p>	
2.	INSTITUTE MERIT SCHOLARSHIP (Performance Award)				
	B.TECH / MBA / MSCLIS	Paid by Institute (IIIT-Allahabad)	<p>A. IIIT-A</p> <p>1. B.Tech (IT) - 10</p> <p>2. B.Tech (EC) - 06</p> <p>3. MBA (IT) - 04</p> <p>4. MS(CLIS) - 04</p> <p>TOTAL - 24</p> <p>B. RGIIT-Amethi</p> <p>1. B.Tech (IT) - 06</p> <p>GRAND TOTAL - 30</p> <p>Eligibility: Merit of 1st Year</p> <p>Renewal: Based on Merit</p>	Rs. 3,000/- p.m. for 12 months of the year (Rs. 36,000/- per year)	
3.	INSTITUTE MERIT-INCENTIVE AWARD (MERIT-BASED)				
	B.Tech	Paid by Institute (IIIT-Allahabad)	<p>1. Merit of qualifying exam</p> <p>2. 10% from each State Board</p> <p>3. Minimum 80% attendance in a Semester</p> <p>4. Continuation in</p>	Rs. 3,000/- p.m. for 12 months of the year (Rs. 36,000/- per year) (Six monthly RENEWAL)	

			successive Semesters subject to obtaining at least 'B' Grade marks in previous Sem		
4.	INSTITUTE MERIT-CUM-MEANS AWARD (INCOME-BASED)				
	B.Tech	Paid by Institute (IIT-Allahabad)	1. Annual Parental Income below Rs. 2.0 Lakh per annum 2. Minimum 80% attendance in a Semester 3. Continuation in successive Semesters subject to obtaining at least 'B' Grade marks in previous Sem	Rs. 3,000/- p.m. for 12 months of the year (Rs. 36,000/- per year) (Six monthly RENEWAL)	
5.	MERIT-CUM-MEANS MINORITY SCHOLARSHIP				
	Undergraduate & Postgraduate Students	Ministry of Minority Affairs, GoI	Eligible UG Students (Annual Income of Parents should be below Rs. 2.5 Lakhs)	Rs. 30,000/- for Hostellers Rs. 25,000/- for Day Scholars FULL FEE REIMBURSEMENT FOR GOVT. INSTITUTIONS	1. Muslims, Christians, Sikhs, Buddhists, Jains 2. 50% Marks 3. 30% for Girls 4. Parent's Income below Rs. 2.5 Lakhs
6.	INDIAN OIL SCHOLARSHIPS				
	B.TECH / MBA	Indian Oil Corporation, Govt. of India	1). 100 No. for B.Tech on All India Basis 2). 60 No. for MBA on All India Basis ELIGIBILITY 1. On All India Basis 2. 50% for SC/ST/OBC + 60% marks 3. 25% for Girls – 60% marks 4. 10% for PHs – 50% marks 5. General – 65% marks	Rs. 3,000/- p.m.	
7.	PRATIBHA SCHOLARSHIPS				
	B.Tech Students of Andhra Pradesh Only	Govt. of Andhra Pradesh	Eligible B.Tech Students of <u>Andhra Pradesh State</u> Only 1. SC/ST/Gen/OBC 2. Min. 60% marks in Intermediate/12 th Class or CGPA of 06 per semester 3. Native of Andhra Pradesh 4. Non-recipient of any other Scholarship 5. Parents Income Rs. 1.00 Lakh p.a.	Rs. 20,000/- per year	

8.	BIRSA MUNDA TECHNICAL SCHOLARSHIPS				
	ST Category B.Tech	Govt. of Jharkhand State	Eligible ST Category B.Tech students of Jharkhand 1). Parents Income Rs. 1.00 Lakh p.a. 2). ST Certificate	12 months' tuition fees, admission fees, examination fees and other University fees (Caution Money not included)	
9.	NCERT SCHOLARSHIPS				
	B.Tech	National Council For Educational Research & Training, Govt. of India	Qualifying Exam: Class VIII (appearing) 1. Reservation: 5% for SC, 7.5% for ST, 3% for PH each in respect of class VIII	Rs.500/- p.m. (Rs. 6,000/- per year)	
10.	CENTRAL SECTOR TOP CLASS EDUCATION SCHOLARSHIP (FOR SC / ST)				
	B.Tech	Ministry of Social Justice & Empowerment (for SC) & Ministry of Tribal Affairs (for ST), Gol	B.TECH Top 10 SC Top 05 ST (AIEEE Merit Ranking) <u>ELIGIBILITY</u> 1. AIEEE Merit Ranking 2. Non-recipient of other Scholarship 3. Successful performance in Annual Exam 4. Parents Annual Income Rs. 4.5 Lakh p.a.	1. Full Refundable/Non-refundable Fee for year 2. Lodging 3. Boarding 4. Contingency/Book Exp. =3,000/- 5. Cost of Computer =45,000/-	
11.	SCHOLARSHIPS FOR PHYSICALLY HANDICAPPED				
	Post Matric professional /technical Courses	Govt. of India	500 new scholarships, Post Matric professional /technical Courses 1. 40% or more disability 2. Pursuing Professional/Technical Courses 3. Parents Income = Rs. 15,000 per month (Rs. 1,80,000/year)	Day Scholars = 700 per month Hostellers = 1,000 per month + Reimbursement of Course Fee = 10,000 per year (Financial Assistance for computer with editing software for blind/deaf students)	
12.	EARN-WHILE-YOU-LEARN				
	Poor meritorious students	Paid by Institute	<u>Nature of Work:</u> 1. Some Administrative, Academic and Project work in spare time to finance their studies 2. 150 Students benefited every year	Decided by authorities as admissible under the Projects	
13.	STIPEND/ASSISTANTSHIP				
	M.Tech Students	Paid by the Institute	Eligible M.Tech students of SC/ST/OBC/General Category <u>Eligibility</u> 1. For GATE Scorers	8,000 per month + Contingency @ 10,000 per annum	

			only 2. Teaching Assistantship under a Faculty is necessary 3. Not for sponsored/MBBS candidates 4. Teaching for 8 hours per month, if reqd.		
14.	SINGLE GIRL CHILD SCHOLARSHIP				
	M.Tech Girl Students	Govt. of India	Only for Girls SC/ST/ General Category (Based on eligibility) <u>Eligibility</u> 1). Single Girl Child in family (should not have any other brother or sister) 2). Age upto 30 years 3). Certificate from First Class Magistrate/Gazetted Officer reg. ONLY CHILD IN FAMILY Status	2,000 per month	
15.	POST GRADUATE SCHOLARSHIP FOR PROFESSIONAL COURSES, UGC				
	M.Tech Students	UGC, Gol	Based on eligibility i) The candidate must have obtained Graduate degree in the relevant subject and obtained admission at Postgraduate level for regular full time course in any of the Professional subject in a recognized University/Institution/College. ii) Candidates pursuing post graduate course in professional subjects by correspondence or by Distance Education mode are not eligible to receive financial assistance under this scheme. iii) The upper age limit for male applicants is 45 years as on 1st July on the year of application, and 50 years in the case of female candidates. In exceptional cases, the age may be relaxed.	5,000 per month No. of slots available = 1000 per year Tenure of award = two/three years depending upon tenure of the PG Course Scholarship: @ Rs.5,000/- p.m. for M.Tech @Rs.3,000/- p.m. for other courses. Contingency: @Rs.15,000/- p.a. for M.Tech @Rs.10,000/- p.a. for other courses	
16.	DLF SCHOLARSHIPS				
		DLF Foundation, Gurgaon	Eligibility: parental annual income	Reimbursement Rs. 40,000/- per year covering tuition fees and allied	

			<p>upto Rs. 1,80,000/-</p> <p>No. of scholarships = 4 selected by Selection Committee of the Institute</p> <p>Scheme for students belonging to States of Haryana, Uttar Pradesh and Union Territory of Delhi</p>	<p>expenses on books, instruments and equipments</p>	
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2.6 THE STATISTICAL OVERVIEW

2.6.1 Financial position of the Deemed University

Year-wise breakup of Income and Expenditure Statement

Sl. No.	Year	Income			Expenditure		Remarks
		Plan Grant	Non-Plan Grant	Income from Internal Sources	Plan	** Non-Plan	
(1)	(2)	(3)	(4)	(5)	(7)	(8)	(9)
1	2000-2001	1650.00	---	177.62	1202.78	337.12	
2	2001-2002	1470.00	---	353.58	1206.58	389.75	
3	2002-2003	225.00	450.00	156.33	853.58	472.34	
4	2003-2004	800.00	450.00	214.57	1020.44	633.65	
5	2004-2005	450.00	450.00	244.26	454.91	600.46	
6	2005-2006	1100.00	463.00	289.79	1102.00	714.20	
7	2006-2007	1500.00	630.85	354.78	1532.55	815.77	
8	2007-2008	2357.05	600.00	479.16	2414.94	1096.00	
9	2008-2009	4508.00	1017.00	650.74	4517.80	1574.31	
10	2009-2010	4957.05	725.00	938.20	4974.50	1887.61	
11	2010-2011	3000.00	572.00	1168.22	3020.91	1665.18	
*12	2011-2012	5500.00	1400.00	1237.52	5517.30	1765.38	

* 1. Actual + Committed expenditure

** 2. Excess of Expenditure over Income has been met from Income of Internal resources of the Institute

2.6.2 DEGREES AWARDED DURING 2011-2012

The following students passed out at the Sixth Convocation of the Institute held on 12th August, 2011.

Number of Graduate Passed out Students						
Academic Batch	Name of Courses	No. of Students Passed				
		Boy(s)		Girl(s)		Total
		With Honours	Without Honours	With Honours	Without Honours	
Jul 2004 - Jun 2008 (Passed in 2010)	B.Tech. IT	00	02	00	00	02

Jul 2006 - Jun 2010	B.Tech. IT	49	113	06	06	174
Jul 2006 - Jun 2010 (Passed in 2011)	B.Tech. IT	00	03	00	00	03
Jul 2007 - Jun 2011	B.Tech. IT	42	101	07	03	153
Jul 2006 - Jun 2010	B.Tech. ECE	17	29	04	03	53
Jul 2007 - Jun 2011	B.Tech. ECE	15	31	05	04	55

Number of Postgraduate Passed out Students

Academic Batch	Name of Courses	No. of Students Passed			
		Splsn.	Boy(s)	Girl(s)	Total
Jul 2009 - Jun 2011	M.Tech. (IT)	BI	09	04	13
		IS	09	02	11
		WCC	12	05	17
		SE	16	05	21
		HCI	11	05	16
		RO	09	00	09
		MI	06	03	09
Jul 2008 - Jun 2010	M.Tech. (IT)	BI	09	11	20
		IS	11	02	13
		WCC	16	00	16
		SE	14	03	17
		HCI	11	02	13
		RO	10	01	11
		MI	09	02	11
Jul 2007 - Jun 2009	M.Tech. (IT)	BI	06	02	08
		IS	03	00	03
		WCC	07	01	08
		SE	09	01	10
		HCI	02	02	04
		RO	00	00	00
		MI	07	01	08
Jul 2005 - Jun 2010	M.Tech. (IT)	SE	01	00	01
Jul 2007 - Jun 2009	MBA	IT	01	00	01
Jul 2008 - Jun 2010	MBA	IT	38	14	52
Jul 2009 - Jun 2011	MBA	IT	33	20	53
Jul 2006 - Jun 2008	MSCLIS		01	00	01
Jul 2007 - Jun 2009	MSCLIS		03	01	04
Jul 2008 - Jun 2010	MSCLIS		44	10	54
Jul 2009 - Jun 2011	MSCLIS		59	11	70

Number of Doctor of Philosophy passed out Students

Name of Courses	No. of Students Passed		Total
Ph.D.	Boys (s)	Girl(s)	08
	03	05	

2.6.3 PUBLICATIONS BY FACULTY

Year-wise Update of Last Five Years

Year	Conferences	Journals	Books	Total	Patents Filed	Patents Obtained	Copyrights
2007-2008	87	52	10	149	04	01	Obtained till now = 09
2008-2009	120	49	12	181	----	----	
2009-2010	98	82	09	189	01	01	
2010-2011	138	102	21	261	----	----	
2011-2012	104	102	13	219	01	----	
TOTAL	547	387	65	999	06	02	09

Faculty-wise approximation of Publications

Sl. No.	Name of Faculty	Publications	
		Upto 2006-2007	Upto 2011-2012
1.	Prof. M.D. Tiwari	160	15
2.	Prof. C.M. Bhandari*	65	08
3.	Prof. G. C. Nandi	60	32
4.	Prof. U. S. Tiwary	33	28
5.	Prof. R. C. Tripathi	----	34
6.	Prof. Sudip Sanyal	10	25
7.	Prof. Om Prakash Vyas	----	18
8.	Prof. Brij Bihari Tiwari	----	19
9.	Prof. B.R. Singh	----	07
10.	Prof. M. Radhakrishna	60	26
11.	Prof. G.N. Pandey	----	42
12.	Prof. Krishna Mishra	250	131
13.	Dr. Anupam	32	42
14.	Dr. Anurika Vaish	10	33
15.	Dr. Shekhar Verma	15	83
16.	Dr. Tapobrata Lahiri	20	19
17.	Dr. Shirshu Verma	----	28
18.	Dr. Sanjeev B.S.	07	06
19.	Dr. C. V. S. Siva Prasad	08	13
20.	Dr. Pavan Chakraborty	----	22
21.	Dr. Vrijendra Singh	04	24
22.	Dr. Neetesh Purohit	02	22
23.	Dr. Pritish Kr. Varadwaj	06	18

Sl. No.	Name of Faculty	Publications	
24.	Dr. Abhishek Vaish	----	27
25.	Dr. Madhvendra Misra	04	15
26.	Dr. Vijayshri Tewari	03	--
27.	Dr. Rajat Kumar Singh	----	11
28.	Dr. Vijay Kr. Chaurasia	01	18
29.	Dr. Manish Kumar	----	06
30.	Dr. Sanjai Singh	10	01
31.	Dr. Sonali Agarwal	----	21
32.	Dr. S. Venkatesan	----	18
33.	Mr. Manish Goswami	----	12
34.	Dr. Krishna Pratap Singh	----	12
35.	Mr. Ajit Singh	----	1
36.	Mr. Ashutosh Kumar Singh	----	15
37.	Mr. Rahul Gupta	----	12
38.	Mr. Triloki Pant	----	12
39.	Mr. Arun Prakash	----	21
40.	Mr. Saurabh Mishra	----	6
41.	Mr. Ajay Singh Raghuvanshi	----	14
42.	Ms. Kusum Lata	----	09
43.	Dr. Satinder Kr. Sharma	----	05
44.	Mr. Utkarsh Goel	----	06
45.	Mr. Monark Bag	----	20
46.	Mr. Shashi Kant Rai	----	5
47.	Mr. Santanu Das	----	2
48.	Dr. Shveta Singh*	12	----
49.	Dr. Arpita Khare*	11	----
50.	Mr. Shashikant Singh*	05	----
51.	Dr. Shariq M. Rizvi*	05	----
52.	Mr. Sudipta Ray*	13	----
53.	Ms. Priya Gupta*	01	----
54.	Dr. Vandana Agarwal*	02	----
55.	Ms. Manjari Gupta*	05	----
56.	Mrs. Shefalika Samaddar*	11	----
57.	Mr. Sandeep Dixit*	05	----
58.	Mr. Ankur Purwar*	10	----
59.	Dr. Tanveer Jahan Siddiqui*	----	15
60.	Mr. Rohit Agarwal*	----	01
61.	Dr. Ravindra Singh*	----	10
62.	Mr. Kailash Chandra Ray*	----	07
63.	Mr. Ashish Kumar Srivastava*	----	02

Sl. No.	Name of Faculty	Publications	
64.	TOTAL	840	999

* Faculty since left the Institute

2.6.4 GUEST LECTURES

The Institute organizes a number of Seminars, Conferences, Workshops etc. every year. A numerical view of Guest Lectures by eminent speakers at the fora as well as Lectures by visiting Faculty taking classes through the year (as compiled for last five years) is as below:

a. Lectures by eminent speakers

Sl. No.	Year	Number of Lectures by Guest Speakers / Invitees
1	2007-2008	14
2	2008-2009	32
3	2009-2010	10
4	2010-2011	26
5	2011-2012	19
	TOTAL	82

b. Lectures by Visiting Faculty to the Institute

Sl. No.		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
1	Prof. Bindhyachal Rai	183	180	179	106	-----
2	Prof. D.P. Chaudhary	192	120	165	130	-----
3	Prof. G.N. Pandey	46	-----	-----	-----	-----
4	Prof. Hari Prakash	-----	-----	-----	-----	-----
5	Prof. Rajeev Tripathi	30	-----	-----	-----	-----
6	Dr. Sunita Agarwal	35	-----	-----	-----	-----
7	Prof. Vinod Prakash	269	230	237	54	-----
8	Dr. Sudarshan Tiwari	30	27	20	-----	-----
9	Prof. A.K. Gupta	-----	-----	-----	-----	-----
10	Dr. K.N. Agarwala	-----	-----	-----	-----	-----
11	Prof. M. Radhakrishna	359	342	-----	-----	-----
12	Dr. Anoop Chaturvedi	119	117	112	-----	-----
13	Dr. S.I. Rizvi	-----	-----	-----	-----	-----
14	Prof. H.N. Tiwari	-----	-----	-----	-----	-----
15	Ms. Vanita Mehrotra	-----	-----	-----	-----	-----
16	Dr. Narsingh	-----	-----	-----	-----	-----
17	Dr. O.P. Vyas	-----	03	14	-----	-----
18	Prof. A.K. Singh	13	-----	-----	-----	-----
19	Prof. R.C. Tripathi	06	-----	-----	-----	-----
20	Prof. M.M. Gore	-----	-----	-----	-----	-----
21	Dr. U.S. Tandon	56	-----	-----	-----	-----
22	Prof. Gulab Singh	-----	-----	-----	-----	-----
23	Dr. Shefalika Samaddar	-----	-----	-----	-----	-----
24	Mr. Abhishek Vaish	-----	-----	-----	-----	-----
25	Dr. Shekhar Verma	-----	-----	-----	-----	-----
26	Dr. Shirshu Verma	-----	-----	-----	-----	-----
27	Prof. H.N. Srivastava	12	-----	-----	-----	-----

28	Dr. Arti Noor	31	12	-----	-----	-----
29	Mr. P.K. Mukherjee	81	60	45	-----	-----
30	Mr. Abhishek Mehrotra	-----	-----	-----	-----	-----
21	Dr. Amora Nongkynrih	30	20	41	-----	-----
32	Prof. R.N. Srivastava	21	11	-----	-----	-----
33	Prof. R.N. Bandopadhyay	11	-----	-----	-----	-----
34	Dr. Rajeev Kumar Srivastava	10	10	-----	-----	-----
35	Dr. H. Ramanathan	-----	-----	-----	-----	-----
36	Dr. Jasvir Singh	-----	30	33	-----	-----
37	Prof. V.V. Menon	-----	05	-----	-----	-----
38	Prof. S.P. Singh	-----	13	-----	-----	-----
39	Dr. P. Chakraborty	06	16	-----	08	-----
40	Prof. A.K. Mittal	-----	26	31	29	27
41	Mr. M. Thottappan	-----	08	-----	-----	-----
42	Prof. S.N. Singh	-----	24	33	-----	-----
43	Dr. Ratneshwar	-----	-----	14	-----	-----
44	Dr. Manjari Gupta	-----	-----	08	-----	-----
45	Mr. Manoj Kumar Yadav	-----	-----	12	-----	-----
	TOTAL	1546	1254	944	327	27

Note: In addition Dr. S.A. Jamil, Dr. H. Ramanathan, Ms. Vanita Mehrotra, Mr. Abhishek Malhotra and Mr. Abhishek Vaish gave Lectures to cover the entire subject allotted to them

Seminars / Workshops / Conferences / Training programs conducted

Sl. No.	Year	Seminars	Workshops	Conferences	Symposia	Total
1	2007-2008	3	4	3	1	11
2	2008-2009	1	8	3	1	13
3	2009-2010	2	11	2	1	16
4	2010-2011	3	5	1	2	11
5	2011-2012	5	2	2	1	10
	TOTAL	14	30	11	06	61

2.6.5 EMINENT VISITORS TO INSTITUTE IN 2012-2013

Sl. No.	Date/Year (Period)	Conferences/Symposia/Talks/ Lectures/Events	Chief Guest/Main Speaker/Resource Person
1.	April 15-16, 2011	National Seminar on Green Energy for Empowering Rural India,	Dr. S. Gomathinayagam – Ex. Director, Centre for wind energy technology, Chennai Dr. Anil P. Joshi, HESCO, Dehradun Dr. A.K. Jain – Director, Sardar Swaran Singh National Institute of Renewable Energy, Kapurthala Dr. M. Shyam – Director, S.P. renewable energy research Institute, Vallabh Vidyanagar
2.	April 28, 2011	Three day seminar on 'Standardization on communication net works'	Gary Fishman
3.	June 10, 2011	Seminar on 'Challenges of the universities in the knowledge society	
4.	July 09, 2011	Seminar on 'Education Innovation and	Prof. Satish K Tripathi, First Indian President of the State University

Sl. No.	Date/Year (Period)	Conferences/Symposia/Talks/ Lectures/Events	Chief Guest/Main Speaker/Resource Person
		Society'	of New York, Prof. Yash Pal Chairman, Board of Governors and Finance Committee, IIIT-A, Vijay K Thadani
5.	12th August, 2011	Sixth Convocation	Padam Shri Prof. Govardhan Mehta - National Research Professor Sri V.K. Thadani - Chairman, BOG, IIIT-A Padam Bhushan FC Kohli Padam Vibhushan Prof. M.G.K. Menon
6.	August 20-21, 2011	Two-day National Seminar on :Green Energy and ICT: Solar Energy Empowerment of Rural India" organized by Indian Institute of Information Technology	Mr. Jaideep Malviya – CEO, STFI, Pune Dr. Amitabh Verma – VP, Technology, solar power business, Mumbai Dr. P.C. Pant – Scientist 'E'/ Director, solar energy centre, Ministry of new and renewable energy, Govt. of India
7.	November 26-02 December, 2011	Fourth Nobel Laureate Science Conclave	Notable Visitors: Nobel Laureate Prof. Robert C. Richardson, USA Nobel Laureate Prof. Dr. Hartmut Michel, Germany Academician Prof. Alexi Removich Khokhlov, RAS, Moscow Turing Award Prof. Joseph Sifakis, Director, Integrative Research Centre, France Prof. h.c.H. Neunzert, and Prof. Ing. Matthias Kleiner, Germany Prof. Paolo Di Nardo – Italy Prof. Douglas Currie – USA Prof. Satish K. Tripathi, President, University at Buffalo, USA Prof. Ramjee Prasad – Director CTIF, Denmark Prof. Pramod Rastogi, EPFL, Lausanne, SWITZERLAND Prof. Rositsa Bateson, Putera Sampoerna International University, INDONESIA Dr. Satya P. Chauhan, Director, PPSG & GSA Contracts Operations, Battelle Memorial Institute, Ohio, USA Prof. Satya Prakash, Mc Gill University, CANADA Prof. Hari S. Sharma, USA Prof. Alex Gaponenko, RUSSIA Ms. Elena Pavlyukova, RUSSIA HON'BLE SRI P.R. DASGUPTA Prof. Govind Swarup, INDIA Prof. Vinod K. Gaur, INDIA Prof. Jayant Vishnu Narlikar, INDIA Prof. A.K. Bakhshi, Vice Chancellor, UPRTOU, Allahabad, INDIA
8.	February 07, 2012	One day National Workshop on Electronics and Information and Communication Technologies Intellectual Property Right"	
9.	March 14, 2012	Visit of Dr. R. Chidambaram – Principal Scientific Adviser, Govt. of India to IIIT-A	Dr. R. Chidambaram

2.6.6 PATENTS AND COPYRIGHTS

AN OUTLINE OF IPR PROFILE OF IIIT-A

A) Patents Granted:

- 10) **Title : Method for Executing a Sequential Program in Parallel with Automatic Fault Tolerance –**
US Patent No: US 7159,211 B2 - Granted Dated Jan 2, 2007
Indian Patent Application No: 884 / Del / 2002

- 11) **Title : Method and Device for detecting watermark in digital data-**
US Patent No: US 7,336,800 B2 granted dated 26.02.08
The Patent was also filed on 16.05.2002 in India vide No: 563 / DEL / 2002. It was granted on 02.03.09 vide Indian Patent No: 231097.

Patents Filed in India and under progress:

- 12) **1971 / DEL / 2005:** An Encryption Method and System.
- 13) **757 / Del / 2006:** A block based method and apparatus for optimized terrain rendering allowing dynamic paging of very large data with multiple levels of details (LOD) and triangle strip based on indexing.
- 14) **399 / DEL / 2007 / FAB:** A fuzzy- adaptive brightness control mechanism for a computer display device.
- 15) **492/ DEL/ 2007:** Soft computing based microprocessor controlled Adaptive Modular Active Leg System.
- 16) **2215 / Del / 2007:** Cushy Mouse Kit, An Ergonomic mouse and mouse pad.
- 17) **779 / DEL / 2009:** A method and A software Implemented Tool for Detecting Plagiarism in documents.
- 18) **1294/DEL/2012:** A personal Human Computer Interaction System based on Eye Gaze Tracking

D) Copyrights :

5)

Obtained Copyright certifications have been obtained from the Registrar of Copyrights, New Delhi for following six software tools:

- 8) **Libsite ver.1.0** for Library Management : It is an in-house developed complete web based solution for academic libraries management consisting of Online Public Access Module(OPAM),Online Member Access Module (OMAM),Online Data Management Module (ODMM)
- 9) **Excite ver.1.0** is a web based complete solution for Examination Cell of any Institute.
- 10) **Aware ver.1.0** is a software tool for Embedding and Recovery of a watermark in digital records.
- 11) **Software CodeCop** is a software tool to detect Patents being gazetted for opposition which are likely covered under Free Open Source Softwares (FOSS).
- 12) **Content Class Marker** is a software tool which essentially allots International Patent Classification (IPC) No. on a newly received Patent for search and examination.
- 13) **Virgin Innovation Detector** is a software tool which may detect whether a newly drafted research paper/ Patent has a virgin originality to merit publication / grant of Patent and is not covered under existing science and technology Prior-Art.
- 14) **Patent Vulture 1.0** is a Software Tool to catch immoral / illegal patents and Business Method Patents in the Indian Patents being Gazetted for Opposition.

E) Copyrights Applied:

- 3) **RoboCAM 1.0** is a software tool which provides a multi client video conferencing facility for text chat, display of other users registered through a secure login storage database and viewing of own's camera feed etc.
- 4) **Lekhok** is a software tool which provides the writing capability to Hoap-2. Using which the user just needs to enter some text and this will be written by the Hoap-2 on the board with a pen in its hand.

2.6.7 ACADEMIC EXCHANGE PROGRAMS

The Institute has continued to maintain and enhance the academic excellence it has had since its inception that has enabled it to have collaborative academic exchanges with the following International / National Universities / Institutions of academic eminence. MoUs have already been signed with most of these institutions and with the rest they are in process.

1. Carnegie Mellon University, Pittsburgh

2. California University, Riverside, USA
3. State University of New York, Buffalo
4. Massachusetts Institute of Technology, USA
5. Gwangju Institute of Science & Technology (GIST), Korea
6. Canberra University, Australia
7. EPFL Louisiana and ETZ Zurich, Switzerland
8. Aalborg University, Denmark
9. Russian New University (ROSNOU), Moscow, Russia
10. University of Michigan, USA
11. Caledonian College of Engineering, Muscat, Oman
12. IIT-Kanpur, IIT-Mumbai and IIT-New Delhi
13. Information Security Research Consortium jointly signed by USA, China, Japan, Russia, Germany, Israel, India, ROSNOU-Russia
14. University of Dundee, Nethergate, Scotland, UK
15. Moscow Institute of Physics and Technology (State University), Moscow, Russia
16. Center for Teleinfrastructure (CTIF), Aalborg University, Denmark
17. Asian Institute of Technology, Bangkok, Thailand
18. The Southern Taiwan University, Taiwan
19. The University of Lincoln, U.K.
20. Erasmus MC: University Medical Centre, Rotterdam, Netherland
21. The Erasmus University, Rotterdam, Netherland
22. University of Abertay Dundee, Scotland
23. The Queensland University of Technology, Brisbane, Australia
24. Putera Sampoerna Foundation (PSF), Jakarta
25. M.H Alsya Co. W.L.L., Kuwait
26. Ohio State University & Cornell University
27. Biolink Institute, Link Campus University, Rome, Italy
28. Shenyang University, China
29. The Swiss Federal Institute of Technology, Lausanne, Switzerland
30. Allahabad High Court, Allahabad, India

2.6.8 COLLABORATIONS WITH INDUSTRIES

- Maple Leaf India Pvt. Ltd., New Delhi
- M/s. Corinex, Canada
- Construction Industry Development Council (CIDC)
- Tata Consultancy Services (TCS), Mumbai
- Artificial Limb Manufacturing Corporation (ALIMCO), Kanpur, Govt. of India
- FORTIS Hospital, Noida, Uttar Pradesh
- Indian Space Research Organization (ISRO), Bangalore
- Zensar Technologies Ltd., Pune
- Indian Oil Corporation, Faridabad
- Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow
- Akruti Citygold Institute, Mumbai
- Microsoft
- IBM
- Battelle Memorial Institute, USA
- NIKSUN India



- Rivers Company, UK
- Biomedical Foundation, Canada

2.6.9 CENTRES OF EXCELLENCE

- Indo-Russian Centre of Biotechnology
- Indo-US Centre of Language Technology
- Indo – Danish Centre for Wireless Communication & Sensors
- Indo-Swiss Centre for Microelectronics
- Patent Referral Centre
- Plagiarism Detection Centre
- S&T Discovery Park for Rural Empowerment, Amethi
- Centre for Physically Disabled Persons
- I4CT, Denmark (Being established)

2.6.10 PLACEMENTS & RANKING

The UG & PG batches of passouts of the Institute have had placements in national / international organizations of repute every year. In a short span of time, the students of the Institute have not only made a mark in some of the best companies around the world, but are also making their presence felt in the highest corridors of academia.

In addition, the Institute has, to its credit the following ranking positions in India and abroad:

8th in India Today in India in 2008

- **11th** by NASSCOM – Dataquest ranking in 2009
- **25th** among the Universities of South Asia by Webometrics
- **53rd** in Spanish Research Organization in the South Asian region out of 20,000 universities in the world in 2011
- **2nd** in Sphere Online Judge globally in 2011
- Dewang Mehta Business School Awards for best academic input syllabus in information Technology- 2011
- National B-School Award in Best Government Engineering College category in 2011
- **18th** in India Today Nielsen Rankings in 2012

Placement details

Sl. No. / Year of Placement	Course	Batch	No. of Passout	No. of Placement
2007-2008	B.Tech	2004-2008	121	120
	M.Tech	2006-2008	70	70
	MBA (IT)	2006-2008	55	50
	MS(CLIS)	2006-2008	30	25
2008-2009	B.Tech	2005-2009	141	139
	M.Tech	2007-2009	55	54
	MBA (IT)	2007-2009	52	50
	MS(CLIS)	2007-2009	52	46
2009-2010	B.Tech	2006-2010	229	196
	M.Tech	2007-2009	55	49
	MBA (IT)	2008-2010	55	35
	MS(CLIS)	2008-2010	54	31
2010-2011	B.Tech	2007-2011	225	216
	M.Tech	2009-2011	53	53
	MBA (IT)	2009-2011	54	38

	MS(CLIS)	2009-2011	70	48
2011-2012	B.Tech	2007-2011	208	177
	M.Tech	2009-2011	96	71
	MBA (IT)	2010-2012	35	25
	MS(CLIS)	2010-2012	-----	35

Selected Campus Recruiters

- ❖ Microsoft-IDC, Hyderabad, India
- ❖ Google, Hyderabad, India
- ❖ Amazon, Bangalore, India
- ❖ Rediff, India
- ❖ Oracle, Bangalore, India
- ❖ Intel, Bangalore, India
- ❖ Motorola, Hyderabad, India
- ❖ Amdocs, India
- ❖ Newgen, India
- ❖ Flextronics, Hyderabad and Gurgaon, India
- ❖ NIS Sprata, New Delhi, India
- ❖ HCL, Noida, India
- ❖ TCS, India
- ❖ Wipro, India
- ❖ Siemens, India
- ❖ Pricewaterhouse Coopers, India
- ❖ ZS Associates, India
- ❖ De Shaw, India
- ❖ IBM-GS, Gurgaon, India
- ❖ Hewlett Packard, India
- ❖ Pantaloons
- ❖ Ernst & Young
- ❖ PIAGGIO
- ❖ Max New York Life
- ❖ Indiamart
- ❖ A-one Technologies
- ❖ Johnson & Johnson
- ❖ Bajaj Hindustan
- ❖ JaipurRugs
- ❖ 3I Infotech (SDG)
- ❖ First Flight
- ❖ Deloitte
- ❖ Indiabulls
- ❖ BIRD etech Group of IMBR

2.6.11 CONSULTANCIES PROVIDED BY THE INSTITUTE

With its expertise in Information Technology and academic fields, the Institute has also provided infrastructural & technical consultancies to various organizations, Industry & Institutions, such as:

1. SSN University, Greater Noida

Greater Noida, U.P. India
promoted by - Sivasubramaniya Nadar Education
and Charitable Trust
(SSN Trust)

2. Akruti Citygold Institute, Mumbai

promoted by Akruti Foundation for Knowledge &
Research Society (AFKR)

3. S.P. Memorial Institute of Technology (SPMIT)

promoted by S.P. Memorial Trust
G.T. Road, Bhati Mahgaon, Kaushambi, Uttar
Pradesh

4. Allahabad Development Authority (ADA)

Indira Bhawan, Allahabad

**5. Jagadguru Rambhadracharya Handicapped
University (JRHU)**

Chitrakoot, Uttar Pradesh



6. Uttar Pradesh Rajarshi Tandon Open University (UPRTOU)

Shantipuram (Sector-F), Phaphamau, Allahabad

Allahabad

7. North Central Railway (NCR)

Allahabad

8. The Allahabad High Court

9. All India Radio (AIR)

Aakashwani, Allahabad

10. Allahabad Nagar Nigam

Allahabad

With the above achievements and promises for a better tomorrow, the Institute is engaged in its continued striving towards excellence.

2.6.12 SCHOLARSHIPS STATISTICS

[A]. INSTITUTE SCHOLARSHIPS

Sl. No.	Name of the Scholarship	Course	No. of Scholarships					
			2007-2008	2008-2009	2009-2010	2010-2011	2011-2012*	
1.								
2.	Institute Merit Scholarship Award	B.Tech (IT) B.Tech (EC) MBA (IT) MS(CLIS) B.Tech (IT) Amethi	5 3 2 1 3	5 3 2 1 3	5 3 2 1 3	05 03 02 01 03	10 06 04 04 06	
3.	Merit-cum-Means Scholarship	July 2010 + July 2011	-----	-----	-----	60	125	
4.	Merit-Incentive Award	July 2010 + July 2011	-----	-----	-----	51	97	
5.	Stipend/Assistantship to GATE qualified M.Tech students	M.Tech (1 st + 2 nd Year)	203	194	238	247	274	

* These figures are provisional and are likely to increase as the sanction of Scholarship is in process

[B]. OTHER SCHOLARSHIPS

Sl. No.	Name of Scholarships	Course	No. of Scholarships				
			2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
1.	Central Sector Top Class Education Scholarships for Top 10 SC Students (Ministry of Social Justice & Empowerment, Govt. of India)	B.Tech (IT) & (EC)	10	20	30	40	40
2.	Central Sector Top Class Education Scholarships for Top 05 ST Students (Ministry of Tribal Affairs, Govt. of India)	B.Tech (IT) & (EC)	05	10	15	20	20
3.	Post Matric, U.P. SC/ST	B.Tech (IT) & (EC) MBA (IT)	45	70	72	78	83

		MS(CLIS)					
4.	Post Matric, U.P. General/OBC/Minority	B.Tech (IT) & (EC) MBA (IT) MS(CLIS)	48	55	73	85	89
5.	Post Matric Other States	B.Tech (IT) & (EC) MBA (IT) MS(CLIS)	15	21	23	28	37
6.	Pratibha Scholarships	B.Tech (IT) & (EC)	22	34	38	32	22
7.	Other Misc. Scholarships	B.Tech (IT) & (EC) MBA (IT) MS(CLIS)	11	15	17	13	08

2.6.13 UNIQUENESS OF THE INSTITUTE

The Institute, during its span of existence have had special features that are pride of the Institute for attraction of the students. Some of them are - Round the clock 200 mbps leased line facility for Internet on each PC, 47 Laboratories. 3000 High End PCs spread over the entire Institute. Other equipment includes Multimedia Projectors, Webcams, Video Camera, etc. Rich repository of Specialized Software including Matlab, Statistics, OpenGL, AutoCAD, Rational Rose, Catia, several IPR related CD ROM's etc. Equipped with facilities for Video Conferencing, Wi-Fi Connectivity, Call Centre Implementation, Infra Red Communication, Robotics, etc. Lush green surroundings exist on the Campus which is being developed tastefully by horticulture experts.

Upcoming State-of-the-art facilities include 5-storied C.V. Raman Bhawan and 1500+ capacity Auditorium, Girls' Hostel & 7-Storey Boys' Hostel.

Some of the features that make IIIT-A unique in its area are:

- IIIT-A is a unique Institute different from other present Institutes in INDIA as students at IIIT are given diverse opportunities for development of their personalities and allowed to work in teams.
- Maintenance and running of Servers, Personal Computers, Networks, Institute Websites, etc. Students fabricate/assemble PCs for their use in the Institute and in various other activities. This enables partial hardware training to students. Cost is thereby reduced significantly and systems are far better than in market. There is practically no maintenance cost.
- Teaching Methodologies where Senior students not only guide their juniors but also teach them in Classes

and guide them in Lab work is being successfully carried on.

- Each and every student is provided with a computer system in his hostel room where he/she may be able to work on the computer system all the 24 hours and develop his skills in Information Technology.
- **'Earn while you Learn'** is a unique and novel proposition where by engaging the poor and meritorious students in the projects, research, teaching and lab works and other aspects of Institute's functioning wherever possible, they are helped to Financial assistance to sustain their education here.
- Student-Industry Interaction is a pre-grooming stage where students are asked to work on Live Projects from Industry and Provide necessary Solutions.
- Emphasis on research and development in the areas of Wireless Computing, Intelligent System, Biotechnology, Robotics & other areas of National & International interest.
- **Societal Programs** like establishment of VRC's with the help of ISRO, Medico-diagnostic programs, awareness and training programs for farmers, programs for differently-abled persons, ICT-related help line to the rural people etc. are unique in their own ways to reach the benefits of IT revolution to the doorsteps of 'Real India' living in villages.
- **Development of AMAL** (Adaptive Modular Leg) at the Robotic Lab of the Institute is a unique contribution of the Institute towards healthy locomotion of disabled persons using prosthetic legs

with the help of IT sensitized active leg to function like normal human beings.

- **“PRAYAS”** is novel societal effort by our teachers, students and other members of the IIIT-A family to impart informal school level education to the poor rural children in our Central School in the evenings after formal school hours.

- **SCIENCE CONCLAVE**

In order to propagate and reorient studies of general sciences in India, the Institute organized, on the pattern of Nobel Laureates Conference in Lindau, Germany, the Fourth Science Conclave during December 08 – 14, 2011 in which Nobel Laureates Prof. Hartmut Michel and Prof. Robert C. Richardson, and about 50 other world famed scientists /

academicians interacted with about 1100 UG, PG and Research students and teachers selected from across the Universities of the country.

- **INSPIRE INTERNSHIP PROGRAM**

The INSPIRE (Innovations in Scientific Pursuits for Inspired Research) Internship Program of the DST, Gol, 2011 was organized by the Institute during December 08 – 14, 2011 alongwith the Science Conclave 2011 in which about 500 top students of Class XI selected from the merit list of the High School Exam 2011 of the U.P. Board participated. They also were afforded opportunities to interact with Nobel Laureates and national/international scientists to have concerted reorientation towards general sciences.

RGIT-AMETHI CAMPUS OF IIIT-ALLAHABAD

3.1 THE AMETHI CAMPUS

Land, Labour and Capital are the essential traditional inputs for production. But advancement of Information has reduced Information Technology as the fourth potent factor thereof. Information has, therefore, become an important and distinct input in production. Thus, along with three sector model of primary, secondary and tertiary industries, a fourth sector – information-related industries has emerged. Information is therefore used as a raw material of knowledge just as iron is a raw material for machinery. The activities of generating, processing, transmitting, disseminating, storing, archiving and retrieving information constitute information industry. In the knowledge economy, the raw material that matters is intellectual rather than physical.

The Rajiv Gandhi Institute of Information Technology, Allahabad is a campus with a difference situated in locally famous Tikarmafi Ashram, the campus as of now is a mix of the old and the new/modern culture around. It has been established to encourage the study of information technology. The aim is to prepare a knowledge workforce comparable to the best in the world through instruction in the cutting edge technology. RGIIIT-Amethi lays emphasis on group projects, so that our students learn to be cooperative and productive members. Industry exposure provides these budding professionals the opportunity to work on current industry problems and to learn thrive in the conducive work environment. The students have access to the highest levels of industrial training, project experience and expert instruction.

RGIIIT-Amethi intends to focus its human and material resources on research and innovation. The faculty and

students are already on the leading edge of research. The future prospects of RGIIIT-Amethi are tremendous.

The Ashram premises in the occupation of the Institute have been re-done, refurbished, modernized and fully air-conditioned to make them IT-savvy, where lecture halls, laboratories and library and others academic activities are carried out. Administrative blocks have been similarly redesigned to meet the requirement of an efficient and elegant administration.

Boys' Hostels, Girls' Hostel and Guest House, well-furnished Auditorium and Mess with all facilities and paraphernalia have been newly built and tastefully formatted and provided. Besides, Academic/Administration Blocks and other buildings have been planned to be constructed on priority, work on which is in progress.

RGIIIT-Amethi's permanent campus has been planned on approximately 60 acres of land donated by the Tikarmafi Ashram and the Village Gram Sabha around. The academic, administrative, residential and hostel buildings and elegant facilities have been designed with maximum advantage of Vaastu to avail the benefit of the five elements (Panchbhutas) of the nature. Besides, the campus would be situated around a central water body that is designed to render the environment cozy and conducive to a healthier living.

For the short run, the campus building of Phase-I has been designed for the strength of 1000 students, with the lookout for the long run in Phase-2 to accommodate 1000 more students making the ultimate student strength 2000.

SITE PLAN PICS

RESIDENTIAL PICS (A, B, C, D)

3.2 ADMINISTRATION & ADMINISTRATIVE CONCEPTS

The Institute was conceived to be a center of excellence in the field of Information Technology and related areas. The institute was conferred the Deemed to be University status by the Govt placing it at par with the Indian Institutes of Technology guided by a sound administrative structure.

The administrative structure is regulated by a Board of Governors which is the principal authority responsible for formulating major policy decisions on academic, financial and administrative matters. Chaired by Sri F.C. Kohli, Former Deputy Chairman of Tata Consultancy Services, the Board includes representatives of MHRD, MCIT, AICTE, State Government, academia, industry, IIIT-A faculty and other experts involved with the Institute.

The Board is assisted by a Senate and a Finance Committee. The Senate comprises the faculty of the Institute and reputed academicians of a number of reputed Institutes. It is responsible for the maintenance of standards of instruction, education and examination and all other allied academic matters.

The Finance Committee looks after resource mobilization and control of expenditure. It also stimulates resource generation from sources other than Government support, such as sponsored projects, research and consultancy. The committee is also responsible for promoting interaction with Industry.

3.3 ACADEMIC STRUCTURE

Institute promises to play a crucial role to generate requisite high level technical manpower to meet national goals in critical areas like defence, weather forecasting, space programs, economic development and social transformation, to gain from emerging IT revolution. Keeping these in view, the courses of the Institute have been designed with a lot of operational flexibility of additions and deletions according to the need of the society.

Each academic year consists of two semesters and summer term. While the education system is broadly organized on the pattern of other IIT's, a Relative Grading System pattern with credits allotted for each course is followed for End Semester Examinations. This, while enabling continuous evaluation of student's performance, also provides students the desired flexibility to choose courses as per their own interests. Each course is assigned specified credits, depending upon its relative importance in the field of Information Technology. Class contact hours per week are also decided based on that.

To boost creativity in students, mini and major projects, in their chosen fields of interest, form an integrated part of the course curriculum at the Institute.

At present RGIIT-Amethi offers a B.Tech Degree in Information Technology. The admission to the course from the year 2005 is done through the prestigious All-India Engineering Entrance Examination (AIEEE) conducted by the CBSE. This national level examination body conducts the entrance for all the Deemed to be Universities declared u/s 3 of UGC Act.

Based upon the merit in the written examination Central Counseling Board of AIEEE invites candidates for counseling at selected centers, and seats for various participating institutions are allotted, based upon individual merit and choice. Normally top students give their choice for IIIT-A and RGIIT-Amethi. A total of 240 (60 for RGIIT and 180 for IIIT-A) students are selected for the B.Tech Program each year.

3.4 PROSPECTIVE AREAS OF RESEARCH

The effectiveness of an educational institution can be gauged from the quality of the Intellectual

output generated from It. IIIT-A is a vanguard of educational training, if its productivity is

anything to go by. The unique blend of experience from faculty members and talent and application leads to a large number of exceptional projects and undertakings.

The projects that have been undertaken by students of the Institute encompass a very broad spectrum of areas, both conventional and pioneering. These include the fields of

Distributed Computing, WAP Data Mining and Warehousing. Image Processing, Character Recognition, Digital Watermarking, NLP and Machine Vision to name a few. The standard of these projects is such that they have been published in reputed and refereed journals and have been presented in various International Conferences. Some of the research works have already been filed for patenting.

3.5 SOCIETAL PROGRAMS AT RGIIT-AMETHI

The Institute offers a number of societal programs for the physically challenged ones, farmers, village people, diagnostic centers and others so that the benefits of the IT-revolution may reach the common man at the lowest levels too. Off-Campus training as well as On-Campus training (short & long terms). This will include IT applications in Government, Semi-Government and Private sector Organizations to update their knowledge, functioning & to keep their activities transparent and objective oriented. There are arrangements for Sports and Games (Indoor & Outdoor) for the students. They also organize cultural activities 2-3 times during the Semester. The students have constituted various Clubs for extra-curricular activities. The following are the Programs:

a) *Strengthening of existing educational institutions located in and around Amethi*

With RGIIT-Amethi as the centre, educational institutions in the districts of Rae Bareilly and Sultanpur and other adjoining areas may be networked for sharing of their resources like library, Internet and other facilities. In this way, existing educational institutions located around Amethi would be strengthened in quantity and quality of their academic activities with the help of RGIIT-Amethi.

b) *Job Oriented training courses for the youth*

RGIIT-A Amethi will support quarterly, half-yearly and yearly short term courses in IT & related sciences at a number of centres in the deep rural areas where the school & college going students can acquire proficient knowledge in IT at their doors, at minimum cost along with their normal study programs. This will open immense job opportunities to the youth of the area in near future.

c) *Diagnostic Health Centre*

This scheme would help in identification of diseases developing in any part of the body with the help of IT based instruments and devices. It will save lives of the diseased at comparatively lower costs.

d) *Helping the Visually-challenged Persons*

At RGIIT-A Amethi, such modern kits would be developed and proper training would be imparted to

the visually challenged persons who would not only work like normal persons but might even excel those otherwise physically fit.

e) *Technological solutions to deaf and dumb*

The Institute will impart technical education to the deaf and dumb to behave like common man. These people are otherwise physically fit except that they can't hear & speak. They have the inherent impairment of language and audition.

f) *Developing replacement of prosthetic limbs by active ones*

Today, physically handicapped persons can have only limbs that are in a very crude and old-fashioned model. Present day life in the society requires active participation of physical forces of the body by frequent movement of limbs to work in various fields of life. RGIIT-Amethi will strive to impart proper education to such persons to be benefited by IT sensitized active limbs with their access to them.

g) *Training to farmers for rural development*

In future, with the help of Information Technology & related sciences, RGIIT-Amethi will help the masses in their agricultural activities by providing basic information such as:

- Information system on weather, pests, crops and advice
- Prices of commodities
- Market demand for goods
- Road networks and condition of network
- Food and other item stocks and date from when they are lying at the centre, consumption pattern and demands
- Transport services like trucks, buses boats, etc., and transporters in the region
- Tractors and other agricultural services available
- Water supply and water management
- Agriculture-seeds, fertilizers, pesticides, tools, implements, markets etc.

Socio-Economic Impact of Establishing RGIIT in Amethi

- ◆ Employment generation in the region.
- ◆ Increased educational knowledge & awareness.
- ◆ Setting up of infrastructure projects like road, electricity, water etc.
- ◆ Financial support through setting up of various projects.
- ◆ Generation of feeder businesses like catering, transport, entertainment, markets, etc.
- ◆ Increasing the standard of living in the region

3.6 ESTABLISHMENT OF S&T DISCOVERY PARK

This is a DST and Purdue University, USA Collaborative Project. The ultimate aim of all academic programs and pursuits is the promotion of welfare of the people. Science & Technology and other branches of knowledge all aim at achieving the same. A delegation of Scientists engaged in the S&T Discovery Park, Purdue University visited India and met the Hon'ble HRM when he was Minister, Science & Technology, Govt. of India about two years back. With his permission and early initiative, a Detailed Project Report for establishing S&T Discovery Park by the Institute at its RGIIT-Amethi Campus was sent to DST with an estimated budget of about 300 Crores which was approved in principle in July 2007. Science & Technology Discovery Park was established for the following segments:

- E-agriculture and traditional agriculture
- Cyber Center

- E-education: Vocational, Medical, Legal
- Employment Generation
- Bio Informatics
- Bio Fuels
- Rural E-enterprise
- Rural Healthcare including Oncology
- Infrastructure Development for Rural India

S&T Discovery Park Project has been initiated at RGIIT-Amethi, CSM Nagar with the end of object of rural empowerment in this most backward region of Eastern UP with major focus on Agriculture, Irrigation, seeds, fertilizers, dairy technology, fisheries, soil testing, education and various information regarding health, hygiene, crops, fuels, manures etc. Details of the Project are given further in this Report.

3.7 PROPOSED INSTITUTE OF HEALTH SCIENCES AT RGIIT-AMETHI

This is an ambitious program of Health Sciences that was approved by the Board on March 7, 2011.

Considering the acute shortage of healthcare facilities for about 100 – 140 kms. around RGIIT-Amethi of Uttar Pradesh. An Expert Committee comprising Prof. R.K. Sharma, Director, SGPGI Lucknow, Prof. S.K. Mishra, Dr. Bhatt of SGPGI and Prof. A.M. Kar of S.M. Medical University, Lucknow have strongly advocated establishment of the Institute of Health Sciences at RGIIT-Amethi.

The Institute has submitted the Project to the GoI, MHRD to provide a Plan Grant of Rs.

3,000.00 Crores during the Twelfth Five Year Plan 2012-2017.

The Institute of Health Sciences at RGIIT-Amethi will have following Schools comprising different segments of health sciences:

1. School of Medical Sciences
2. School of Dental Sciences
3. School of Nursing
4. School of Pharmacy
5. School of Paramedical Sciences

The DPR of the Project would be submitted to Govt. for final approval and incorporation in the Twelfth Five Year Plan.

**RGIIT-A CAMPUS PICS IN
FOLDER**

PREVENTIVE MECHANISM OF THE INSTITUTE

4.1 REDRESSAL MECHANISM FOR GRIEVANCES

The Institute has an effective and efficient Grievance Redressal System that promptly deals with the in-house grievances of students, employees and administrative/academic setups as well as grievances of the public at large that may come up during the normal functioning of the Institute. Periodical reports are submitted to the Government.

Grievance Redressal Committee

- | | |
|--|---------------|
| 1. Prof. R.C. Tripathi (Student Counselor) | - Chairman |
| 2. Prof. G.C. Nandi (Dean – Academic) | - Member |
| 3. Dr. Anurika Vaish (Divisional Head – MBA & MSCLIS) | - Member |
| 4. Dr. Vrijendra Singh (Chief Proctor & Faculty In-charge, Ph.D. Cell) | - Member |
| 5. Sri R.B. Singh (Deputy Registrar (Finance)) | - Member |
| 6. Sri Govind Saran (Advocate) | - Member |
| 7. Sri H.D. Tiwari (Advisor Finance) | - Coordinator |
| 8. Sri Yogesh Kardam (Representative of SC/ST) | - Member |
| 9. Ms. Farha Naz (Representative – Minority Communities) | - Member |

A Grievance Redressal Forum has been established vide O.M. No. IIIT-A/DIR/4325/2010 dated February 07, 2010. The Grievance Redressal System of the Institute keeps itself informed of the latest Govt. instructions in this regard based on legal rulings of Courts and other authorities. The Committee is as follows:

4.2 PREVENTION OF HARASSMENT OF WOMEN AT WORKPLACE

The Government vide notification F.No. C.36011/7/2005-ug DATED March 29, 2006 have required strict action in cases of harassment to women at work place are required to be dealt with sternly. Periodical progress reports have to be sent to the Govt. to show that the malady has been treated as desired.

IIIT-A vide its OM No. IIIT-A/DIR/4326/2010 dated February 7, 2010 has reconstituted the Committee for prevention of sexual Harassment of women at workplace as follows:

- | | |
|--|-------------------|
| 1. Dr. Anurika Vaish (Faculty Representative) | - Chairperson |
| 2. Sri Ravi Singhal (Advocate – High Court) | - External Member |
| 3. Dr. Seema Shah (Deputy Registrar (Office representative)) | - Member |
| 4. Dr. Asheesh Kumar (Deputy Registrar) | - Coordinator |
| 5. Sri H.D. Tiwari (Advisor Finance) | - Member |
| 6. Sri Yogesh Kardam (SC / ST representative) | - Member |
| 7. Ms. Seema Mishra (Student representative) | - Member |
| 8. Topper of B.Tech IVth Semester
(if the topper is a girl, then next boy in merit) | - Member |
| 9. Ms. Farha Naz (Minority representative) | - Member |

4.3 PREVENTION OF RAGGING IN THE INSTITUTE

Ragging in the educational institutions has been yet another social evil that has been taking its toll every year over the country so much so that many a youthful prodigies have lost their careers and even their lives solely on account of this evil. All preventive measures have often failed and the malady has been evading cure unabatedly.

The Supreme Court, of late, has taken a very serious view of this social evil and has issued stern directions in asking the Government and all organs under the Government to stop the menace of Ragging altogether with immediate effect. It has also issued stern action against non-observance of the Appellate Court instructions through the Government and the UGC.

IIIT-A, therefore, has undertaken positive measures to implement the Apex Court directions in this regard through an Office Memorandum No. IIIT-

A/DIR/1358/2009 dated 10.07.2009 and multi-structured Committees have been constituted as under for its implementation:

1. Institute level Anti-ragging Committee

- | | | |
|--|---|----------|
| • Dean, Students' Affairs | - | Chairman |
| • Head of the Division | - | Member |
| • Warden/Counselor of the concerned Hostel | - | Member |
| • Registrar/Dy. Registrar/Assistant Registrar of Institute | - | Member |
| • Legal Counsel | - | Member |
| • Nominated person | - | Member |

2. Institute level Anti-ragging Squads

- | | | |
|---------------------------------------|---|----------|
| • Dean, Students' Affairs | - | Chairman |
| • Assistant Proctor (two by rotation) | - | Member |
| • Security Officer | - | Member |
| • One M.Tech/Ph.D. Student nominated | - | Member |
| • Warden (nominated) | - | Member |

3. Hostel Level Anti-ragging Squads

- Warden of the Hostel
- Two Prefects
- One representative of Freshers

Wide publicity of these preventive measures have been made through noticeboards, handouts and website of the Institute at all possible places on the Campus, hostels

and other vulnerable points. The structured Committees are on the prowl all the times to deal with any inkling of the malady.

4.4 PROHIBITIONS AND BANS

The Institute is committed to ensure observance of Prohibitions and Bans promulgated under orders of the Supreme Court, Government and regulatory authorities under the Govt.

Accordingly, the following prohibitions and bans are strictly imposed in the Institute:

- ❖ Use of alcohol, tobacco and its products are totally banned in and around the Institute

- ❖ The entire area inside the Campuses of the Institute is a Smoking Free Zone. Therefore, smoking is strictly prohibited
- ❖ Use of mobiles in classrooms, labs, academic, administrative, cultural and extra-curricular activities, Seminars, Workshops and other official gatherings of the Institute is strictly prohibited under orders of the Parliament
- ❖ Any other prohibition or ban as may be promulgated under orders of the Competent Authority from time to time

A GLANCE AT SIGNIFICANT EVENTS

HOSTING OF SCIENCE CONCLAVES – ENCOURAGING RESEARCH IN BASIC SCIENCES

In order to propagate and enthuse studies of general sciences among the youth of the country at the initiative of Government of India MHRD and the DST the Institute have been hosting Science Conclaves of Nobel Laureates and renowned international and national Scientists since the year 2008.

5.1.1 BROAD OBJECTIVES

The objective of the Science Conclaves is to provide a platform to young researchers to have wide-ranging open discussions with the top scientific brains of the world, to imbibe or cultivate in them the scientific temper, to learn how to refine their knowledge by following a dedicated and rigorous effort, and finally, to take up science as their careers.

The program of the Conclave comprises of lectures presented by the Nobel Laureates, interdisciplinary platform discussions, experiences and progress relating to basic science research and application-oriented themes. These interactions enable generation of new ideas, encourage person-to-person personal contacts, inspire scientific endeavours, and enable critical examination of scientific processes and queries from a new point of view by both the learners and the learned persons. In the Science Conclave UG, PG and Research students & teachers, selected from the Universities, Degree Colleges, Engineering Colleges and Institutions of higher education from the streams of general sciences and engineering are invited to participate. In addition, students from SAARC and ASEAN countries are also included. These

participants have one-to-one interface and interactions with the Nobel Laureates and renowned scientists that provide incentive and reorientation to the participants.

So far four such Science Conclaves have been organized by the Institute during 2008, 2009, 2010 and 2011 and the Fifth Science Conclave has been scheduled during December 08 – 14, 2012. In addition **INSPIRE (Innovations In Science Pursuits for Inspired Research) Internship Programs** have been held that include top 500 selected students from U.P. Board High School merit of Uttar Pradesh State that interact with the Nobel Laureates and Mentor Scientists.

This unique effort of the Institute has received wide National and International acclaim to its credit as it has the potential to arrest the declining trends in the studies of general sciences in the youths of the country to a considerable extent. The following statics would reveal the gigantic efforts undertaken by the Institute as its promotional and growth/developmental academic activity of the Institute:

Description of Science Conclave	No. of Nobel Laureates	No. of Eminent Scientist			No. of Students/ Teachers		
		Foreign	Indian	Total	Science Conclave	INSPIRE	Total
First Science Conclave (2008)	05	11	13	23	824	345	1169
Second Science Conclave (2009)	03	29	32	61	800	395	1195
Third Science Conclave (2010)	02	20	39	59	769	399	1168
Fourth Science Conclave (2011)	02	20	27	47	942	463	1405

5.1.2 INSTANCE OF SCIENCE CONCLAVES AT IIIT-A, SINCE 2008



With the kind initiative, support and funding from the MHRD & DST, Govt. of India, the Annual Science Conclaves – Congregation of Nobel Laureates and eminent scientists were visualized and conceptualized and its three editions in 2008, 2009 and 2010 were successfully organized at Allahabad, each of which saw an overwhelming response from young participants, about 1200 of whom attended each of the Conclaves and interacted with high profile academicians, scientists and laureates at these Conclaves.

There is plenty of awareness about science in India that has spread far and wide amongst the young and the inquisitive minds.

More and more endeavours are in store for the budding talents as we approach the Fifth Science Conclave 2012.

There couldn't be a better dream for future for sciences in India, than every second person wanting to be engaged in scientific pursuits.

Attached are pictures of previous four Science Conclaves held at Allahabad.

5.1.3 INSPIRE INTERNSHIP PROGRAMME FOR SECONDARY LEVEL STUDENTS

Alongwith the hosting of Science Conclaves initiated by the Gol, MHRD, at the initiative of the DST, an INSPIRE (Innovations in Science Pursuits for Inspired Research) Programme has been added as conceived by the DST for promotion of general sciences among the Secondary Level students as well so that a better appreciation of the entire promotional programme of the Science Conclaves may be achieved alongwith during the minimum conceivable timeframe.

During the years 2008 and 2009, about 500 to 600 Secondary Level students have been participating in the INSPIRE Internship Programme. This year also about 600 students have already registered their names so far and there is considerable pressure to include more numbers. Specific account of INSPIRE Programmes of 2008 and 2009 have been included in that of Science Conclave resume of the relevant year in the subsequent pages of this Brochure.

The enthusiasm and interest of these youthful prodigies has been very very encouraging in so much so that their inquisitiveness and concerns have been taking the organizers and resource persons by surprise to quench their thirsts for knowledge.

This verily kindles the hope for brighter acceptance of general sciences in the youths during the morrows.

Innovation in Science Pursuit for Inspired Research (INSPIRE) is a programme launched by the Government of India to strengthen the National Science and Technology base. It is being implemented by the Department of Science and Technology (DST).

The interaction under this programme was successfully conducted during the 3rd Science Conclave at the IIT Allahabad. Higher Secondary students from all over Uttar Pradesh and some other parts of the country were invited here at the lush green campus of IIT-A and were made to interact with some of the best minds in the world. State of the art facilities were made available to the enthusiastic students who were more than willing to grab this once in a life time opportunity.

Three venues were allotted for the INSIPRE program in order to accommodate more than 350 students from all over the Uttar Pradesh (UP). The program started on 26th November 2011 where Nobel Laureates and Eminent Scientists encouraged the students. The program lasted till 2nd December 2011. This was a seven days program format includes interaction, Video, Toy show, Workshop and Night sky watch which was split in sessions in each day.

Session I: The INSPIRE program of the Conclave comprised of lectures presented by the Nobel Laureates,

addressing to questions relating to basic science research and application-oriented themes. This unique open brainstorming format contributed to the generation of innovative ideas, that was encouraged & motivated towards making student understand the importance of basic science, INSPIRED scientific endeavors over and beyond the norm, and enabled the critical examination of scientific questions from a new point of view.

Session II: It comprises of Physics, Chemistry, biology workshop and video, toy show, informal get-togethers, discussions with the Laureates and other experts within and outside the country where no limitations was set for the kind of questions to be handled. In these sessions, the Laureates and Experts shared their respective contributions in the field of science and technology. They also motivated students to set up new milestone in the field of science technology system and R&D.

Session III: Night sky watch through gigantic telescopes.

The students were also given information about the following schemes:-

- 3) Scheme for early Attraction of Talents for science(SEATS)
- 4) Scholarships for Higher Education(SHE)
- 5) Assured Opportunity for Research Careers(AORC)

5.1.4 HOSTING OF FOURTH SCIENCE CONCLAVE – 2011 (December 08-14, 2011)

The Fourth Science Conclave had an impressive list of scientists interacting with the students. The list had **20** International scientists including two Nobel laureates apart from one Academician and one Turing Awardee, and **27** Indian Scientists and academicians from Basic sciences and allied areas. The international scientists coming from various parts of the world extended their hand in the task by joining the conclave and interacting with the students. The particulars of the scientists are given in the Statistics included in this Report.

The Nobel Laureates visiting IIIT-A were:

1. **Prof. Richard R. Ernst** - Laboratory of Physical Chemistry, Zurich, Switzerland
Nobel Laureate in Chemistry 1991
2. **Prof. Roald Hoffmann** - Professor of chemistry and chemical biology
Dept. of Chemistry and Chemical Biology, Cornell University
Baker Laboratory, USA

Academician Alexei Removich Khokhlov Head of the Chair and Laboratory, Russia
Prof. Joseph Sifakis Director, Integrative Research Center (CRI), France

The Target Audience

Participants were invited & selected at the level of B.Sc./M.Sc./Engineering Streams securing merit-level or above 90% scores in their previous exams. In all, over 1000 students, teachers and young scientists were screened from all over the country for participation in the Second Science Conclave organized for the promotion of scientific research in the country. It was another rare occasion when such a large audience had a chance to interact with Nobel Laureates and for such a long time, spanning full seven days.

Participants

Participants were drawn from the UG and PG courses of Basic and Engineering science streams of different universities across the country. They were selected from amongst the nominees of the Institutions/universities based on merit. A total of **942** students and teachers participated in the program. Besides this, about **463** high school students and teachers from schools of UP, North East and J & K participated in the science conclave under the INSPIRE Scheme. Special efforts were made for the participation of the students from J& K and north East in order to provide them a rare opportunity to interact with so many eminent scientists and students from all over the country. The students and the teachers from the states of J & K and north East were extremely happy at the opportunity. It was an exciting event for the students and almost all the scientists were amazed and happy at the enthusiasm and the initiative shown by the students.

Incentives to encourage participation

To encourage participation, the boarding, lodging and travel of participants was taken care by the organizing Institute with active support from Govt. of India. Apart from this, nominal Dearness Allowance was also provided to the participants. They were also issued Certificates of Participation.

In the forthcoming Fourth Science Conclave, as a new addition, students would be encouraged to present Model / Poster presentations where the best entries would win awards from the hands of Nobel Laureates and Scientists.

Course Content

Workshop Content

Physics Workshop Experiments

1. Fiber optic intrusion detection system
2. Microscopic demonstration through projector.
3. Demonstration of Archimedes Principle
4. Experiments of Gravitational laws
5. Demonstration of Bernoulli's principle

6. Experiment on wavelength measurement using gratings
7. Refraction of light ray
8. Refraction of light ray
9. Experiment on air track
10. Polarimeter calibration
11. Demonstration of Fiber optic transceiver setup
12. Seebach effect
13. Laws of Motion (3rd equation of motion effect)
14. Optical Bench
15. Ferromagnetic liquid
16. Electric field lines
17. Motion of waves in different medium
18. Standing waves

Chemistry Workshop Experiments

1. Liquid Filtration and Extraction.
2. Soxhlet Extraction.
3. Distillation Process.
4. Thin Layer Chromatography.
5. Starch Test.
6. Food Adulteration tests.

Biology Workshop Experiments

1. Blood group diagnosis through kit.
2. Blood cell visualization through microscope.
3. DNA extraction from peas.
4. Osmosis and reverse osmosis demo.
5. Plant leaf anatomy visualization through microscope.

Feedback from the Experts and Coordinators

Experts Feedback

1. Prof. D.G.Curie
 - I found the session very interesting.
 - I found there were good questions.
2. Prof.G.Swarup
 - It was very useful interaction with the students.
 - There were many inquisitive and simple questions.
 - Inspire programme is very fruitful
3. Prof.R.C.Richardson

- Students were so intelligent and curious
- It was a very stimulating session.
- Many students has prepared there questions in advance and why not them submit to the panel.

4. Prof.Mrs.B.Richardson

- Thanks to the students for their many interesting questions.
- We had an enjoyable visit and know that the future of science in India in good hands.
- Students were well prepared with questions written down on notepads.
- There was no delay in their questions asking.
- They were also very polite with each other and showed respect for each person.
- There was more interaction with the "Inspire" students then with the Science Conclave students
- We did have trouble in understanding the words spoken because of the rapid delivery from many students, speakers who spoke slowly were easier to understand.

5. Prof.Satyaprakash

- Excellent one! Should be more participants
- Question was very good from students.
- Try to focus on academic related questions.
- Chat free to ask what they want to ask.

6. Prof. D.V.Singh

- The students have awareness of what they are studying and a fair amount of perception for the future.
- They are also concerns of the social and economic milieu of the country.

7. Prof.Khoklov
- Very interesting questions motivated students.
 - It was a pleasure to answer their questions.

8. Prof.Paul Dir hardo
- Very interested and mentally active students
 - Very stimulating for me also

9. Prof. Dr.Hartmut Michel
- It has been difficult. We are not experts for many of the questions asked.
 - There have been many questions concerning basic physics.
 - A University professor teaching basics could answer better.
 - A general problem is that the English pronunciation was difficult, may better to get the question written on a paper, so it can be distributed among the experts, and there is a problem of understanding.
 - Nevertheless interesting.

(Coordinator feedback: After this feedback we asked the students to write their questions in the paper and give it to the panel and also the questions are handled by the respective experts of the field.)

10. Prof.Helmut Neunzert
- Good interaction of the panel.
 - At beginning good questions.

11. Prof.Mrs. Neunzert
- I am in favor of the idea to give students the opportunity to interact with scientists.

12. Prof. H.C.Joshi

- I strongly feel that the INSPIRE program has been an eye-opening experience for me about the state of current primary-secondary education. I believe these kinds of programs should infiltrate the entire country as soon as possible.

13. Prof.B.Sarkar
- "Inspire" program is one of the most important items I have seen in the science conclave.
 - These eager students are hungry for knowledge.
 - I wish this sort of program should be extended throughout the country.

Workshop Coordinators Feedback

Chemistry and Biology Workshop

- All the students enthusiastically participated in the live experiments.
- Students highly impressed with their own blood group testing and cells visualization.
- They have learned and noted down the food adulteration tests.
- They also done sections of plant leaf material and observed the anatomy.
- They have understood the concept of Osmosis by doing experiment with Potato.
- They very much enthusiastic to do natural way of water filtration and distillation and carried procedure to their home.
- They were fascinated to see the various colors of metals on Bunsen burner.
- Student also understood how to differentiate chemically starch from other food materials.

Overall students have been given with hands on experiment and scientific knowledge generally they don't get at their schools or colleges in very students friendly manner.

5.1.5 BENEFITS DERIVED FROM THE SCIENCE CONCLAVES

Holding of Science Conclave of Nobel Laureates and renowned academicians and scientists of national and international repute at IIIT-A was a historical Mega Event in the country on the patterns of the world famed Lindau Conclave in Germany.

Although, the entire benefits as a consequence of holding of this highly professional academic program cannot be quantified and summarized in few words, however, some of them are listed below:

1. The students in general were exhorted and benefited with personal contacts with the Nobel Laureates and were enthused to take to the studies and researches in science and technology.
2. Postgraduate students and teachers from all over the country who attended the week long Conclave had useful academic discussions with the Nobel Laureates, about 400 of them have approached IIIT-Allahabad for joining research in the Institute.
3. The Faculty Members of the Institute interacted with the Nobel Laureates and discussed many aspects of higher researches in sciences. They were welcomed by the Nobel Laureates to visit and join their labs in summers.
4. The Nobel Laureates inspected the various labs established in the Institute and made in-depth queries. They also made valuable suggestions for improving and upgrading the Institute labs.
5. Prof. Claude-Cohen Tannaudji announced award in the form of Gold Medal to the student prodigy of the Institute (Physics).
6. Prof. Tannaudji's daughter, who visited the Institute on the occasion, also announced award of a Gold Medal to a youth prodigy of the Institute (Bioinformatics).
7. The country as a whole got benefited by this Mega Event and there has arisen general awareness and inquisitiveness among the students across the country to participate in that event and get oriented and reoriented about their studies in general and researches in particular.
8. The teaching community as a whole has been benefited to a great extent because those teachers who have had the occasion to interact with the Nobel Laureates and eminent scientists emulate their ideals and become, in turn, pioneers of the same in their own community back at home.
9. Apart from the benefits, the students derive out of interactions with the Nobel Laureates in their studies, their face-to-face mixing with them freely outside the classroom at tea breaks and luncheons / dinners, they learn and emulate their simple living and high thinking ideals to inculcate them in their lives and career.
10. Senior faculty members who have a week-long close and intimate associations with the Nobel Laureates and other eminent scientists have had the occasion to maintain their intimate terms / associations with the Nobel Laureates for the rest of their lives that has the propensities of not only increasing their own intrinsic academic values but, in turn, increases the quality of human capital stock of the country.
11. The contacts developed with the Nobel Laureates and renowned scientists is not transient and limited to the duration of the holding of the Science Conclaves but in fact, results into repeativity of their visits to the country and the Institutes on other academic occasions such as Convocations, national and international Workshops, Symposia and academic meets.
12. The holding of the Science Conclaves serves as a means to enhance the dignity of the country in the comity of nations and propagates its heritage and culture abroad as the Nobel Laureates and Scientists from abroad are keen to be taken round the sites and places of historical, cultural and religious importance in the country to see for themselves what the country has been standing for and how our great nation has staged its comeback after independence and has shaped its

economy and development in scientific, technical, technological and other fields.

13. The learned lectures of the Nobel Laureates and academicians of repute, with knowledge and knowledgeability in different sectors of sciences and technologies help promote efforts back home in respect of the following:

- (1) Scientific research as a major driving force in the field of health and social care and greater use of scientific knowledge for promoting human health**
- (2) Urgent need to reduce the gap between India and developed countries by improving scientific capacity and infrastructure in India.**
- (3) Information and Communication revolution as a new and more effective means of exchanging scientific knowledge and advancing education and research.**

(4) Scientific research and its applications to yield significant returns towards economic growth and sustainable human development including poverty alleviation, equitable production, distribution and use of knowledge more than ever before.

(5) Promotion of new relationship between science and society to cope with such pressing global problems as poverty, environmental degradation, public health & food / water scarcity etc.

14. At the end of the Science Conclave, the Nobel Laureates and Eminent Scientists issue a joint communiqué and make a number of recommendations that may help promote decision / policy making at the highest echelons of education and at the levels of the Government.

PHOTOS FOURTH SCIENCE CONCLAVE 2011

The ultimate aim of all academic programs and pursuits is the promotion of welfare of the people. Science & Technology and other branches of knowledge all aim at achieving the same. A delegation of Scientists engaged in the S&T Discovery Park, Purdue University visited India and met the Hon'ble HRM when he was Minister, Science & Technology, Govt. of India about two years back. With his permission and early initiative, a Detailed Project Report for establishing S&T Discovery Park by the Institute at its RGIIT-Amethi Campus was sent to DST with an estimated budget of about 300 Crores which was approved in principle in July 2007. Science & Technology Discovery Park was established for the following segments:

- E-agriculture and traditional agriculture
- Cyber Center
- E-education: Vocational, Medical, Legal
- Employment Generation
- Bio Informatics
- Bio Fuels
- Rural E-enterprise
- Rural Healthcare including Oncology
- Infrastructure Development for Rural India

Considering the poor status of rural population in backward areas of UP, a project entitled S&T Discovery Park Project sanctioned by the Department of Science and Technology, Ministry of Science and Technology, Govt of India, New Delhi, has been initiated on the following segments:

1. **E-agriculture and Traditional Agriculture**
2. **Bio-diesels & Bio-fuels**
3. **Bio informatics**

This project is being implemented at Rajiv Gandhi Institute of Information Technology, Amethi very effectively for following Blocks: Bhader, Bhetua, Amethi and Sangrampur.

Brief Aims / Objectives of S&T Discovery Park

The work on Discovery Park was started in July, 2009 at Rajiv Gandhi Institute of Information Technology,

Tikarmafi, a Campus of Indian Institute of Information Technology, Allahabad.

S&T Discovery Park Project has been initiated at Amethi, CSM Nagar with the end of object of rural empowerment in this most backward region of Eastern UP with major focus on Agriculture, Irrigation, seeds, fertilizers, dairy technology, fisheries, soil testing, education and various information regarding health, hygiene, crops, fuels, manures etc. The emphasis has been placed on the following points:

4. E-agriculture and Traditional Agriculture

Herbal, Vegetable, Inter-cropping, Fruit crop Floriculture Training Programs/Workshop

5. Bio-diesels & Bio-fuels

Bio-fuel, Farmers' Training Programs/Workshop, Inter-crop

6. Bio informatics

Bio-fertilizer, Dairy management and Animal Husbandry Fisheries:- development, Bio-Pesticide control, Farm Produce Processing Program

Demonstrative Plants and Agricultural implements in RGIIT campus

- Development of "Herbal Garden" for demonstration and distribution of herbal and medicinal plants, which is very popular.
- Demonstrative vegetables- rajma, broccoli, lettuce, garlic, fennel and other which are not grown commonly in this area.
- Develop demonstrative Tissue Culture banana to farmers for their awareness.
- Jatropha field demonstration for Bio-fuel production
- Bio-fertilizer demonstration
- Agricultural implements for farmers use.

Concluding Observation

All the four blocks- **Bhader, Bhetua, Amethi and Sangrampur** with a total population of 1120691, with total families 63180 with have been covered under Discovery Park Project. Thus far, 26650 families are producing and using Bio-fertilizer with farm wastes, 39150 families have been distributed herbal plants for their use with enthusiasm and keen interest especially for their seasonal and preventive requirements. Some of

common herbal plants- Occimum (Tulsi), Satawer, Lemongrass, Ashvagandha, Safedmushli, Mentha, Stevia, Kalmegh, Alovera, Khus, Brahmi etc., are highly popular in each block.

Out of vegetables and fruits, the following: Vegetables- Potato, Tomato, Brinjal, Chilli, Cauliflower, Cabbage, Carrot, Radish, Cucumber, Bittergourd, Okra, Garlic, Onion, Beans, Peas, Cowpea, Pumpkin, Sugarbeet, Broccoli, etc., fruits- Papaya, Banana, Grapefruit, Loquat, Grape, Citrus, Mango, Guava, Aonla, Bale, Jamun, Jackfruit (Kathal), etc., have been extensively used with enthusiasm in each block. It is interesting that the growth of Rajma, broccoli, banana have received great enthusiasm, because earlier there was feeling in the area that such vegetables and fruits cannot be grown there. 17009 families are actively engaged in tissue culture vegetables and fruits, taken from Biotech Park, Lucknow, IIVR, Varanasi, under supervision of Discovery Park Project. 17000 families have planted orchard, 1700 have started floriculture, 13200 families have followed Basmati line sowing pattern in cereals and pulses crop, 9000 families have started dairy program, 1250 families have started bee-keeping, 19000 families have planted Jatropha plant, 23100 families have used bio-pesticide for disease insect-pest control, Food Processing Programs have been started in each block and 300 families have started fisheries after their training, first time arranged by National Bureau of Fish Genetic Resources (NBFGR), ICAR without charging any fee on special request from Discovery Park. It is also noted that there are 31000 families with less than half acre land, which could be developed only through capacity building on the basis of their education for which initiative have already been taken to identify the persons for suitable training as discussed earlier.

Second Phase

We are also planning to initiate work on the following in the second phase:

- | | |
|--|--------------|
| (1) Cyber Center | (2) E- |
| education: Vocational, Medical and Legal | |
| (3) Employment Generation | (4) Rural E- |
| enterprise | |
| (5) Rural Healthcare including Oncology | (6) |
| Infrastructure Development for Rural India | |

Second phase on Rural Healthcare including Oncology has been started with the establishment of "Telemedicine Centre" under the Discovery Park Project,

"Telemedicine Center" is a collaborative program between IIITA and SGPGIMS established at Rajiv Gandhi Institute of Information Technology (RGIT), Tikarmani, CSM Nagar, a Campus of Indian Institute of Information Technology, Allahabad, where Discovery Park Project is being implemented.

The objective of this collaborative program between IIITA and SGPGIMS is to work on the following:

- Application of information Technology in Health Care like Hospital Information Systems, Electronic Health Record and Telemedicine for health care delivery in rural areas.
- Assessment of Disease burden using secondary or primary data in neighboring districts and application of data mining tools and GIS to determine the disease pattern which could be used for strategic planning of health care according to local and regional needs, which could be replicated in rest of Eastern Uttar Pradesh.

The Facilities for color scanning, video conferencing, internet connectivity performing for exchange of information between Amethi and SGPGIMS, have been established. Thirty patients with serious illness have been identified and the process of consultation with SGPGIMS will begin shortly. Regarding employment generation, rural e-enterprise, the same will be taken up shortly.

Before formally sanctioning the Science & Technology Discovery Park, DST has approved a Pilot Project costing Rs. 5.00 Crores for duration of two years with a commitment to establish the Discovery Park in its entirety after the results of the Pilot Project.

The DST has already released a sum of **Rs. 2.42 Crores** for this Pilot Project and sanctioned posts of:

1. Scientist 'C'	-01
2. Scientist 'B'	-01
3. Engineer	-01
4. Farm Supervisor	-03
5. Data Entry Operator	-02
5. Field Helpers	-03
7. Consultancy	

At present, selection of 06 posts has already been made with their support. The Pilot Project is functional since July 2009.



Farmer's Workshop



Field Demonstration



Jatropha Seeds



Demonstration at RGIIT Campus



Farmers' Workshop



Herbal Plantation



Bio-fertilizer Pit



Banana Plantation



Seed cum fertility drill



Thresher



Brinjal Plantation



Plant Distribution

5.3

EVENTS OF THE YEAR – AT A GLANCE

The Institute has had the commendable occasion to organize and participate in large Conferences / Seminars with some eminent visitors and participants during the period April 2011 – March 2012. Some of them are:

Date	Subject
21 April	State-of-art computer lab to open at IIIT-A soon: State-of-the-art seven storeyed computer lab would open at Indian Institute of Information Technology (IIIT-A) in July. Constructed at the cost of Rs. 40 crore, the lab would enable students and researchers of IIIT-A to get world class research and computing facilities on the campus itself.
22 April	First Indian to head US, Buffalo University: Indian computer scientist Satish K. Tripathi has been appointed president of United State's University of Buffalo (UB). Tripathi, 60, will be the first ever non-American to head the university. He was chosen for the top position from a galaxy of 70 candidates after an exhaustive search which spread over seven months.
26 April	Hkkjrh; lwpuk izkS ksfxdh laLFkku] bykgkckn ds Nk=ksa ds ikl ukSdjh ds rhu&rhu vkWQjA laLFkku dh jsl;wVs'ku vkSj izksQsllZ dh esgur ds lkFk cPpkSa dh esgur dk TokbaV osapj gS eYVhus'kuy daifu;ksa dks csgrjhu fjLikal] ;gka ls ,twds'ku ys jgk ,d Hkh Nk= ,slk ugha gS ftldk lsysD'ku ugha gqv k gSA lHkh dks ikap ls ysdj chl yk[k :lk, rd dk iSdst vkWQj gqv k gSA dbZ Nk=ksa dks rks rhu&rhu tkWc vkWQj feys gSaA ;g Nk=ksa ds fy, rks [kq'kh dh ckr gS gh] gekjs fy, Hkh xoZ dh ckr gSA vkxs vkSj csgrj fjtYV nsus dh gekjh dksf'k'ksa tkjh jgsaxhA
26 April	Think Clock amongst top three in Next Big Idea Competition: Think Clock Innovation Labs (Pvt) Ltd, a company under incubation at Indian Institute of Information Technology, Allahabad has made a place among the top three winners of the prestigious Next Big Idea Contest. This contest was organized by Intel and Department of Science and Technology, Government of India at IIM Bangalore recently.
28 April	Meet to discuss communication standardization: To develop standardization in the field of information technology and communication area, the India Institute of Information Technology, Allahabad, is organizing a three day seminar on 'Standardization on communication net works' from Friday in the Institute Auditorium.
10 May	rduhd esa 'kgj us fIDdk tek;KA VsDuksyKWth ds {ks= esa gks jgh izxfr esa lwpuk izkS ksfxdh ¼vkbZVh½] lwpuk lapkj izkS ksfxdh ¼vkbZlHv½ rFkk lcls egRoiw.kZ uSuks VsDuksyKWth ds {ks= esa fvªiyvkbZVh esa py jgs 'kks/k dk;Z us bl {ks= esa ubZ fn'kk nh gSA
19 May	IIIT-A to provide info tech assistance to UPRTOU: The Indian Institute of Information Technology, Allahabad (IIIT-A) will provide all information technology assistance to UP Rajarshi Tandon Open University, Said Dr. MD Tiwari, Director IIIT-Allahabad. Aspirants can download the admit cards from website complaints of harassment at any study centre would also be resolved through the new website.
28 May	Project Tiger set to get a major boost : The controversy over the actual numbers of tigers in various wildlife reserves, including Sariska and Ranthambore, would use

	sensors developed by the Indian Institute of Information Technology, Allahabad (IIIT-A) would not only keep track of a feline's movement, but also help experts record their actual numbers. Injectable hi-tech micro-sensors developed by the IIIT-A would not only keep track of a feline's movement, but also help experts record their actual numbers.
29 May	vk bZVh fo'ks" kK cusaxh vc xkao dh Nk=k,a% xzkeh.k ckfydkvksa dh enn djsxk vkjthvkbZvkbZVhA fv ³ iy vk bZVh us lkroha&vkBoha esa i<+kbZ NksM+us okyh Nk=kvksa ds fy, 'kq: dh ubZ ;kstuka 'kSf{kd le`f) ;kstuk ds rgr bliks dh enn ls foist fjlkslZ lsaVj ij nh tk,xh tkudkjha jktho xka/kh lwpuk izkS ksfxdh laLFkku] VhdjekQh vesBh vius dSail esa bliks ds ISVsykbV ds tfj, dkslZ pyk,xkA vk bZVh ls tqM+s fo'ks" kK bu Nk=kvksa dks ISVsykbV ls enn ls lwpuk izkS ksfxdh dh tkudkj nsus ds lkFk gh mudks jkstxkj dh laHkkoukvksa ls ifjfpr dj,axsA
2 June	IIIT-A has special incentive for AIEEE-2011 toppers: The IIIT-A administration will grant an impressive scholarship worth ₹ 35,000 per annum to any of the top 200 rank holders of AIEEE-2011. In a unique initiative, the Indian Institute of Information Technology, Allahabad has decided to offer cash incentives to top rank holders of all India rank holders of all India Engineering Entrance Examination (AIEEE)-2011 who opt for engineering studies on its campus.
10 June	IIIT-A and NASI to hold national Seminar: Indian Institute of Information Technology, Allahabad in collaboration with National Academy of Sciences, India is going to organize a National Seminar on 'Challenges of the Universities in the Knowledge Society' at Regional Science City, Aliganj extension, Lucknow on July 4.
21 June	Innovation is the Key enabler for sustained economic development. The Indian Institute of Information Technology, Allahabad will organize an international seminar on 'Education, Innovation and Society' on July 10 at the Indian International Center, New Delhi. IIIT-A director Dr. M.D. Tiwari on Tuesday said that globalization and technological developments had challenged the Indian Institute of higher education to innovate.
9 July	Expert to share views on education, innovation and society: Indian Institution of Information Technology, Allahabad is organizing a seminar on 'Education Innovation and Society' on Sunday at the Indian International Center, New Delhi. Prof. Satish K Tripathi, First Indian President of the State University of New York, will inaugurate the seminar. Renowned Scientist Prof. Yash Pal will be the guest of honour. Chairman, Board of Governors and Finance Committee, IIIT-A, Vijay K Thadani will preside over the function. IIIT-A Director MD Tiwari said globalization and technological developments had thrown in challenges and opportunities for Indian Institutions of higher education to innovate.
10 July	f'k{kk dh Lora=rk ds fy, vkanksyu dh t:jr&;'kikyA f'k{kkfon~ izksQslj ;'kiky us f'k{kk ds fy, ,d Lora=rk vkanksyu 'kq: fd;s tkus dh t:jr crkbZA fo'ofok ky; vuqnku vk;ksx ds iwoZ v/;{k vkSj oSKkfud ;'kiky fo'ofok ky;ksa dh iw.kZ Lok;Ùkrk ds Hkh gkeh gSaA jfookj dks jkt/kkuh ds bafM;k baVjus'kuy lsaVj esa f'k{kk] vkfo"dkj vkSj lekt fo"k; ij gqbZ ,d xks"Bh dk mn~?kkVu djrs gq, mUgksaus dgk fd fo'ofok ky;ksa esa ,d:irk dh dksf'k'kksa dks ukdke djrs gq, fofo/krk cjdjki j[kuk cgqr t:jh gSA

18 July	<p>RGIIIT-Amethi to be hub for research in healthcare: The Rajiv Gandhi Institute of Information Technology at Amethi which is an extension campus of the Indian Institute of Information Technology, Allahabad may well become the hub for research and diagnostics in healthcare using high-end information and communication technology. The latest technologies like use of robotics, stem cell therapy and other such high-end avenues will be researched and discussed upon at the Amethi.</p>
19 July	<p>IIIT-A initiates anti-ragging measures: mobile squads and undercover student groups will remain on vigil at all times. Indian Institute of Information Technology Allahabad has adopted various anti-ragging measures, including forming institute-level- anti-ragging committees and squads. The Institute has also uploaded the anti-ragging videos as per instructions issued by university Grants commission on its website for student community.</p>
31 July	<p>IIIT-A scientists working on virtual fence to protect wildlife, forests. Preventing animals in forests from crossing over into human habitations, creating an alert when poaching takes place and detecting unwarranted cutting of trees in forest. These are some of the features of a complex but ambitious wireless sensor based system that scientists from IIIT-Allahabad and Indian Institute of Sciences – Bangalore and a couple of universities from the US are working on to protect wildlife and forests.</p>
5 August	<p>IIIT-A to offer three new post-graduate courses: Indian Institute of Information Technology, Allahabad is gearing up to start three new courses from the next academic session. Classes for two of these proposed courses would be held at IIIT-A's Jhalwa campus while the third would be held at Rajiv Gandhi Institute of Information Technology (RGIIIT-Amethi) its Amethi based extension centre.</p>
7 August	<p>laLFkku esa Qkbo Ms ohd % ,uvkbZVh vkSj vkbZvkbZVh dh rtZ ij tuojh ls fv^aiyvkbZVh esa Hkh ikap fnolh; Iirkg dh O;oLFkk ykxw gksxhA</p>
9 August	<p>Solar energy to empower rural India initiative IIIT-A, RGIIIT to prepare plan for better utilization of renewable courses of energy: in a welcome initiative, the Indian Institute of Information Technology, Allahabad (IIIT-A) has decided to seek expert advice from a cross-section of professionals and come out with a detailed plan for empowering rural India using solar energy. IIIT-A plans to submit this proposal to the central government, along with the recommendations of the experts, to help the government fine tune the proposed and operational schemes and policies.</p>
12 August	<p>Sixth Convocation of IIIT-A held: India emerge superpower: 440 B.Tech, 238 M. Tech, 106 MBA, 129 MSCLIS and 08 Ph.D. Degrees conferred on students. Former director of Indian Institute of Sciences (IISc), Bangalore and National research professor Padma Shri Prof Govardhan Mehta said that the country was a melting pot of contrasts and colours, where past, present and future, sometimes separated by almost a century, coexisted in harmony.</p>
14 August	<p>tYn gh 22 Hkkjrh; Hkk"kkvksa esa gksxh dEI;wVj izksxzkefax % dEI;wVj ij nslh Hkk"kk esa dj ldsaxs lkjs dkeA bafM;u lKW¶Vos;j baMLV^ah ds tud ,Qlh dksgyh us nh tkudkj] izksxzkefax ds fy, dElkkbylZ rS;kj] 18 eghus ds Hkhrj 'kq: gksxk mi;ksxA</p>
21 August	<p>IIIT-A Ranked 53rd in south Asia in web Dominance. The lone IIIT of northern India – Indian Institute of Information Technology is now among the elite group of top 5 universities of South Asia.</p>
20-21 August	<p>Only 44% rural households have access to electricity: Director, Union ministry of new and renewable energy, Dr. PC Pant on Saturday said despite an ambitious rural electrification programme, 400 million Indians lost access to electricity during frequent</p>

	blackouts. He said while 80% Indian villages have at least an electricity line, just 44% of rural households have access to electricity.
28 August	Experts to share views on improving quality of life. The Indian Institute of Information Technology, Allahabad (IIIT-A) will be organizing a two day conference (September 18-20) at its Jhalwa Campus to discuss ways for improving quality of life and determine an extraordinary expansion of longevity.
01 Sept.	IIIT-A adjudged second in worldwide online judge system: SPOJ is an online judge system with over 100,000 registered users and over 9000 problems. The solution to problems were submitted in over 40 languages. It also includes a forum where programmers can discuss how they can solve a particular problem.
5 Sept.	Lkqf'kf{kr lekt % fv ³ iy vkbZVh ds ikap Nk=ksa dh eqfge] vc ISdM+ksa gks x, 'kkfeyA ikap o"kZ iwoZ ikap tquwuh ;qokvksa us bl ladYi esa ikap vkxs c<+k, vc ISdM+ksa mudh eqfge esa lkFk gSA bathfu;fjax ds Nk= lqcg ls nsj jkr dh O;Lr fnup;kZ gSaA exj blls buds ladYi dh jkg VwVrh ughaA cPpksa dks vf'k{k ds va/ksjs ls f'k{k ds mtkys dh vksj ys tkrs gSaA
14 Sept.	Hkkjrh; lwpuk izkS ksfxdh laLFkku] bykgkckn esa fgUnh fnol euk;k x;kA
18-20 Sept.	Spotlight on convergence of biomedicine, engineering at IIIT-A: With an objective to reap the benefits of convergence of biomedicine and engineering, experts from India and abroad assemble at IIIT-Allahabad for three day meet on future Technologies for health Care. Convergence between bio-medicine & engineering holds promise to benefit both the patients and the industries, Panel comprising Lidia Szpyrkowicz, Italian Embassy Scientific Counselor; YP Kumar, Senior Advisor in CSIR, DST and RK Chauhan, former secretary, UGC discusses globalization of Indian research and development in the first session held on September 18.
25 Sept.	With an aim to cater to the growing number of students, the Indian Institute of Information Technology, Allahabad has decided to construction a new hostel for boys and girls each on its campus.
26-30 Sept.	The five-day annual cultural-cum-technical festival of IIIT-A-Effervescence-got off to a blazing start. The event aims to take both education and entertainment to new heights. Singer Lucky Ali, the famous talented singer was the star attraction of "celebrity Night".
15 Sept.	Soon, books will answer your questions online: The Indian Institute of Information Technology, Allahabad is working on a technology that may make it possible to virtually 'talk to books in question and answer format' in different language, much the same way as humans interact.
8 Nov.	IIIT-A software offers hope for JE control Epidemic forecast can help in taking Precautions: Scientists Hope for hundreds of children taking ill to Japanese Encephalitis (JE) every year during monsoon in the eastern parts of Uttar Pradesh is on the horizon. Bio-Information Scientists at the Premier Indian Institute of Information Technology, Allahabad (IIIT-A), have developed a software which they claim can accurately forecast the outbreak of the disease and identify the species of mosquitoes which are responsible for it, enabling the health department to take preventive measures.
9 Nov.	IIIT-A bags Mehta Biz School Award Recognized as business School with Best Academic Input in IT. IIIT-A has bagged the prestigious 19 th Business School Affaire and Dewang Mehta Business School Award.
26 Nov. to 2 Dec.	The stage is all set for the country's Fourth Nobel Laureate Science Conclave which will

	kick off in style on the Jhalwa campus of Indian Institute of Information Technology, Allahabad (IIIT-A) on Saturday. The mega congress that will witness over 40 renowned scientists of the world, including Nobel laureates, besides 1,500 participants from all across the country, will continue till December 2. These series of Science Conclaves – a Congregation of Nobel Laureates and Eminent Scientists of the country and abroad has been planned by the Government in its commitment of arrest the regressive trends in the studies of general sciences comprising physics, chemistry zoology, botany, biochemistry, biochemistry, mathematics and engineering etc. and to reorient and enthuse the young scientist and researchers. Nobel laureates participating in the conclave this year included Nobel Laureate in physics Prof. Theodor W Hansch of Germany, Nobel laureate in biochemistry Prof Dr. Hartmut Michel, also of Germany and prof Robert C Richardson, from the USA who is a Nobel laureate in chemistry. “Besides two internationally acclaimed scientists Alexi Removich Khokhlov of Russian Academy of Sciences, Moscow and Prof Joseph Sifakis, director, Integrative Research Centre, France will also participate in the Conclave.
10-11 Dec.	Students to display science models. A two day state level science exhibition as part of Government of Indian’s much ambitious Innovation in Science Pursuit for Inspired Research (INSPIRE) award for Uttar Pradesh will be organized by Indian Institute of Information Technology, Allahabad.
6 Jan.	Five day working schedule at IIIT-A The Indian Institute of Information Technology, Allahabad has implemented a five day working system with effect from January 3. According to the new system, the institute will remain closed on Saturday and Sunday.
11 Jan.	US embassy team to agreed to came to IIIT-Allahabad.
30 Jan.	tYn gh cny tk,xh fV ^a iy vkbZVh dh lwjr% vR;k/kqfud ySc] vkWfMVksfj;e] Nk=kokl] dEl;wVj dsUnz&3 fcfYMax dk feysxk rksgQkA
30 Jan.	IIIT-A, a unique initiative for students. IIIT-A has introduced two award schemes by the name Merit incentive Award and Merit-cum-means Award from July 2010 for its B.Tech entrants. These two awards are given Rs. 2,000/- p.m. i.e. Rs. 24,000/- annually.
01 Feb.	IIIT-A to students: no loitering on Campus: The Indian Institute of Information Technology, Allahabad (IIIT-A) has asked its boys and girls not to loiter on the campus after 9 pm.
7 Feb.	Day long IPR workshop at IIIT-A, will be organizing an one day national workshop on Electronics and Information and Communication Technologies Intellectual Property Right” Patenting is most valuable task for any Industry, Director, IIIT-A Dr. MD Tiwari on Saturday said that Intellectual Property Right (IPR) was playing is a key role in the development of the Industry in the current framework.
11 March	MHRD grants greater autonomy to IIIT-A New ‘Board of Management’ headed by director is now highest decision-making body. The Institute director will now also head the finance committee of the Institute that has the responsibility to look after resource mobilization, control of expenditure.
14 March	Need to converge social issues with research: Principal Scientific Adviser to the Government of India Dr. R. Chidambaram visited the Indian Institute of Information Technology, Allahabad (IIIT-A) on Tuesday and took note of ongoing research programs at the Institute.
15 March	IIIT-A starts M.Tech in Communication Engineering. Now engineering students have eight subjects to choose from for specialization in three separate streams in post graduation. Specialization in communication engineering has been introduced under the IIIT-A’s electronic and communication engineering steam. The course also offers specialization in microelectronics.

16 March	USERS meet at IIT-A tomorrow. With an initiative taken by department of Science and Technology (DST), Government of India to utilize the expertise of retired scientists, a two day management advisory committee (MAC) meeting of Utilization of Scientific Expertise of Retired Scientists (USERS) will be held at IIT-A on March 19-20, 2012.
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5.4 CO-CURRICULAR AND EXTRA-CURRICULAR ACTIVITIES

From the very beginning, it has been the concern of the Institute not only to produce Graduate and Postgraduate Engineers and Technocrats of the world class but in its bid and resolve to achieve excellence in the stock of human capital of the country, the Institute has been well alive to develop the physical and mental faculties of students maximally.

With this end in view, a number of clubs have been established that help the students develop and nurture their inherent capabilities and mental faculties in various human skills and shed off their inhibitions that could clog their overall personality development.

While these clubs carry out their individual activities specific to their nature of formation and inception throughout the year, together they form a unique combination and produce an extravaganza of festivities under the Annual Cultural cum Techno-Management Fest Effervescence.

5.5.1 CLUBS AT THE INSTITUTE

The various clubs at the Institute are as follows:

1. STAMBH – PROGRAM MANAGEMENT AND PUBLICITY CLUB

This Club – called Stambh, has got the responsibility of overall management of all the other Clubs and keeping a watch on the organization of cultural/technical functions of the Institute, including the students' own annual techno-cultural festival "Effervescence" which is, in fact, the umbrella event of the Institute to

culminate and sum up the cultural and extracurricular performances of the students.

2. SARVASVA – THE LITERARY CLUB

The Literary Club organizes debates, extempores and other literary competitions. It is also responsible for publishing IMHO (In English) and Swacchanda (in Hindi) two magazines for In-Campus circulation, and regular newsletter MELANGE.

3. RANGTARANGANI – THE DRAMATICS CLUB

The Dramatics Club – called Rang Tarangini, is responsible for organizing workshops (acting as well as script writing) and holding drama competitions where young talent can be showcased. Innovation one act play competition is an annual feature of the Club.

4. VIRTUOSI – THE MUSIC CLUB

The Music Club called Virtuosi, apart from having a college band RagnaRok, has been successful in putting up wonderful performances and also being helpful in letting the students bite the music bug.

5. SPIRIT – THE SPORTS CLUB

The club is entrusted with the responsibility of enthusing among students a healthy spirit of sportsmanship. The Sports Club brings the spirit of life, the spirit of competition, the spirit to win, the spirit to participate and ultimately prove the one within you. It organizes cricketing, tennis, basketball, football, table tennis and other sports events keeping the student folk engaged all the year-round.

6. USHMA – THE DANCE CLUB

The Dance Club, called Ushma organizes various choreography events and two Dance

parties annually. Synergy of thought, symphony of movement, artistic expression and a sense of idyllic beauty – this symbolizes the Ushma of the Dance Club.

7. THUNDERBOLT – THE AUDIO LIGHTS CLUB

The Audio and Lights Club – called Thunderbolt is devoted to managing lights, audio equipment and visual recording of various events staged at the Institute.

8. THE TECHNICAL CLUB

This Club organizes the technical events of the Institute involving application of mind and IT expertise for the entrepreneurs of tomorrow, involving computer / programming based puzzles, games etc. The Club is at the forefront of various programming and software events, which promote learning through healthy competition.

9. ROBITA -THE ROBOTICS CLUB

The robotics club of IIITA encourages students to explore and experiment with robot design, artificial intelligence programming and related areas. Robot fabrication workshops are also conducted.

5.5.2 THE CLUB ORGANS

Patron – Dr. M.D. Tiwari, Director, IIIT-A
Chairperson – Dr. Anurika Vaish, Associate Professor
 & Divisional Head, MBA Division, IIIT-A

New Club Office Bearers for the session January to December,2012

PMP Club				
S.No.	Names	Enroll. No.	Designation	Email
1.	Mohammed Zaffer	IIT2010005	President	IIT20100005@iiita.ac.in
2.	Geetali Dewan	IMB2011040	Secretary	
3.	Aishwarye Saxena	IEC2010068	Treasurer	
4.	Akshay Chaturvedi	IIT2011030	Member	
5.	Mohit Sonkar	IIT2011026	Member	
6.	Rishabh Bindal	IIT2011066	Member	
7.	Amit Kumar	IIT2011043	Member	
8.	Swapnil	RIT2010016	Member	

9.	Rahul Sharma	RIT2010061	Member	
Technical Club				
S.No.	Names	Enroll. No.	Designation	Email
1.	Prakul Agarwal	IIT2010197	President	
2.	Gagan Gupta	IIT2010105	Secretary	
3.	Divanshu Garg	IIT2011077	Treasurer	
4.	Ayush Dhobal	IEC2011081	Member	
5.	Swapnil Srivastava	IIT2011072	Member	
6.	Shubham Sharma	IIT2011003	Member	
7.	Aditya Chaturvedi	IIT2011102	Member	
8.	Akshay Khare	RIT2010024	Member	
9.	Namrata Singh Chauhan	RIT2011004	Member	
Dramatics Club				
S.No.	Names	Enroll. No.	Designation	Email
1.	Avi Munjal	IIT2010172	President	
2.	Kumar Harsh	IIT2010135	Secretary	
3.	Niraj Tanwar	IIT2010111	Treasurer	
4.	Monika	IIT2011105	Member	
5.	Raman Goyal	IIT2011021	Member	
6.	Yash Vardhan Singh	IIT2011124	Member	
7.	Kuwar krishna Ayush	IIT2011135	Member	
8.	Aman Agarwal	RIT2011079	Member	
9.	Shivam Sahu	RIT2011016	Member	
Literary Club				
S.No.	Names	Enroll. No.	Designation	Email
1.	Anubhav Dutta	IIT2010153	President	
2.	Shivendra Soni	IIT2010027	Secretary	
3.	Shivani Pant	IIT2010127	Treasurer	
4.	Vijender Singh Aswal	IIT2011151	Member	
5.	Waseem Akram	IIT2011144	Member	
6.	Shubham Kesarwani	IIT2011097	Member	
7.	Rohit Kumar	IIT2011007	Member	
8.	Junaid Ali	RIT2011021	Member	
9.	Mragank Tolwani	RIT2010072	Member	
Sports Club				
Sl. No.	Names	Roll No.	Position	E-mail
1.	Aman Sinha	IIT2010028	President	
2.	Kush Kumar	IIT2010096	Secretary	
3.	Priyanshu Sharma	IIT2010139	Treasurer	

4.	Sumit Bana	IIT2011180	Member	
5.	Nayan Chauhan	IIT2011214	Member	
6.	Vikash Kumar Gautam	IIT2011052	Member	
7.	Shikha Rani	IIT2011093	Member	
8.	Vratika Ghatiya	RIT2010078	Member	
9.	Amit Meena	RIT2010031	Member	
Music Club				
Sl. No.	Names	Roll No.	Position	E-mail
1.	Jayanto Chaudhry	IIT2010088	President	
2.	Siddharth Bhardwaj	IIT2010174	Secretary	
3.	Rishabh Singh	IIT2010010	Treasurer	
4.	Vaibhav Dixit	IIT2011215	Member	
5.	Siddhartha Siaba	IIT2010015	Member	
6.	Sumit Meena	IIT2011089	Member	
7.	Priyanka Singh	IIT2011120	Member	
8.	Alankrita	RIT2010022	Member	
9.	Prachi Jain	RIT2011042	Member	
Dance Club				
Sl. No.	Names	Roll No.	Position	E-mail
1.	Shubhra Singh	IEC2010083	President	
2.	Akash Gupta Choudry	IEC2010051	Secretary	
3.	Pallavi Kella	IIT2010191	Treasurer	
4.	Keshav Maheshwari	IIT2010162	Member	
5.	Shalini Sahu	IEC2011017	Member	
6.	Aayush Varshney	IIT2011175	Member	
7.	Alisha Singh	IIT2011067	Member	
8.	Kundala Rahi	RIT2010063	Member	
9.	Vamshi Krishna S	RIT2011026	Member	
Audio & Light Club				
Sl. No.	Names	Roll No.	Position	E-mail
1.	Manish Kumar Aswani	IIT2010147	President	
2.	Kuldeep Panchal	IIT2010098	Secretary	
3.	Nayan Singhal	IIT2010164	Treasurer	
4.	Prabhat Kumar Kulratna	IEC2011041	Member	
5.	Jatin Mehta	IIT2011103	Member	
6.	Vishal Srivastava	IIT2011125	Member	
7.	Akash Bhatia	IIT2011084	Member	
8.	Shashi Kumari	RIT2010004	Member	
9.	Pankaj Anand	RIT2011008	Member	

EXTRA-CURRICULAR PHOTOGRAPHS

5.5.3 EVENT SCHEDULE FOR THE YEAR 2011 – 2012

Calendar For year 2011

Month	Date	Event	Club
Feb	12-16	Table tennis,badminton,volleyball	Sports
	15,18,20	Talent hunt	Dance,drama,lit,music(combined)
	11	Chords	Music
	13	Petals	Literary
	16	Arpan	Dramatics
	19	India match +opening ceremony	Alc
	20	Dance party	Dance
	27	Stunning duo	Dramatics
	27	Silverscreen	Alc
March	6	Alekhan	Dramatics
	20,27,	Silverscreen	Alc
	25-7april	T10 cricket	Sports
	27	Entertainment quiz	Literary
	28-10 april	Workshop	Dance
	28	Audio editing	Alc
	29	Semifinals world cup	Alc
	30	Semifinals world cup	Alc
	31	Oss camp	Technical
April	1	liita bakra	Dramatics
	2,	World cup finals	Alc
	8	Antakshari	Music
	10	Spell bee	Literary
	17	Silverscreen	Alc
July	3	Silverscreen	Alc
	10-16	Video editing	Alc
	28	Confusion	Music
	18-22	Football	Sports
	21-1 august	J2me hackathon	Technical
	24	Intercollege debate	Literary
	26-8 august	Aerobic/yoga classes	Dance
August	1	Silverscreen	Alc
	2	Dance competition	Dance
	1-8	Carrom,chess ,roadies	Sports
	8	Workshop	Technical
	12	Foundation day	
	14	Demented	Dance
	15	Athletics	Sports

	19	Musical show	Music
	20	Ad mad	Drama
	21	Dumb charades	Literary
	21-28	Photography competition	Alc
	29	Workshop	Dramatics
September	3	Dramaturgy	Dramatics
	4	Puzzle night	Literary
	4,11	Silverscreen	Alc
	5	Teachers day	Music
	6	Swimming competition	Sports
	28-2	Effervescence mm'11	
October	9	Dandiya nite	Dance
	10,16,23	Silverscreen	Alc
	25	Basketball competition	Sports
	30	Sports quiz	Literary

Serial no.	Tentative date	Event	Organizing club	Budget
Even semester				
1	31/03/2012	Dance party	Dance club	Rs 6000
2	31/03/2012 – 1/04/2012	Chess and carrom	Sports club	

5.5.4 REPORT OF CLUB EVENTS 2011-2012

January 2011

Shaurya- The Republic week

Sarasva marked the onset of a new tradition at IIIT-Allahabad by taking the celebration of Republic Day by organizing SHAURYA- the republic week. A plethora of events were organized by the club throughout the week.

ABHIVYAKTI, an open creative writing competition saw an overwhelming participation of over 40 writers from the college.

UPROAR was a group discussion in English n topic being "British rule in India – Boon or Bane".

MANTHAN, a parliamentary debate, Manthan saw a huge participation of team from the college and was held over 3 days.

Republic Day Sports Events

To commemorate the Republic day, Sports Club spirit organized Marathon and 10 m Sprint which saw huge levels of participation.

February 2011

Linux Workshop (Tech Club)

This was the first event of the tenure, to get all the students who did not even know the basics get acquainted with the basics of this very important OS and platform. The event was mainly targeted at the then first-years, as they had no experience on the Linux Platform and it is necessary to be a successful engineer.

The Dance Party (Dance Club)

It was held on the 27th of February, 2011. Students from all the four batches Of B.Tech as well as students from MBA, MS AND M.Tech attended this party. Also, a few research scholars made their way into the 3 hours of non-stop dancing. For the first time, beside girl-boy pair there was a different section for boy-boy and girl-girl pairs. The

DJ was called from Asha and Company. The theme was set as “Dark Knight” and a dress code was set pertaining to the theme.

PETALS (Literary Club)

It was an open creative writing competition (in English & Hindi), bringing forth all the students to share their orotund ideas and notions to the widest audience.

[March 2011](#)

PRELIMS OF POPCORN QUIZZA (SARASVA)

It was an entertainment quiz with questions from films to music, from literature to games. It witnessed an overwhelming participation from the student fraternity.

STUNNING DUO (RANGTARANGINI)

Stunning Duo was introduced first time in this year. This was an event to discover the most talented duo in the college. The objective of this event was to find the imagination, creativity, and flexible ways of thinking among the participants. The reason of forming couplet at the time was to find their adaptability among them. This event was conducted successfully on March 28, 2011.

[July 2011](#)

Football tournament

Spirit organized a Football tournament was organized in which a large number of students took part. It witnessed exciting matches and the league matches decided the winning team.

Popcorn Quizza Finals

The finals of Popcorn Quizza was organized by Sarvasva in which the selected team were tested on their films and entertainment skills.

Foundation Day

The Foundation day (August 12, 2011) – It is a yearly event of our college marking the foundation of the college. The theme for this years foundation day was , Euphoria”, meaning vibrant or colorful. This event is particularly for the new admission into the college from all streams.

Group Dance (Ushma)

The first years from M.S, MBA and B.Tech perform on this day and showcase their talent to the college. Ushma had presented a total of 3 group dances, one from the MS batch, one from the MBA batch and one from the B.Tech guys.

Drama (Dramatics Club)

An on stage drama event was organized on Foundation day. The event witnessed some breathtaking performances by the freshman batches of IITA.

Kavi Sammelan (Literary Club)

This year Sarasva organized a Kavi Sammelan in which some of the budding poets of B.Tech first year presented their works, drawing much applause from the audience.

[August 2011](#)

AD MAD (Dramatics Club)

This event was conducted on the 21th August, 2011. Promises, very large promises, are the soul of an advertisement in the present epoch. Usual is fiasco while Idiosyncrasy is the new success mantra and that marks the very essence of AD-MAD. This year’s edition was no different witnessing a huge turnout.

Dramaturgy (Dramatics Club)

Dramaturgy was an event to find the talent in writing, performing and directing the short plays. It was conducted for the first time; the event received an overwhelming response from the students and attracting

appreciation from all quarters. This event was conducted successfully on August 28, 2011.

Sports Club Events

Chess and Carrom competitions were held on 18th August, 2011. Table Tennis championship was held on 20th August, 2011, that included Table Tennis Singles, Doubles.

EFFEVERSCENE MM 11

LITERARY EVENTS

COGNOSCENTIA

The oldest event of IIIT- Allahabad, Cognoscentia was organized once again this year. Considered to be one of the best quizzing contests, it witnessed participation of different teams from over 10 colleges with the likes of **IIIT-Gwalior, HBTI Kanpur, SHIATS, Law Faculty AU, MONIRBA, IIIT-Allahabad** and many more. This year's edition saw the level of excellence in quizzing rise even further.

CROSSFIRE

The annual debating competition was organized by the literary club this year. Some of the best orators from different colleges around the region participated and helped make the event a grand success.

MINDSPEAK

It was an informal group discussion with the topic being "Is people power a legitimate and valuable means of shaping public policy". A large number of participants from different colleges turned up to air their views on the topic.

FEATHERS

It was an open creative writing competition, which witnessed some masterpieces being written by the budding poets and authors of different colleges across Allahabad.

RJHUNT

Once again the literary club organized the search for the RJ of Effervescence with huge success. With participants from **IIIT-Allahabad, HBTI Kanpur, SHIATS, Law Faculty AU, MONIRBA** and many other colleges; the event some of the best talents fight it out to lay claim to the top prize.

DANCE EVENTS

FOOTLOSE (GROUP DANCE)

The first event Footloose was the opening main stage event of Effervescence on 28th September. It started at 5:30 pm. Judged by the eminent Atamjeet, the versatile choreographer running dance classes in Katra and Civil Lines and our very own Saurabh Mishra.

CARPE DIEM (SOLO DANCE)

The second event was Carpe Diem. After choosing from lots of entries there were 12 finalists. The event started at 5:30 pm on 29th November. This event was judged by Kalpana Sahay, a trained classical dancer and our very own Ashish Srivastav. There were participants from IIIT-A, SHIATS, Atamjeet Institute. The first round had participants dancing on the prepared songs. On the basis of their dance 6 were chosen to go the next Impromptu Prop round. The prop and song was given an hour before already.

LA FRENZE (DUET DANCE)

The third and final event La Frenze was held on 29th November after the Drama Club Event Innovation. There were a total of 8 teams who had performed on a prepared dance number. The time limit was 2.5-4 minutes. This event was judged by Beena Singh of the Prayag Sangeet Samithi.

Dramatics events

Innovation

Innovation, the flagship event of Rangtarangini reached newer zeniths. As on stage drama event it witnessed some mesmerizing performances from teams of different colleges like **MNNIT, IIIT-A and RGIIT**.

Tongues on Fire

An unique event which celebrate the art of leg pulling. Tongues on Fire was a huge success once again. The event was full of energy and excitement with the participants engaging in healthy debates.

Bindas Bol

This is an event which brings out the very essence of Nukkad Natak. This year a large number of teams participated from different colleges.

Technical Events

The following online events were organized by GeekHaven during Effervescence MM 11

- a) Al Khwarizm
- b) Coldfire
- c) Platzen
- d) Stockhunt
- e) Webkriti

The numerous technical events organized during the year's effervescence witnessed large scale participation from India and abroad.

FUNDING & FINANCES

6.1 FINANCE, ACCOUNTS & AUDIT

The Institute is on the Maintenance Grant of the Govt. of India and accordingly its academic and allied activities are fully funded by the Govt.

The Institute's budget estimates are prepared and approved by the Finance Committee and the Board of Management on the Government patterns and rules that are submitted to Govt. for sanction of grant.

The grant, Plan and Non-Plan, is sanctioned by the Government are then released quarterly on the basis of Utilization Certificates submitted by the Institute for the grant sanctioned in the previous quarter. The current Funding Procedure is based on Performance of the Institute.

Apart from the Grant received from the Govt., the Institute receives substantial portion of its revenues from its internal resources comprising mainly tuition and other kinds of fees from the students. Students are charged fees as approved by the Finance Committee and the Board of management that is revised continually and rateably as in other such institutions.

While the Plan Grant received from the Govt. is the main source of funding for construction of academic / admin buildings, residential quarters and other infrastructural facilities such as development of labs, library and other equipments etc., the Non-Plan Grant coupled with receipts from internal resources are the mainstay for recurring expenses for running the Institute.



PHOTOGRAPH

6.2 SOURCES AND USES OF THE YEAR 2011-2012

NON-PLAN

Resource mobilization of the Institute on the Non-Plan side during the year 2011-2012 was to the tune of **Rs. 2687.52 Lakh** out of which Grant-in-aid accounted for **Rs. 1400.00 Lakhs** and the rest **Rs. 1287.52 Lakh** was raised through the internal sources of the Institute comprising mainly academic fees and return on investments.

The Grant-in-Aid of **Rs. 1400.00 Lakh** was released by the Govt. in three installments:

1. F.No. 24-9/2011-TS.I dt. 18-05-2011	Rs. 183.75 Lakh
2. F.No. 24-9/2011-TS.I dt. 23-08-2011	Rs. 200.00 Lakh
3. F.No. 24-9/2011-TS.I dt. 01-12-2011	Rs. 167.50 Lakh
4. F.No. 24-9/2011-TS.I dt. 05-03-2012	Rs. 183.75 Lakh
5. F.No. 24-9/2011-TS.I dt. 27-03-2012	Rs. 665.00 Lakh
	<hr/> Rs. 1400.00 Lakh

The Non-Plan Expenditure was to the tune of **Rs. 3683.61 Lakh** resulting in excess of **Rs. 996.09 Lakh** from the Govt. Grant received and income from internal sources taken together to meet the recurring expenses of the Institute.

PLAN

The Govt. released the Plan Grant of **Rs. 5500.00 Lakh** in three installments as below for both Campuses of the Institute at Allahabad and Amethi.

1. F.No. 24-8/2011-TS.I dt. 08-05-2011	Rs. 1125.00 Lakh
2. F.No. 24-8/2011-TS.I dt. 19-08-2011	Rs. 1125.00 Lakh
3. F.No. 24-8/2011-TS.I dt. 01-12-2011	Rs. 1125.00 Lakh
4. F.No. 24-8/2011-TS.I dt. 07-02-2012	Rs. 1125.00 Lakh
5. F.No. 24-8/2011-TS.I dt. 26-03-2012	Rs. 1000.00 Lakh
	<hr/> Rs. 5500.00 Lakh

The above approved Plan outlay for the year was to be utilized on approved plan activities of the Institute given under the details of the Tenth Plan in this Report.

On the expenditure side, the Plan Expenditure during the year amounted to **Rs. 5509.38 Lakh**, the balance having been supplemented from Non-Plan side.

Accounts

The Annual Accounts and Balance Sheet of the Institute have been compiled on the common format prescribed by the Govt. of India for Public Sector Units vide letter no. 1703/JS&FA(HRD)/2/2002 dated February 18, 2002.

6.3 RECEIPT AND PAYMENT ACCOUNTS OF PROJECTS BY MAJOR HEAD

Year 2011-2012 (Rs. In Lacs)

Sr.	NAME OF PROJECT	RECEIPTS					PAYMENTS					
		A	B	C	D	T	E	F	G	H	I	T
1	To Establish and Operationalize Bio-Technology (Bioinformatics)Centre--IRCB	4.89	--	----	0.19	5.08	0.02	--	---	---	5.06	5.08
2	Establishment of Joint Indo-Russian Centre for Bio-Technology at IIT, Allahabad	0.87	---	---	0.03	0.90	0.02	---	---	---	0.88	0.90
3	Digital Library Mega Centre-Language Technology and content Development & Content Creation in Tibetan, Sanskrit & English	10.52	---	---	10.56	21.08	19.94	----	0.67	0.31	0.16	21.08
4	Information Security Education & Awareness	7.79	18.19	---	0.43	26.41	3.96	---	---	5.00	17.45	26.41
5	Development of English to Indian Language Machine Translation System	1.71	31.1.9	---	2.91	35.81	8.37	---	1.39	16.88	9.17	35.81
6	Development of Indian to Indian Language Machine Translation System	3.81	---	---	4.32	8.13	2.02	---	---	4.65	1.46	8.13
7	Development of Robust Document analysis and Recognition system for printed Indian Scripts (OCR)	1.35	12.07	---	2.96	16.38	2.61	---	1.94	1.58	10.25	16.38
8	Allahabad Michigan University Collaborative Fund	1.48	0.66	---	0.04	2.18	2.02	--	---	---	0.16	2.18
9	Fund for Improvement of S & T Infrastructure in Universities and Higher educational Institutions (Fist Program-2007)	3.34	---	---	0.12	3.46	2.32	---	---	---	1.14	3.46
10	Development of Algorithm Using ECG Bio-signal & Bio-Images	1.76	---	---	0.07	1.83	0.38	--	---	1.40	0.05	1.83
11	Technology Incubation and Development of Entrepreneurs (Tide Scheme)	31.84	---	1.90	7.74	41.48	0.66	---	5.27	1.00	34.55	41.48
12	Institutional partnership project (IPP) -Centre of Excellence in Micro-Electronics & Microsystems ,EPFL, and Lausanne Under -Indo Swiss Project	10.94	--	--	0.33	11.27	8.59	---	----	---	2.68	11.27
13	Indigenization of Broadband over powerline technology (BPL) from Corinex,Canada by connecting adjoining villages around IIT, Allahabad and RGIIT, Amethi using existing power lines	60.29	---	4.92	0.29	65.50	7.55	--	---	--	57.95	65.50
14	Establishment of North Zone Resource Centre of Generating Contents,Mentors,Teachers etc.by Conducting Specialized short term HRD Courses for IT/ITES Sector	212.70	---	1.90	10.94	225.54	22.86	150.00	24.12	22.18	6.38	225.54
15	Methods for Compensation & localization of Interferences in Ultra wide-band wireless Sensor Networks	3.10	---	---	0.05	3.15	2.61	--	0.46	--	0.08	3.15
16	Setting UP of an ASEAN -INDIA Science & Technology Library	155.68	---	10.97	4.55	171.20	21.70	--	120.45	----	29.06	171.20
17	Development of Transgenic Wheat Plant against Cereal Cyst nematode (<i>Heterodera Avenae</i>) and Sunnpest (<i>Eurygaster intergriceps Puton</i>) by using Bioinformatics and Genetic Engineering Approaches	8.99	---	---	0.28	9.27	9.11	----	---	---	0.16	9.27
18	Development of a Neuron like system for Real Time Visual Object Detection	4.37	10.57	---	0.46	15.40	7.94	--	1.12	1.09	5.25	15.40
19	Development of a Computer aided Microscopic pool for structural deri-vation of pathologically significant proteins	1.56	4.19	---	0.03	5.78	2.70	--	--	3.07	0.1	5.78
20	National Mission on Education through Information & Communication Technology (ICT)	17.62	0.62	0.32	10.00	28.56	0.15	---	16.16	10.00	2.25	28.56
21	Development of new method and algorithms to identity exon-intron boundary and finding signatory signal pattern for genetic abnormalities like autism-(A-8.25)	7.80	---	---	0.27	8.07	4.11	----	---	---	3.96	8.07
22	Inspire Awards-2010	606.78	---	15.50	4.97	627.25	38.45	165.50	----	----	423.29	627.25
23	Disaster Management system for large scale deployment of sensor network using a fault tolerant mechanism	----	73.08	3.24	1.63	77.95	4.58	---	0.70	15.81	56.86	77.95
24	Army Technology Board-Network simulation Testbed at MCTE,MHOW	----	83.00	---	0.29	83.29	11.19	---	70.35	----	1.74	83.29
25	Indian Oil Corporation Limited & IIT-Allahabad	---	3.50	---	---	3.50	3.46	---	---	---	0.04	3.50

A: Opening Balance

B: Grants Received from Sponsoring Agencies

C: Income on Investment

D: Other Income

E: Expenses

F: Investments

G: Fixed Assets

H: Other Payments

I: Closing Balance

Annexures

Annexures

Annexure	Particulars	Page No(s).
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MEMBERS OF IIIT-A SOCIETY

1.	Sri P.R. Dasgupta Hon'ble Chairman, IIIT-A Society Director Bangalore International Centre, TERI Complex Bangalore – 560071	Chairman
2.	Secretary Deptt. of Education, MHRD	Member
3.	Secretary Deptt. of Space Govt. of India	Member
4.	Secretary Deptt. of Atomic Energy Govt. of India	Member
5.	Secretary Deptt. of Electronics Govt. of India	Member
6.	Secretary Deptt. of Science and Technology Govt. of India	Member
7.	Director General NIC, New Delhi	Member
8.	Vice Chairman/Member Secretary AICTE, New Delhi	Member
9.	President National Academy of Sciences, Allahabad	Member
10.	Financial Adviser, MHRD	Member
11.	Vice Chancellor Allahabad University	Member
12.	Director IIT, Kanpur	Member
13.	Director Institute of Technology BHU	Member
14.	Prof. Ashoka Chandra Director, IAMR New Delhi	Member
15.	Prof. H.C. Pandey Vice Chancellor Emeritus Ranchi	Member
16.	Director IIIT&M, Gwalior	Member
17.	Prof. Dutta Majumdar Calcutta	Member
18.	Prof. H.S. Mani Director, MRI, Allahabad	Member
19.	Prof. A.K. Gupta JK Institute, Allahabad	Member
20.	Commissioner Allahabad Division Allahabad	Member
21.	Principal Secretary (In-charge IT) U.P. Government	Member

22.	Dr. Y.K. Sharma DDG, NIC	Member
23.	Representative of Bureau of Technical Education, MHRD	Member
24.	CMD Hindustan Futuristic Communications Ltd. Himachal Pradesh	Member
25.	CMD, WIPRO	Member
26.	CMD, INFOSYS	Member
27.	Executive Director, C-DAC	Member
28.	CMD, Reliance Telecommunications	Member
29.	CMD, Bharati Telecom	Member
30.	Director / OSD IIIT, Allahabad	Member Secretary

THE ACADEMIC COUNCIL

(update as in March 2012 [till 5.7.12])

1	Dr. M.D. Tiwari Director IIIT Allahabad	Chairperson
2	Prof. P.B. Sharma Vice Chancellor Delhi Technological University	Member
3	Prof. Bharat Bhasker Professor, Information Technology & Systems Indian Institute of Management (IIM), Lucknow	Member
4	Prof. K.N.S. Yadava Vice Chancellor Rani Durgavati University, Jabalpur	Member
5	Prof. A.K. Bakshi Vice Chancellor Uttar Pradesh Rajarshi Tandon Open University, Allahabad	Member
6	Prof. Jayanta Kumar Bhattacharjee Director Harish Chandra Research Institute (HRI), Allahabad	Member
7	Prof. S.K. Kak Vice Chancellor Mahamaya Technical University, Noida	Member
8	Prof. G. C. Nandi Dean (R&D) and Divisional Head, IT IIIT-Allahabad	Member
9	Prof. R.C. Tripathi Dean (Student Affairs) IIIT Allahabad	Member
10	Prof. M. Radhakrishna Professor & Divisional Head (Electronics) IIIT Allahabad	Member
11	Prof. G.N. Pandey Professor IIIT Allahabad	Member
12	Prof. Sudip Sanyal Professor IIIT Allahabad	Member
13	Prof. Hari Prakash Professor IIIT Allahabad	Member
14	Prof. Ramji Lal Professor IIIT Allahabad	Member
	Prof. O.P. Vyas Professor IIIT Allahabad	Member
15	Prof. B.R. Singh Dean (Academic) IIIT Allahabad	Member
16	Prof. U.S. Tiwary Professor	Member

	IIIT Allahabad	
17	Dr. Anupam Agarwal Associate Professor IIIT Allahabad	Member
18	Dr. Shekhar Verma Associate Professor IIIT Allahabad	Member
19	Dr. Anurika Vaish Associate Professor & Divisional Head, Management and Cyber Laws IIIT Allahabad	Member
20	Dr. Shirshu Verma Associate Professor IIIT Allahabad	Member
21	Dr. C.V.S. Siva Prasad Assistant Professor & Divisional Head, Applied Science and IRCB IIIT Allahabad	Member
22	Dr. T. Lahiri Associate Professor IIIT Allahabad	Member
23	Dr. B.S. Sanjeev Assistant Professor IIIT Allahabad	Member
24	Dr. Pavan Chakraborty Assistant Professor IIIT Allahabad	Member
25	Dr. Vrijendra Singh Assistant Professor IIIT Allahabad	Member
26	Prof. B.B. Tiwari Professor and Member Secretary IIIT Allahabad	Member Secretary

FINANCE COMMITTEE

1	Dr. M.D. Tiwari Director IIIT Allahabad	Chairperson
2	Sri Navin Soi Director (Finance) Dept. of H.E., MHRD, New Delhi	Member
3	Sri S.N. Jha, IAS (Retd.) Former Secretary, Govt. of India Noida, U.P.	Member
4	Sri Chandra Lal Retd. AG(A&E) U.P. Allahabad	Member
5	Prof. Ramesh Chandra Founder Director Dr. B.R. Ambedkar Centre for Biomedical Research University of Delhi	Member (Co-opted)
6	Mr. R.B. Singh Deputy Registrar (Finance) IIIT-Allahabad	Member Secretary

BUILDING & WORKS COMMITTEE

1	Dr. M.D. Tiwari Director IIIT Allahabad	Chairperson
2	Director MHRD, New Delhi	Member
3	Sri S.K. Khanna Retd. Chief Engineer – CPWD, New Delhi & Advisor (Technical), IIIT-Allahabad	Member
4	Sri S.C. Singhal Superintending Engineer (UPPWD) & Advisor (Technical), IIIT-Allahabad	Member
5	Prof. S.K. Srivastava Emeritus Fellow (AICTE) Member, Executive Council, West Bengal Technical University Varanasi & Faculty, IIIT-Allahabad	Member
6	Prof. G. C. Nandi Dean (Academic) & Divisional Head, IT IIIT-Allahabad	Member
7	Prof. R.C. Tripathi Officiating Dean (Student Affairs) IIIT Allahabad	Member
8	Dr. Asheesh Kumar Deputy Registrar (M) IIIT Allahabad	Member
9	Sri R.B. Singh Deputy Registrar (Finance) IIIT Allahabad	Member
10	Sri H.D. Tiwari Advisor (Finance) IIIT Allahabad	Member Secretary

PLACEMENTS IN THE YEAR 2010-2011

B.TECH (ELECTRONICS COMMUNICATION & ENGINEERING) 2007 BATCH				
Sl. No.	Roll No.	First Name	Last Name	Company
1	IEC2008001	Naveen	Malik	Tally Solutions
2	IEC2008002	Ashutosh	Tripathi	NVIDIA
3	IEC2008006	Supratika	Shruti	Ericsson
4	IEC2008007	Kiran	Bharti	Wipro VLSI
5	IEC2008009	Param	Aggarwal	Deloitte US India
6	IEC2008010	Deepak	Yadav	HCL Technologies
7	IEC2008013	Mukul	Bharti	Ericsson
8	IEC2008014	Mayank	Bansala	ZS
9	IEC2008018	Monika	Kansotiya	Nomura
10	IEC2008020	Anurag	Sahu	Samsung
11	IEC2008021	Archana	Kumari	TCS
12	IEC2008026	Ajay	Kumar	HCL Technologies
13	IEC2008028	Raj	Singh	Vihaan Networks
14	IEC2008030	Abhishek	Jain	HCL Technologies
15	IEC2008031	Saurabh	Jain	Kritikal Solutions Pvt. Ltd
16	IEC2008035	Bipin	Kujur	Vihaan Networks
17	IEC2008037	Sumit	Bhogal	Comviva
18	IEC2008044	Vishant	Gotra	WiproVLSI
19	IEC2008045	Govinda	Darak	HCL TECHNOLOGIES
20	IEC2008046	Kumar	Sri Harsh	TCS
21	IEC2008047	Naman	Sharma	Ericsson
22	IEC2008049	Shailendra	Mishra	Deloitte US India
23	IEC2008050	Arun	Beesam	Verizon
24	IEC2008053	Nand Kishore	Sharma	Sparsh Softwares
25	IEC2008055	Anurag	Ranjan	IBM GBS
26	IEC2008056	Nisha	Kumari	NVIDIA
27	IEC2008058	Paras	Gupta	NVIDIA
28	IEC2008059	Shubhanshu	Yadav	Kony
29	IEC2008060	Ayushi	Sinha	Verizon
30	IEC2008061	Sanchit	Agarwal	Verizon
31	IEC2008062	Anand Kumar	Mishra	Sparsh Softwares
32	IEC2008063	Rishab	Goel	Barclays Capital
33	IEC2008064	Gaurav	Agarwal	ZS
34	IEC2008066	Nishant	Hirani	Deloitte US India
35	IEC2008067	Deepshikha	Agarwal	Wipro VLSI
36	IEC2008069	Priyankar	Mathuria	Kritikal Solutions Pvt. Ltd
37	IEC2008070	Yagya Dutt	Mishra	Wipro IT
38	IEC2008074	Pankaj	Kumar	Wipro VLSI
39	IEC2008076	Yogesh Sendre		HCL TECHNOLOGIES
40	IEC2008077	Kunal	Chitkara	Indus Valley Partners

B.TECH (INFORMATION TECHNOLOGY) 2007 BATCH				
41	IIT2008001	Malay	Singh	MAQ Software
42	IIT2008004	Shubham	Gupta	Adobe Systems
43	IIT2008005	Anvay	Srivastava	Flipkart
44	IIT2008006	Shailendra	Upadhyay	Yahoo!
45	IIT2008007	Shubham	Agarwal	Directi
46	IIT2008008	Pranjal	Singh	PaGalGuy/Inzane Labs Pvt.Ltd.
47	IIT2008009	Santak	Dalai	Deloitte US India
48	IIT2008010	Sunny	Shukla	Nomura
49	IIT2008011	Prabhat	Chaudhary	Belzabar Softwares
50	IIT2008012	Kumar	Saurabh	TCS
51	IIT2008014	Sushil	Nath	PaGalGuy/Inzane Labs Pvt. Ltd.
52	IIT2008015	Gaurav	Kishore	HCL Technologies
53	IIT2008016	Pratyush	Thakur	ZS
54	IIT2008019	Vikash	Kesarwani	Kritikal Solutions Pvt. Ltd.
55	IIT2008020	ABHISHEK	CHAUDHARY	Wipro VLSI
56	IIT2008021	Neeraj	Singh	Samsung
57	IIT2008024	Ashish	Mehta	Adobe Systems
58	IIT2008025	Bhavana	K	PaGalGuy/Inzane Labs Pvt. Ltd.
59	IIT2008026	Satyarth	Prasad	Kuliza Softwares
60	IIT2008027	Rajat	Mathur	Barclays Capital
61	IIT2008029	Saurabh	Vaishnav	Verizon
62	IIT2008030	Swati	Arya	IBM GBS
63	IIT2008031	Ankit	Gupta	Ericsson
64	IIT2008033	Kumari	Rajni	IVY Comptech
65	IIT2008034	Sadanand	Sonkar	Comviva
66	IIT2008035	Prateek	Verma	Samsung
67	IIT2008036	Parvez	Ahmed	IBM GBS
68	IIT2008038	Prashant	Gupta	Infoedge India Pvt. Ltd.
69	IIT2008039	NITESH	JINDAL	Kritikal Solutions Pvt. Ltd.
70	IIT2008040	Rishabh	Bhuinya	Samsung
71	IIT2008041	Shobhit	Puri	MAQ Software
72	IIT2008042	Nishant	Kumar	IVY Comptech
73	IIT2008043	Eesha	Singh	ZS
74	IIT2008044	Sangam	Bharti	Nomura
75	IIT2008045	Shivam	Gupta	Samsung
76	IIT2008047	Faiz	Karim	MAQ Software
77	IIT2008048	Bikalpa	Pandey	Deloitte US India
78	IIT2008049	Sachin	Sebastian	Adobe Systems
79	IIT2008050	Vikas	Khandel	Wipro IT
80	IIT2008051	Ashish	Sadh	Infoedge India Pvt. Ltd.
81	IIT2008053	ALEEMULLAH	KHAN	HCL Technologies
82	IIT2008055	Swapnil	Kumar	Belzabar Softwares
83	IIT2008056	Anurag	Saxena	Yahoo!
84	IIT2008057	Ankur	Katiyar	IVY Comptech
85	IIT2008058	Ayman	Andrabi	IVY Comptech
86	IIT2008059	Praphulla	Narayan	Kony
87	IIT2008061	Neeraj	Bagga	Kony
88	IIT2008063	Umesh	Meena	Samsung
89	IIT2008064	Sachin	Jain	Mangalayan Uni
90	IIT2008065	Fariz	Ahmed	Deloitte US India
91	IIT2008066	Namita	Shah	HCL Technologies

92	IIT2008067	Gaurav	Singh	Mangalayan Uni
93	IIT2008068	Amit	Sahu	TCS
94	IIT2008069	Shirsh	Bansal	Comviva
95	IIT2008073	Arshabh	Chaturvedi	Nomura
96	IIT2008074	Himanshu	Gupta	MAQ Software
97	IIT2008076	NIRMAL	MEENA	Ericsson
98	IIT2008077	Divij	Vaidya	SAP Labs
99	IIT2008080	Vipul	Singla	Samsung
100	IIT2008081	Sarvendra	Anand	Kritikal Solutions Pvt. Ltd.
101	IIT2008082	Amit	Shah	Samsung
102	IIT2008083	SHISHIR	AGRAWAL	MAQ Software
103	IIT2008086	Shubham	Raina	Verizon
104	IIT2008087	Vinay	Aggarwal	SAP Labs
105	IIT2008090	Anand	Kumar	Deloitte US India
106	IIT2008093	Gaurav	Singh	Infoedge India Pvt. Ltd.
107	IIT2008094	Animesh	Demta	Ericsson
108	IIT2008098	Aman	Raj	Indus Valley Partners
109	IIT2008099	Ajay	Narang	Directi
110	IIT2008100	Monica	Gupta	Kony
111	IIT2008101	Kritivasas	Shukla	Studypad Inc.
112	IIT2008102	Nitin	Verma	Directi
113	IIT2008103	Anchal	Jijhotiya	Samsung
114	IIT2008104	Dharmendra	Kumar	Wipro IT
115	IIT2008105	Rahul	Dev	IBM GBS
116	IIT2008106	Naveen	Tiwari	IBM GBS
117	IIT2008108	Vidushi	Khatri	MAQ Software
118	IIT2008110	Jitendra	Kumar	Kony
119	IIT2008111	Manisha	Mittal	SAP Labs
120	IIT2008113	Faraz	Doja	Wipro IT
121	IIT2008114	Ganesh	Regmi	MAQ Software
122	IIT2008117	Anas	Hadi	Tally Solutions
123	IIT2008119	Apoorva	Kumar	SAP Labs
124	IIT2008120	Rajat	Singhal	SAP Labs
125	IIT2008121	Srishti	Srivastava	Amazon
126	IIT2008122	Mitul	Agrawal	MAQ Software
127	IIT2008124	PRATEEK	RAJVANSHI	Microsoft
128	IIT2008125	PRERNA	SRIVASTAVA	Yahoo!
129	IIT2008127	Abhimanyu	Gupta	Kony
130	IIT2008128	Prateek	Dixit	Verizon
131	IIT2008129	Ved	Prakash	HCL Technologies
132	IIT2008130	Aman	Srivastava	Samsung
133	IIT2008132	Srijan	Bhatnagar	Samsung
134	IIT2008133	Bhuwan	Garg	HCL Technologies
135	IIT2008134	ANURAG	KRISHNA	Deloitte US India
136	IIT2008135	Niharika	Anand	Amdocs
137	IIT2008136	Nikhil	Bansal	IVY Comptech
138	IIT2008137	Atul	Verma	Wipro VLSI
139	IIT2008138	Amit	Gulia	Ericsson
140	IIT2008139	Shubham	Sisodia	HCL Technologies
141	IIT2008141	Anshulika	Prasad	Samsung
142	IIT2008142	Vaibhav	Nigam	IBM GBS
143	IIT2008144	Shruti	Gupta	LPU
144	IIT2008145	MAHIMA	GUPTA	Microsoft
145	IIT2008146	Sukhmeet	Singh	Studypad Inc.

146	IIT2008147	Prakriti	Vardhan	Kony
147	RIT2008001	Anurag	Bhoumick	Ericsson
148	RIT2008002	ARPIT	MITTAL	Amdocs
149	RIT2008003	Rishabh	Maurya	Ericsson
150	RIT2008004	Anjaney	Anjan	Samsung
151	RIT2008006	Gopi	Vishwakarma	Flipkart
152	RIT2008007	Harshit	Singh	HCL Technologies
153	RIT2008008	Anurag	Singh	Comviva
154	RIT2008009	Lalit	Sharma	Adobe Systems
155	RIT2008010	Aakash	Johari	Microsoft
156	RIT2008011	Vipul	Mehta	Samsung
157	RIT2008013	Abhinav	Jaiswal	Venera Technologies
158	RIT2008015	Ashish	Sharma	Wipro IT
159	RIT2008016	Shubham	Maheshwari	Informatica
160	RIT2008017	Varun	Pahwa	Samsung
161	RIT2008018	Rohit	Sindhu	Kritikal Solutions Pvt. Ltd.
162	RIT2008021	Pritpal	Banga	SAP Labs
163	RIT2008027	NIRANJAN	TIRKEY	IBM GBS
164	RIT2008029	Puneet	Sharma	Samsung
165	RIT2008032	Naresh	Kumar	Sapient
166	RIT2008035	Siddhartha	Thota	MAQ Software
167	RIT2008038	Nitesh	Kumar	Samsung
168	RIT2008039	Pavan	Reddy	Kony
169	RIT2008043	Ashmantak	Pandey	Sapient
170	RIT2008045	Priyanka	Saini	ZS
171	RIT2008046	Nitish	Rawat	Kritikal Solutions Pvt. Ltd.
172	RIT2008048	Jitendra	Bajiya	Wipro IT
173	RIT2008049	Sumit	Kumar	Wipro IT
174	RIT2008050	Anand	Gupta	Kuliza Softwares
175	RIT2008051	M Bhanu Prakash	M	Wipro IT
176	RIT2008052	Sweety	Bhagat	Kony
177	RIT2008053	Gaurav	Nanda	TCS
		M.TECH		
1	IBI2010001	MEELAN	BISWAL	Wipro IT
2	IBI2010002	Dipali	Singh	IBM GBS
3	IBI2010004	Swati	Patel	TCS
4	IBI2010007	JEFFIN	ROCKEY	Ericsson
5	IBI2010009	Swati	Adlakha	Infoedge India Pvt. Ltd.
6	IBI2010012	SHAMEEM	Y	Valyu
7	IBI2010013	Sruti	Bharali	Wipro IT
8	IHC2010001	Vikas	Tomer	HCL Technologies
9	IHC2010003	Snigdha Chandan	Khilar	IBM GBS
10	IHC2010004	Vinaykumar	Panchal	IBM ISL
11	IHC2010005	Vipra	Dwivedi	IBM ISL
12	IHC2010007	Gaurav	Saxena	Vihaan Networks
13	IHC2010008	Sumit	Srivastava	IVY Comptech
14	IHC2010009	Vivek	Kumar	Mangalayan Uni
15	IHC2010011	Vaibhav	Tripathi	Yahoo!
16	IIS2010001	Shitanshu	Mishra	RGUKT
17	IIS2010007	Ajinkya	Bambal	HCL Technologies
18	IIS2010009	Varsha	Verma	Wipro IT
19	IIS2010010	Chandan	Singh	Mangalayan Uni
20	IIS2010011	Avanish	Kumar	Mangalayan Uni
21	IMI2010003	PIYUSH	JOSHI	LPU

22	IMI2010004	KAVINDRA	KANDPAL	RGUKT
23	IMI2010005	Vibhooti	Sinha	HCL Technologies
24	IMI2010007	Manoj	Kumar	IBM GBS
25	IMI2010008	Manoj Kumar		Wipro VLSI
26	IMI2010009	ATUL	KUMAR	Sparsh Softwares
27	IMI2010010	Hari	Kakara	Wipro VLSI
28	IMI2010012	Anshuman	Dwivedi	IBM GBS
29	IMI2010016	Shalu	Agarwal	IBM GBS
30	IRO2010002	Abha		Wipro IT
31	IRO2010003	SACHIN	KANSAL	Wipro IT
32	IRO2010004	Jainendra	Shukla	LPU
33	IRO2010005	SAMAN	SHAHID	IBM GBS
34	IRO2010006	Faimy	Ansari	Mangalaytan Uni
35	IRO2010007	Jitendra	Pal	Amdocs
36	IRO2010009	Shruti	Chandra	Informatica
37	ISE2010001	ARPIT	TRIVEDI	Microsoft
38	ISE2010002	Jashan	Koshal	Wipro IT
39	ISE2010003	Anuj	Kumar	Samsung
40	ISE2010004	Nitesh	Jain	IVY Comptech
41	ISE2010007	Deepshree	Somani	IBM ISL
42	ISE2010007	DEEPSHRI	SOMANI	TCS
43	ISE2010008	Sonu	Sabir	Ericsson
44	ISE2010009	Shipra Upadhyaya		IVY Comptech
45	ISE2010011	Shailesh	Sharma	Amdocs
46	ISE2010013	Vipin	Kumar	Amdocs
47	ISE2010014	Durga	Guntoju	MAQ Software
48	ISE2010016	SUMITAVO	ROY	IBM GBS
49	ISE2010018	Suman	Kuril	Mangalaytan Uni
50	ISE2010019	Sachin	Kumar	Wipro IT
51	ISE2010020	Rohit	Pandey	IBM GBS
52	ISE2010022	Abhinav	Lokhande	Samsung
53	ISE2010023	Aditya	Kumar	LPU
54	ISE2010024	Gaurav	Varshney	Sparsh Softwares
55	ISE2010026	Rupali	Singh	HCL Technologies
56	IWC2010001	Sonali	Singh	Verizon
57	IWC2010002	Kumari	Anjali	IBM GBS
58	IWC2010003	Harshita	Kishnani	IBM GBS
59	IWC2010005	Rajneesh	Kumar	Innopark
60	IWC2010007	Robin	Guleria	IBM GBS
61	IWC2010009	Himanshu	Uttam	Amdocs
62	IWC2010011	Satyanarayan	Patel	Amdocs
63	IWC2010012	Sumit	Tokle	Deloitte US India
64	IWC2010013	Kaushal	Singh	IBM GBS
65	IWC2010014	Kusum	Lata	IBM GBS
66	IWC2010016	Sandeep	Goutele	HCL Technologies
67	IWC2010017	Rohit	Mishra	IBM GBS
68	IWC2010019	Kaushlendra	Pandey	Mangalaytan Uni
69	IWC2010020	ANKIT	JAIN	LPU
70	IWC2010022	Ritesh	Singh	Wipro IT
71	IWC2010025	HARDIKKUMAR	SHAH	Valyu Tech

Nodal Officer for implementation of the Cigarettes and other Tobacco Products Act, 2003
- Dr. Sudip Sanyal

LIST OF HUMAN RESOURCES IN MANAGING INSTITUTE IN 2011-2012

Academic Staff

S. No.	Name	Designation
1.	Dr. M. D. Tiwari	Director
2.	Prof. G. C. Nandi	Professor
3.	Prof. R. C. Tripathi	Professor
4.	Prof. U.S. Tiwary	Professor
5.	Prof. Sudip Sanyal	Professor
6.	Prof. O. P. Vyas	Professor
7.	Prof. G. N. Pandey	Professor
8.	Prof. M. Radhakrishna	Professor
9.	Prof. Krishna Mishra	Professor
10.	Prof. B. R. Singh	Professor
11.	Dr. Anupam	Associate Professor
12.	Dr. Shekhar Verma	Associate Professor
13.	Dr. Anurika Vaish	Associate Professor
14.	Dr. Tapobrata Lahiri	Associate Professor
15.	Dr. Shirshu Verma	Associate Professor
16.	Dr. Sanjeev B. S.	Assistant Professor
17.	Dr. C. V. S. Siva Prasad	Assistant Professor
18.	Dr. Vrijendra Singh	Assistant Professor
19.	Dr. Madhvendra Mishra	Assistant Professor
20.	Dr. Pavan Chakraborty	Assistant Professor
21.	Dr. Pritish Kr. Bhardwaj	Assistant Professor
22.	Dr. Vijayshri Tewari	Assistant Professor
23.	Dr. Vijay Kumar Chaurasiya	Assistant Professor
24.	Mr. Manish Kumar	Assistant Professor
25.	Dr. Neetesh Purohit	Assistant Professor
26.	Dr. Sanjai Singh	Assistant Professor
27.	Dr. Abhishek Vaish	Assistant Professor
28.	Dr. Rajat Kumar Singh	Assistant Professor
29.	Mr. Manish Goswami	Assistant Professor
30.	Dr. Subramanin Venkatesan	Assistant Professor
31.	Dr. Sonali Agarwal	Assistant Professor

32.	Dr. Krishna Pratap Singh	Lecturer
33.	Mr. Ajit Singh	Lecturer
34.	Dr. Kusum Lata	Lecturer
35.	Dr. Arun Prakash	Lecturer
36.	Mr. Ajay Singh Raghuvanshi	Lecturer
37.	Mr. Rahul Gupta	Lecturer
38.	Mr. Triloki Pant	Lecturer
39.	Mr. Santanu Das	Lecturer
40.	Mr. Ashutosh Kumar Singh	Lecturer
41.	Mr. Monark Bag	Lecturer
42.	Mr. Shashi Kant Rai	Lecturer
43.	Mr. Saurabh Mishra	Lecturer
44.	Mr. Utkarsh Goel	Lecturer
45.	Dr. Satinder Kr. Sharma	Lecturer

Non-teaching Staff

S. No.	Name	Designation
1.	Sri. R. B. Singh	Deputy Registrar (Finance)
2.	Dr. Asheesh Kumar	Deputy Registrar (Miscellaneous)
3.	Dr. Seema Shah	Deputy Registrar (Establishment)
4.	Ms. Reema Gupta	Software Engineer
5.	Mr. Lok Nath Sharma	Security Officer
6.	Mr. Mithilesh Mishra	System Analyst
7.	Mr. K. K. Tiwari	Assistant Registrar (Finance)
8.	Mr. Ranjeet Banerjee	Assistant Registrar (Exam)
9.	Mr. Anil Bhadauria	Assistant Engineer
10.	Mr. Pankaj Mishra	Senior Information Assistant
11.	Mr. Prashant Srivastava	Programmer
12.	Mr. Mukesh Rawat	Personal Secretary
13.	Mr. Vivek Nagar	Personal Secretary
14.	Mr. Yogesh Kardam	Computer Operator
15.	Mr. Ajay Kr. Tiwari	Computer Operator
16.	Dr. Pallavi Dixit	Jr. Technical Assistant
17.	Mr. Vivekanand Sinha	Comp/ Data Processer
18.	Mr. Gaj Raj Singh	Junior Engineer
19.	Mr. Durgesh Kumar	Data Processor/Data Operator
20.	Mr. Santosh	Data Processor/Data Operator
21.	Mr. Shailendra Singh	Technical Assistant/Data Processor
22.	Mr. Kaushal Kumar Singh	Technical Assistant/Data Processor
23.	Mr. Sanjiv Kumar	Technical Assistant/Data Processor
24.	Mr. Santosh Kumar Mishra	Technical Assistant/Data Processor
25.	Mr. Ashutosh Shukla	Technical Assistant/Data Processor
26.	Mr. K. S. Aeron	Accountant
27.	Mr. Rajeev Kumar Bhatia	Accountant
28.	Ms. Shweta Gupta	Accountant
29.	Mr. Vinay	Multifunctional Assistant

S. No.	Name	Designation
30.	Mr. Brijesh Kumar Pandey	Multifunctional Assistant
31.	Mr. Rajendra Singh Bisht	Multifunctional Assistant
32.	Mr. Sandeep Kumar Kesarwani	Multifunctional Assistant
33.	Ms. Asha Shukla	Multifunctional Assistant
34.	Mohd. Saleem Ansari	Multifunctional Assistant
35.	Mr. Gaj Raj Singh	Junior Engineer
36.	Mr. Akhilesh Kumar	Junior Engineer
37.	Mr. Sivakant Tripathi	Junior Engineer
38.	Mr. Sarvesh Kr. Mishra	Library Information Assistant
39.	Mohd. Izhar	Compounder
40.	Mr. Vinod N. Tripathi	Compounder
41.	Mr. Rahul	Executive Assistant
42.	Mr. Subhash Kumar	Care Taker
43.	Mr. Pankaj Srivastava	Lab. Assistant
44.	Mr. Girish Kumar Dixit	Lab. Assistant
45.	Mr. D. N. Shukla	Computer Assistant
46.	Mr. N. K. Tripathi	Computer Assistant
47.	Mr. Raj Kumar	Driver
48.	Mr. Satish Kumar	Driver
49.	Mr. Swatantra Kr. Dwivedi	Attendant

Annexure – 08

Consultants

1.	Sri H.D. Tiwari	Advisor (Finance)
2.	Sri Govind Saran	Legal Counsel
3.	Sri S.C. Bose	Enquiry Officer
4.	Sri S.K. Khanna	Advisor (Technical)
5.	Sri S.C. Singhal	Advisor (Technical)
6.	Sri S.C. Khare	Accounts Officer
7.	Dr. R. Dayal	Chief Medical Officer
8.	Dr. M.D. Mishra	Medical Officer
9.	Dr. Sonia Agrawal	Medical Officer
10.	Dr. K.S. Pandey	Homoeopath
11.	Dr. Kaushlesh Dwivedi	Medical Officer
12.	Dr. Praveen Singh	Medical Officer
13.	Dr. Pritima	Medical Officer
14.	Dr. Veer Vikram Singh	Medical Officer (RGIIT-A)