

1. Introductory

1.1 THE CHANCELLOR'S PROFILE

H.E. Hon. Prof. Goverdhan Mehta **National Research Professor**

Hon'ble Professor Goverdhan Mehta is a leading researcher in the area of Chemical Sciences and presently he is a National Research Professor and Lilly-Jubilant Chair Professor at the University of Hyderabad. He obtained his PhD from Pune University and carried out postdoctoral research at Michigan and Ohio State University. He started his professional career at IIT Kanpur, then moved to University of Hyderabad where he became the Vice Chancellor during the period 1994-1998. Subsequently, he served as the Director of IISc, Bangalore for seven years (1998-2005). He remained attached with the Department of Organic Chemistry at IISc as CSIR Bhatnagar Fellow (2005-2010).

Hon. Prof. Mehta has made wide ranging research contributions in organic chemistry that encompass synthesis of biologically active and architecturally challenging natural products, creation of new and aesthetically pleasing molecular entities and incisive probing of stereo electronic effects. His forays into synthesis have been marked by brevity, conceptual novelty and originality and his flair for devising simple solutions to complex and challenging problems of contemporary interest in organic synthesis have drawn attention internationally. In addition, he has made significant contribution to science education, science policy and planning and management of higher education in India.

Hon. Prof. Mehta is a Fellow of the Royal Society (FRS) and a Foreign Member of the Russian Academy of Sciences. He is also a Fellow of all the three Science Academies in India and Third World Academy of Sciences and was the President of INSA. He is a recipient of Padma Shri from the President of India and has been conferred with "Chevalier de la Legion d'Honneur" by the President of France. He had been offered several Visiting and Guest Appointments in leading Universities, has received over 30 medals/awards and numerous Honorary Doctorate degrees.



1.2 THE CHANCELLOR'S MESSAGE

Indian Institute of Information Technology, Allahabad has registered its phenomenal rise in the global academic arena during short span of its life since inception in 1999. As in the wake of IT revolution sweeping the lives and destinies of developed nations, this Institute was established 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 conceived 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. Indeed, it has been a bold signature of GoI, MHRD as a consequence of recommendation of Rame Gowda Report on the National Task Force constituted by the then Prime Minister.



As Chancellor of IIIT-A, I have the proud privilege to mention here that the Institute has accredited itself with enviable 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 promise and poise for brighter tomorrow.

I am happy to note that IIIT-A is bringing out its Annual Report of the year 2013-2014 for submission before the Hon'ble Parliament through the Govt. The Report reflects the academic pursuits and achievements of the present as also its vision 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 on the initiative of GoI, MHRD and DST by organizing a series of Science Conclave of Nobel Laureates and world renowned academician and scientists during the last seven years 2008-2014. I wish this noble venture of the Institute to be parallel to the Lindau effect of the Nobel Laureates efforts for the cause of general sciences.

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

Prof. Goverdhan Mehta



1.3 THE DIRECTOR'S REPORT

The year of 2013-14 ushered the Institute in its fifteenth year of existence after its inception on August 12, 1999 as a consequence of recommendation of the Rame Gowda Committee Report constituted for establishing an Indian Institute of Information Technology at Allahabad as per 75th recommendation of the National Task Force on IT and related sciences. Starting from a humble student strength of 60 for B.Tech (IT), the Institute has now on its rolls 2200 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 in national and international organization of repute .Apart from the world –class academics in various disciplines of knowledge

The Institute has had industrial collaborations of its academic pursuits with renowned national and international organizations 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 collaborative organizations of the Institute are Corinex Canada, TCS, ISRO, Zensar, IBM, Maple Leaf, ALIMCO etc. Further, centers 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. These collaborations have given excellence and international recognition to its academics.

The Institute has had prime concern to enlarge 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 eminence. Alongwith its curricular academics, the Institute has been undertaking Projects covering a variety of subjects of national and international imports. By the year 2013-2014, the Institute has completed a number of projects and has had 30 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. This Annual Report incorporates these academic accomplishments of the Institute described and inserted at various places.



The unimaginable destruction debilitation and despondence brought about as a consequence of the Second World War resulted in global averseness and regression in The Studies of general sciences .At the initiative of GoI, MHRD and DST the Institute under took the onerous task of promoting studies of general sciences in India. On the pattern of the initiatives taken by the organization of Nobel Laureates at Lindau in Germany and started organizing Science Conclave of Nobel Laureates and renowned national and international Scientists since the year 2008.

Since then, the Institute has hosted successively six 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, ASEAN and African Countries continuing the string, the Institute organized 6th Science Conclave during December 8-14,2013 with commendable success and grandeur.

In order to fulfill the essence of the mission of reducing technological imbalances in this region of the country, the Institute 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. Further 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.

During the year 2013-14, The Institute has organized a number of national and international workshops, seminars and discourse of the eminent personages in its bid to reach the benefits of e-content of IT in academics, good governance, agricultures medicine health and health care and environment, short descriptions of which are embodied in the Annual Report.

Director



1.4 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.



1.5 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 as ended wide UGC (Institutions Deemed –to be Universities) Regulation, 2014.

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 Constitution of IIIT-A Society as approval by the Government is given in **Annexure - 01**.

The Board of Management (B.O.M.)

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. A List of Members during the period is given as **Annexure - 02**.



The Academic Council (A.C.)

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 Members of Academic Council during the period is given as **Annexure - 03**.

The Finance Committee (F.C.)

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 Members of Finance Committee during the period is given as **Annexure - 04**.

The Building & Works Committee (B.W.C.)

- (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.

A List of Members of Building & Works Committee during the period is given as **Annexure - 05**.



2. The Administration

(As in March 2014)

2.1 Academic Departments

- 1. IT Division**
- 2. Electronics and Microelectronics Division**
- 3. Management and Cyber Law Division**
- 4. Applied Science and IRCB Division**

These Division plan their academic activities jointly and severally under the guidance and direction of Dean(Academic) 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.

2.2 Deans/Faculty Coordinators

Prof. G.C. Nandi, Dean (Academic)

Prof. O.P. Vyas, Dean (R&D)

Prof. B. R. Singh, Faculty Coordinator (Electronics)

Dr. Manish Goswami, Faculty Coordinator (Electronics)

Dr. Shekhar Verma, Faculty Coordinator (IT)

Dr. Pawan Chakraborty, Faculty Coordinator (IT),

Dr. Madhvendra Mishra, Faculty Coordinator (Management)

Dr. Vijayshree Tewari, Faculty Coordinator (Management)

Dr. B. S. Sanjeev, Faculty Coordinator (Applied Science & IRCB)

Dr. Ashutosh Mishra, Faculty Coordinator (Applied Science & IRCB)

Dr. Vijay Chaurasiya, Faculty Coordinator (MSCLIS)

Dr. S. Venkatesan, Faculty Coordinator (MSCLIS)

2.3 Wardens/Student Counselor

Dr. Vijayshree Tewari (Student Counselor)

Dr. K. P.Singh, Warden (Boys' Hostel 1)

Dr. Akhilesh Tiwari, Warden (Boys' Hostel 2)

Dr. Amit Prabhakar, Warden (Boys' Hostel 3)

Dr. T. Pant, Warden (Boys' Hostel 4)

Dr. Ranjana Vyas, Warden (Girls' Hostel 1)

Dr. Nidhi Mishra, Warden (Girls' Hostel 2)

Dr. Sangeeta Singh, Warden (Girls' Hostel 3)

2.4 Proctorial Board

Dr. Vijay Chaurasiya, Chief Proctor

Dr. Rajat Singh, Assistant Proctor



Mr. Satish Kumar Singh, Assistant Proctor
Dr. Satyavani Guttula, Assistant Proctor

2.5 Special Functionaries

Prof. U.S. Tiwary, Chief Vigilance Officer (CVO)
Prof. Sudeep Sanyal, Grievance Officer
Dr. Shirshu Verma, Professor In-Charge, Placement (B.Tech, M.Tech & MBA)
Dr. Pavan Chakraborty, Faculty In-charge (Ph.D. Cell)
Dr. Neetesh Purohit , Faculty In-charge (Library)
Dr. Vijay Chaurasiya, Faculty In-Charge (Exam Cell)
Dr. Abhishek Vaish, Faculty In-Charge, Placement (MS)
Dr. Manish Kumar, Faculty In-charge (Maintenance)
Dr. K. P. Singh (International Relations)
Dr. Sanjai Singh, Faculty In-Charge (RGIIT Amethi)

2.6 Officers

Dr. Asheesh Kumaar, Deputy Registrar (Admin.)
Dr. Seema Shah, Deputy Registrar (E)
Mr. H.D. Tewari, Advisor (Finance)
Mr. S.C. Khare, Accounts Officer
Mr. L.N. Sharma, Security Officer
Mr. K.K. Tiwari, Assistant Registrar (F)
Mr. R. Banerjee, Assistant Registrar (Exam)
Mr. Mithilesh Mishra, System Analyst
Mr. Pankaj Mishra, Public Relation Officer / Hindi Officer



3. The Academics

3.1 Student Profile

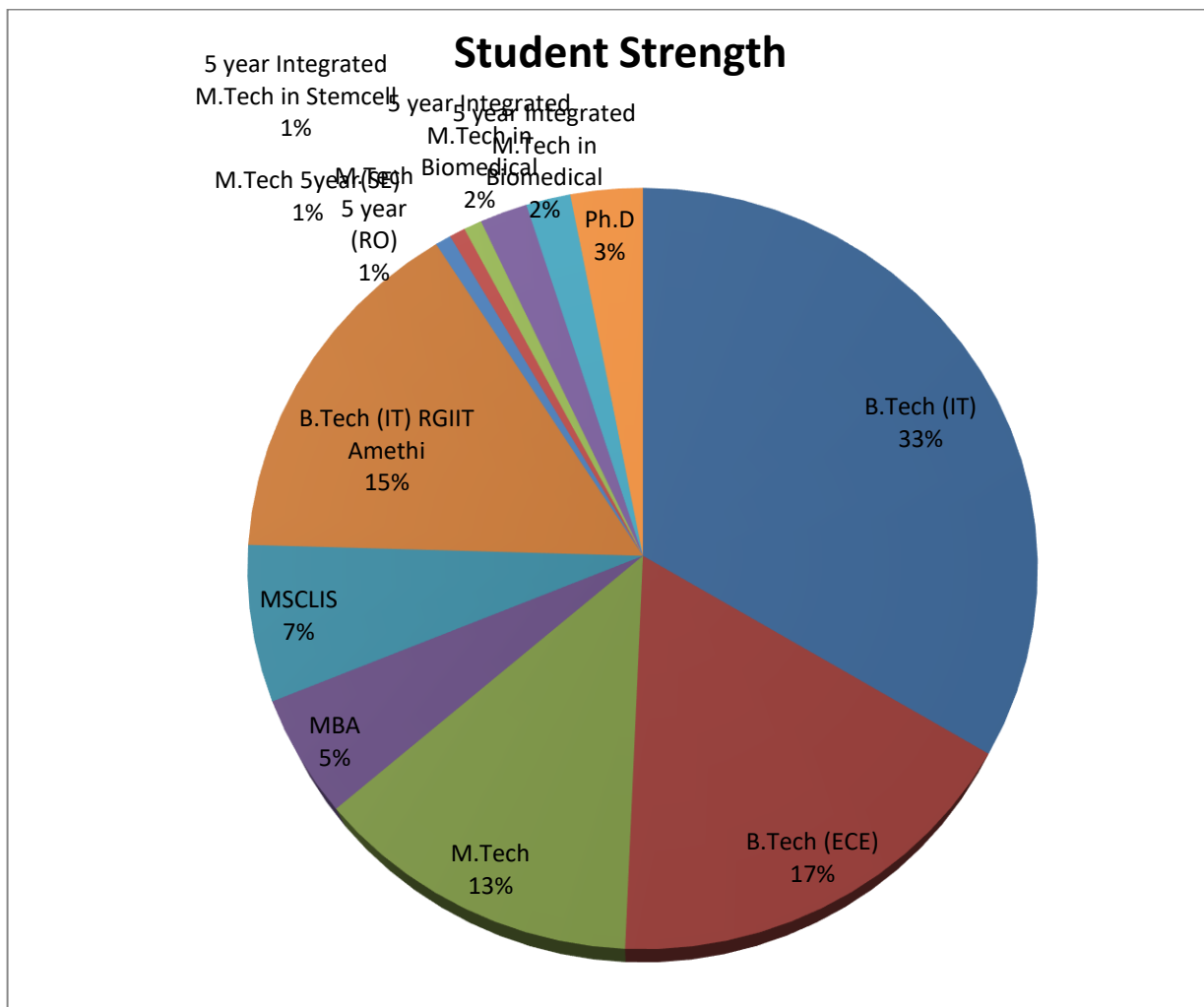
Course	Year	Total no. of Student
B.Tech (IT)	2013	195
	2012	194
	2011	184
	2010	176
	Total	749
B.Tech (ECE)	2013	92
	2012	95
	2011	95
	2010	101
	Total	383
M.Tech	2013	145
	2012	146
	Total	291
MBA	2013	47
	2012	67
	Total	114
MSCLIS	2013	73
	2012	75
	Total	148
RGIIT B.Tech (IT)	2013	85
	2012	92
	2011	91
	2010	78
	Total	346
M.Tech 5year(SE)	2013	15
M.Tech 5 year (RO)	2013	15
5 year Integrated M.Tech in Stemcell	2013	17
5 year Integrated M.Tech in Biomedical	2013	45
5 year Integrated M.Tech in Biomedical	2012	42
Ph.D	Up to 2013	68
Total		2233



3.1.1 Intake of the Year (Admission Status)

Course	Year	Total no. of Student
B.Tech (IT)	2013	195
B.Tech (ECE)	2013	92
M.Tech	2013	145
MBA	2013	47
MSCLIS	2013	73
RGIIT	2013	85
M.Tech 5year(SE)	2013	15
M.Tech 5 year (RO)	2013	15
5 year Integrated M.Tech in Stemcell	2013	17
5 year Integrated M.Tech in Biomedical	2013	45

3.1.2 Total Strength



3.2 THE ACADEMIC PROGRAMS

The Institute has been conceived with the ambitious objectives of developing professional expertise and skilled manpower in Information Technology (IT) and related areas. As an apex nucleating institute in the area of IT, the establishment of IIIT-A, is a major step of Govt. of India towards strengthening the indigenous capability necessary for exploiting profitably and harnessing multi-dimensional facets of IT at all levels, and attaining expertise to enable the country to emerge as a leading player in the global arena

A modular course design, along with several opportunities for industry training, gives students the freedom to tailor their learning experience. The grading system is broadly based on the pattern of other IITs. With regular sporting, cultural and other extracurricular activities an IIITian has opportunities to develop multiple facets of his personality and achieve excellence in varied fields.

The Courses of the Institute have been designed with latest operational flexibility in syllabus so as to be at par to the need of the society.

The Institute conducts the following Undergraduate and Postgraduate Courses:

Course offered by the Institute	
UG	Bachelor of Technology in Information Technology (B.Tech - IT)
	Bachelor of Technology in Electronics & Communication Engineering (B.Tech - ECE)
PG	Master of Technology (M.Tech) in Information Technology (IT) -
	1) Wireless Communication Engineering (WCE)
	2) Software Engineering (SE)
	3) Bioinformatics (BI)
	4) Intelligent Systems (IS)
	5) Human Computer Interaction (HCI)
	6) Robotics (RO)
	7) M.Tech(Cyber Law and Information Security)
	8) Microelectronics (MI)
	5- Year Dual Degree Program B.Tech - M.Tech
	1) Wireless Communication Engineering (WCE)
	2) Software Engineering (SE)
	3) Bioinformatics (BI)
	4) Intelligent Systems (IS)
	5) Human Computer Interaction (HCI)
	6) Robotics (RO)
	7) M.Tech(Cyber Law and Information Security)
	8) Microelectronics (MI)
	9) MBA
	5-Years Integrated M.Tech in Bio-Medical Engineering [M.Tech (BM)]
Master of Business Administration in Information Technology [MBA(IT)]	
Ph.D.	
Minimum 4-Year Dual degree M.Tech - Ph.D & MBA- Ph.D	



Ph.D.	1)	Wireless Communication Engineering (WCE)
	2)	Software Engineering (SE)
	3)	Bioinformatics (BI)
	4)	Intelligent Systems (IS)
	5)	Human Computer Interaction (HCI)
	6)	Robotics (RO)
	7)	M.Tech(Cyber Law and Information Security)
	8)	Microelectronics (MI)
	9)	MBA

BACHELOR OF TECHNOLOGY - Information Technology and Electronics & Communication Engineering (IT and ECE)

IIIT-A offers a B.Tech Degree in Information Technology and Electronics & Communications Engineering. Entrance to the course from year 2003 is through the all-India exam conducted by CBSE.

This course is arguably one of the best in the country in the field of information technology and electronics & communications engineering. Its greatest strength is its adaptability to the changing industry requirements. A student here is not only learning the newest technologies, but is also given ample industry exposure.

Admission Procedure

Admissions to the four year B.Tech Program in both the branches (IT & ECE) of the Institute is made through All India Engineering Entrance Examination by appropriate bodies, as decided by Govt. of India from time to time. Currently, the examination is conducted by CBSE under the name and style of JEE (Main). Official Notification of this examination is given wide publicity through national dailies during September – December every year. Application forms-cum-Brochure are made available throughout the country through various Banks. The examination is scheduled usually in May the following year and held at several centers spread over the entire length and breadth of the country, including J&K and NE states.

Based upon the merit in the written examination, Central Counseling Board of JEE (Main) invites candidates for counseling at selected centers, closes to the respective home places of candidates & seats for various participating institutions are allotted, based upon individual merit.

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.
- 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.

Electronics and Communication Engineering

Electronic engineering as a profession sprang from technological improvements in the telegraph industry in the late 19th century and the radio and the telephone industries in the early 20th century. People were attracted to radio by the technical fascination it inspired, first in receiving and then in transmitting.

The B. Tech. degree course in Electronics and Communication Engineering imparts strong theoretical foundations and practical learning to its graduates on electronic devices as well as rigorous training in research, design, and development of such devices, and their broad-based applications. The course offers a wide spectrum of elective subjects that cover the application of sophisticated and cutting-edge technologies for device design such as satellite transponder technology and signal processing chip technology. In addition to common core subjects offered in the course other elective subjects aim to sharpen the academic learning in graduates on recent advances and innovations such as Sensor Networks, Wavelength Division



Multiplexing (WDM), Wavelet Transformations, Digital Signal Processing (DSP), Data and Image Compressions, and Satellite Communication.

5-YEARS INTEGRATED M.TECH IN BIO-MEDICAL ENGINEERING [M.TECH (BM)]

Five Years Integrated Programme leading to M. Tech (Biomedical Engineering) was started in July 2012 with intake of 45 students. The course structure for the ten semesters is given below. The course was designed to nurture the field of biomedical engineering through knowledge of information technology in emerging areas such as diagnostics, health monitoring, tools and software for health sector, cognitive sciences, genetic based preventive medicine, virtual human, drug design and development, support system for critical clinical decisions, electronic database system of health, computerized medication environment, image archiving and communication system and image processing.

Relevance and Importance of 5 year Integrated M.Tech Biomedical Engineering Course

Diagnostics: Image processing, data mining and warehousing would be useful to diagnose various diseases. The data from instruments such as MRI, X-Ray, CT scan, PET Scan, Ultrasound Medical Imaging, etc., are being used for developing more accurate diagnostics.

Health Monitoring: Health monitoring would also benefit from research in areas like wireless sensor networks so that the real time information of patients could be monitored, and acted upon in case of emergency. This will help in realization of hospital-at-home concept to the nearby region.

Tools and Software for Health Sector: Various tools and software for hospital management and health sector along with telemedicine and teleconference facilities could be developed and used more effectively for rural India.

Cognitive Sciences: Applied research in cognitive and behavioural science would be useful to develop state-of-the-art tools and to understand the working of human brain and behavior.

Genetics based Preventive Medicine: Research in genomics and proteomics (Bioinformatics) could be used to understand genetic basis of various diseases. This would help in developing preventive medicine to contain or to eliminate various genetic disorders and diseases.

Virtual Human: The Virtual Physiological Human (VPH) is a methodological and technological framework that, once established, will enable collaborative investigation of the human body as a single complex system. The Virtual Physiological Human (VPH) is a framework which aims to be descriptive, integrative and predictive;

Image Processing: In India image processing is very important, for example, at present it is very difficult to distinguish between X-rays obtained for following diseases: Pneumonia, Tuberculosis, Lung Cancer.

This position could be modified and qualitatively improved through image processing with enhanced techniques available in information technology. This is relatively a new area but has wide applications in medical image processing.



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 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 field of Cyber Law and Information Security was highly desired by the industry with a huge demand of qualified professional in the area.
- 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.

MASTER OF BUSINESS ADMINISTRATION IN INFORMATION TECHNOLOGY MBA (IT)]

- MBA in information Technology is presently being offered in a very few institutions of India, with IIIT-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 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.

Doctoral Program (Ph.D)

Students may enroll in the doctoral program directly after B.Tech or after M.Tech. 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.

The Institute as at present has 20 R&D projects of far-reaching consequences having bearings on latest innovations, inventions and other academic concepts. Besides, the Institute has academic collaboration with 18 National and International Institutions. There are eight Industrial collaborations such as Corinex Canada, TCS, ISRO, Zensar Pune, Maple Leaf, ALIMCO, etc, and eight Centers of Excellence at the Institute such as IRCB, Indo-US Centre for language technology, Indo-Danish Centre for Wireless Sensors and Senses, Patent Referral Centre and S&T Discovery Park, etc.

A Communication Skills Laboratory assists the students from different socio-economic background 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.

The Institute academic staffs have published as many as 1550 Books & Papers having high impact factor and citations. Patents granted are 02 and filed ones are 10 while there are 07 copyrights and conferences held/attended are 386. 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.

3.3 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



4. The Faculty Update

4.1 Faculty Profile

Prof. G.C. Nandi
Professor



Research Interests:

Robotics including Humanoid robotics, Artificial Intelligence, Soft Computing (Fuzzy Logic, ANN, Genetic Algorithm, HMM), Artificial Life Simulations (Biologically Inspired Optimization Algorithms), Computer Controlled Systems.

Academic background

- Graduated (BSME) from Bengal Engineering College, Sibpore, Calcutta University, in 1984.
- Post Graduation (MSPE) from Jadavpur University, Calcutta in 1986.
- Obtained Ph.D. Degree from Russian Academy of Sciences, Moscow in 1992.

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.

CURRENT POSITION

Senior most Professor and Dean (Academic Affairs) of Indian Institute of Information Technology, Allahabad

EXPERIENCE

I have 30 years of experience (as on 2014) in n the area of teaching and research

MEMBERSHIP OF PROFESSIONAL ORGANISATIONS

- Senior Member of ACM, USA
- Senior member of IEEE, USA
- Founder Chairman, ACM-IIT-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 of Mechanical, Manufacturing and Robotics.
- Former Member of Robotics and Remote system division of American Nuclear Society, USA.
- Former Member of SPIE: The International Society for Optical Engineering.
- Member of Robotics Society of India.
- Member of IEEE Robotics and Automation Society
- Member of IEEE Computer Society

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)

Research Publications of the year

- S C Pandey and G C Nandi, TDS based framework for mining the induction rules, Journal of computational sciences, Vol. 5, issue 2, pp. 184-195, Elsevier, 2014. (Impact Factor:1.567) (SCI Journal)
- S C Pandey, G C Nandi, Convergence of knowledge, nature and computations: a review, soft computing , springer, 2014. DOI 10.1007/s00500-014-1510-7. (SCI Journal) (Impact Factor: 1.304).
- A. Nandy, P. Chakraborty, G. C. Nandi "Person Tracking and Segmentation for Human Gait Biometric System" – In International Journal of Biometrics, Inderscience Publisher, vol 6, 3, pp 205-230, 2014.
- A. Nandy, R. Chakraborty, P. Chakraborty, G. C. Nandi "A novel approach to Human Gait Recognition using possible speed invariant features" – In International Journal of Computational Intelligence Systems, Taylor and Francis Publisher, Volume 7, Issue 6, 2014, pp 1174-1193.



- S. Bhowmick, A. Nandy, P. Chakraborty, G. C. Nandi.: "A Speed Invariant Human Identification System using Gait Biometrics" In International Journal of Computational Vision and Robotics, (IJCVR), InderScience Publishers, vol.4, Issue 1, pp.3-22, 2014.
- A. Nandy, S. Bhowmick, P. Chakraborty, G. C. Nandi.: "Gait Biometrics: An Approach to Speed Invariant Human Gait Analysis for Person Identification"- Proceedings of 2nd International Conference on Soft Computing for Problem Solving SocPros-2012 Jaipur in the proceeding of AISC Series of Springer, Vol. 236, pp.729-737, 2014.
- S. Bhowmick, A. Nandy, P. Chakraborty, G. C. Nandi, "A Speed Invariant Human Identification System using Gait Biometrics" – In International Journal of Computational Vision and Robotics, (IJCVR) 2013, InderScience Publishers.
- Avinash Kumar Singh and G.C.Nandi, "A Real Time Parallel Component based Face Recognition for Human Robot Interaction", Proceedings of 7th IEEE International Conference on Contemporary computing (IC3 2014).
- Seema Mishra, G. C. Nandi, "Hierarchy of Community and Link Analysis", "Second International on Intelligent Interactive Technologies and Multimedia, Springer Communications in Computer and Information Science, Volume 276, 2013, pp 246-254.
- Seema Mishra, G C Nandi, "Link Mining Using Strength of Frequent Pattern of Interaction" in International Conference on Advanced Computing, Networking, and Informatics(ICACNI 2013), Springer AISC Central Institute of Technology, Raipur, Chhattisgarh, India.
- Avinash Kumar Singh, Piyush Joshi, G.C.Nandi, "Face Recognition with Liveliness Detection using Eye and Mouth Movement," Under publishing in the proceeding of 15th IEEE conference on advanced computing technologies (ICACT-2013).
- Avinash Kumar Singh, Piyush Joshi, G C Nandi, "Face Liveliness Detection through Face Structure Analysis", in International Journal of Applied Pattern Recognition , InderScience publisher(Accepted)
- Seema Mishra, G C Nandi "Link Mining A Computer Vision and Pattern Mining Approach", 80(6): 41-47, 2013, published by foundation of computer science, New York.
- Neha Baranwal, Ganesh Jaiswal, G.C.Nandi "A speech recognition technique using MFCC with DWT in isolated hindi words" in the International conference on advance computing, networking and informatics(ICACNI 2013)(Springer).
- Neha Baranwal, Shweta Tripathi, G.C. Nandi "A Speaker Invariant Speech Recognition Technique Using HFCC Features in Isolated Hindi Words." "International Journal of Computational Intelligence Studies" InderScience publisher (Accepted)
- Shweta Tripathi, Neha Baranwal, G.C.Nandi "A MFCC Based Hindi Speech Recognition Technique Using HTK Toolkit" in the 2nd IEEE International conference on Image Information processing (ICIIP 2013) (Accepted).
- V.B. Semwal, A. Bhushan and G.C. Nandi- "Study of Humanoid Push Recovery Based on Experiments", International Conference on control, automation, Robotics & Embedded System- CARE13, 2013- IIITDM Jabalpur (Accepted).
- V.B. Semwal, S.A.Katiyar, P.Chakarvarty and G.C. Nandi- "Biped Model Based on Human Gait Pattern Parameters for Sagittal Plane Movement", International Conference on control, automation, Robotics & Embedded System- CARE13,2013- IIITDM Jabalpur (Accepted).

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.

List of selected Invited talks delivered:

- Delivered a talk on Biped Locomotion Control with reference to Push Recovery of Humanoid Robots at the 6th India-Korea Joint Workshop on Robotics, October 30-31, 2013, Juju, The republic of Korea.
- Delivered an invited talk on Locomotion Control of Biped Humanoids, IIT, Indore, 16th December, 2013.



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
Professor



Research Interests:

Intellectual Property Right, Patents & Copyright, Enterprise Resource Planning

Prof. R.C. Tripathi

Designation: Professor

Academics:

1. M.Sc (Physics with Electronics) in 1967 from Allahabad University
2. Ph.D. in Solid State Physics in 1972 from Allahabad University
3. DIQC, The Bouwcentrum, Rotterdam, The Netherlands in 1975
4. Member IEEE & ACM U.S.A.
5. Fellow of (i) IETE, (ii) Society for Information Science and (iii) Authors Guild of India, New Delhi

Teaching Experience: 34 Years

Research Experience: 37 Years

Academic Achievements

- Ph.D. scholars being supervised include: Mr. Ranjeet Kumar- RS98, Mr. Pawan Sharma- RS102, Ms. Akriti Nigam- RS103, Mr. Vivek Kumar Singh- RS117.
- Continued as Incharge IPR cell upto 19-02-2014.
- Incharge Image Processing Lab (SILP) in CC-2 upto 17-01-2014
- Coordinated M.Tech HCI branch upto 17-01-2014

Courses taught during the year:

i) July 2013-Dec 2013

- ~ Information Retrieval (IR) to B.Tech (IT) yth Sem and M.Tech- HCI,IS ... 3rd Sem
- ~ Intellectual Property Rights (IPR) to M.Tech all branches of 3rd Sem
- ~ Data & Network Security (DNS) to B.Tech (IT) yth Sem

ii) Jan 2014- July 2014

- ~ Intellectual Property Rights (IPH) to B.Tech IT & ECE VI Sem
- ~ Data & Network Security (DNS) to B.Tech (IT) 6th Sem

Publications:

A: Journal and International Conference Papers

1. Pawan Sharma and R.C.Tripathi, "Patent Database: A Methodology of Information Retrieval from PDF"- International Journal of Database Management Systems (IJDMS) Vol.5, No.5, pp 9-16, October 2013.
2. Sumit Srivastava and R. C. Tripathi "Real Time Mono-vision Based Customizable Virtual Keyboard Using Finger Tip Speed Analysis"- 15th International Conference, HCI International 2013, Las Vegas, NV, USA. Springer Lecture Notes in Computer Science Volume 8007,2013.
3. Akriti Nigam, Rupesh Yadav, RC. Tripathi, "Image Retrieval System for Composite Image Using Directional Chain Codes", International Journal of Advanced Science and Technology, Vol 58, pp 51-64,2013.
4. Akriti Nigam, Prateek Singh, RC. Tripathi, "Robust Offline Signature Identification and Verification System using Directional Chain Codes", International Conference on Computing Sciences (ICCS-2013), Lovely Professional University, Jalandhar, November 2013.
5. Abhishek Verma, Vivek Kumar Singh ,RC.Tripathi, "A Passive Approach to Detect Copy-Move Forgery in Digital Speech Audio Signal" ", International Conference on Computing Sciences (ICCS-2013), Lovely Professional University, Jalandhar, November 2013.
6. Akriti Nigam, Ajay Indoria, RC. Tripathi, "Fuzzy Clustering of Image Trademark Database and Pre processing using Adaptive Filters and Karhunen Loeve Transform", International Journal of Image and Graphics, Vol 13, Pages 15, 2013.

Participation in Training Seminars / Workshops / Conferences

1. In-charge of the Site Seeing Committee in the 6th Science Conclave held during Dec 08- 14, 2013 in IIIT-A.



2. Organized a three-day national workshop of three National Science Academies of India on "Galois Theory, Finite Fields and Cryptography" organized at Indian Institute of Information Technology Allahabad and National Academy Of Science Allahabad from 24th - 26th June 2013.

Work done in Projects undertaken in the Institute

a) Coordinated as the Co- investigator of the "Technology Incubation and Development of Entrepreneurs (TIDE)" scheme of DeitY, MCIT, Gol, New Delhi for which Rs 40 lakhs was received earlier as the first installment in the year 2008-2009, out of approved outlay of Rs 155 lakhs over duration of 4 years. The project has been progressively extended without any financial enhancement upto March 31, 2017.

Research & Development (year 2013-2014)

- a) Patents filed: A Patent filed earlier, bearing Number **12941DELI2012**, on 10.04.2012 to Delhi Patent office entitled "A personal Human Computer Interaction System based on Eye Gaze Tracking"- Santosh Kumar Barnwal, R.C.Tripathi and M.D.Tiwari- IIIT-Allahabad, was pursued and request for its examination was filed.
- b) Another Patent titled "A method and apparatus for similarity detection between any two documents"- Siddharth, R.C.Tripathi and M.D.Tiwari- IIIT-Allahabad, was filed in early Jan 2013 and allotted Number as PAA 1791 by the attorney.
- c) Visited M/s Mazumdar and Company, Kolkata on the approval of the Director IIIT-A, during April 27 to May 1st, 2014 to pursue pending 3 patents of IIIT-A.

Extra-Curricular activities (July 2013-Jan 2014)

- Coordinated plagiarism check up of all research papers, PhD Thesis, M.Tech Thesis etc for entire IIIT-A, upto 19th February, 2014. About 200 reports were generated and about 10 worst cases were detected, for which plagiarism got removed to save name and fame of IIIT-A
- Chaired Grievance Redressal Committee of IIIT-A upto 28-01-2014

Awards / Honors / Recognition received

- Member of the following bodies of IIIT-A:
 - i) Senate Committee/ Academic Council
 - ii) Research Degree Committee
 - iii) Buildings and Works Committee

Any other Achievements / Distinctions

- 1) Coordinated HCI (Human Computer Interaction) branch of M.Tech (IT) programme at IIIT-Allahabad upto 17-01-2014.
- 2) Discharged duties of Students' Counselor and Officiating Dean (Students' Affairs) at IIIT-A. upto 16-01-2014.
- 3) Obtained Certificate of Appreciation for the working as member of organizing committee 6th Science Conclave 2013.

Prof. U.S. Tiwary
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

Subjects	Particulars
Full name	Prof. Uma Shanker Tiwary, FIETE, SMIEEE
Academic Designation and Qualification	1. B.Tech (Electronics Engg.) -1983, Institute of Technology, B.H.U., Varanasi, India. 2. Ph.D. (Electronics Engg.)-1991, Institute of Technology, B.H.U., Varanasi, India.
Publications	Names of Books published a) Natural Language Processing and Information Retrieval, Tanveer. Siddiqui and U. S. Tiwary, Oxford University Press, 2007. Fifth impression, 2014. Publications of Articles / Research Papers in Journals/Magazines: b. International Journals and Proceedings- (i) Gyanendra Verma and Uma Shanker Tiwary, "Multimodal Fusion Framework: A Multiresolution Approach for Emotion Classification and Recognition from Physiological Signals."NeuroImage (Impact Factor: 6.25). 11/2013; DOI:10.1016/j.neuroimage.2013.11.007 Source: PubMed



<p>Participation in Seminars/Workshops/Conferences/Symposiums etc.</p>	<p>a. Publication in International Proceedings and Conference-</p> <ul style="list-style-type: none"> (i) Anshuman Dhuliya, Uma Shanker Tiwary, "An associative classifier based on the concept of analogy and human learning", Publication date: 2013/11/23, Conference-Multimedia, Signal Processing and Communication Technologies (IMPACT), 2013, Publisher : IEEE (ii) Sudhakar Mishra , Uma Shanker Tiwary, "Hear rate measurement using video in different user states for online HCI applications, Conference:International Conference on Intelligent Human Interaction, IHCI 2014, Paper accepted : 9 sept 2014 (iii) Utkarsh Agrawal , Soumava Roy , Uma Shanker Tiwary, "Wavelet based image de-noising using interval type-2 fuzzy set and multilevel adaptive thresholding" Conference : International conference on soft computing and machine intelligence , ISCM I 2014, Accepted : 28 Jul 2014 (iv) Mohit Kumar and Uma Shanker Tiwary." Hybrid Chunk-based Machine Translation System for Hindi to English Trans." 11/2013; In proceeding of: MICAL, Mexico. (v) Malay Singh, Uma Shanker Tiwary and Tanveer J. Siddiqui, "A Speech Retrieval System Based on Fuzzy logic and Knowledge-base Filtering", 11/2013; In proceeding of: IMPACT 2013, Aligarh, India. (vi) Anshuman Dhulia and U. S. Tiwary," An Associative Classifier Based on The Concept of Analogy and Human Learning." 11/2013; In proceeding of: IMPACT 2013, Aligarh, India. <p>Participation in Seminars/Workshops/Conferences:</p> <ul style="list-style-type: none"> (i) Coordinator of the Interactive Session committee (Engineering branch) in the 6th Science Conclave held during Dec 08- Dec 14, 2013 in IIIT-A. (ii) Delivered an invited lecture on 'Type 2 Fuzzy sets and their applications' in the National Workshop on Computational Intelligence in Department of Science, IIT Kanpur during July 2013.
<p>Work done in projects undertaken in the Institute</p> <p>Please see Annexure 1</p>	<p>(i) FIST Project- Devices were purchased from FIST Project and installed in SILP Lab-</p> <ol style="list-style-type: none"> 1. DG5-VHand Data Glove 3.0 (1 Pair): Hand Data Glove is an input device for human-computer interaction worn like a glove. In a Data Glove, five sensor strips captures bending of fingers, and a motion tracker captures the rotation movement of wrist. Thus this device converts hand movement into digital data, which can be recognized as gesture such as Sign Language. Therefore, several Human-computer programs can be developed, which could be controlled through user's hand movements. Several B. Tech and M. Tech semester projects based on this device have been done. 2. Face Tracker Device (1 Qty.): Face Tracker Device converts the movements of parts of a person's face (such as forehead, eyebrow, cheek, lip, Chin etc.) into digital signals using camera and laser light. This digital signal is used to produce computer animation for movies, games, or real-time avatars. Because the motion of computer graphics characters is derived from the movements of real people, it results in more realistic computer character animation. 3. The Mirage Augmented Reality Head-mounted display (1 Qty.): Head-mounted display (HMD) is a Virtual Reality display device, worn on the head that has a small display optic in front of eyes. It allows a computer-generated virtual image to be superimposed on a real-world view. Several student-semester projects based on this device have been done. 4. a) IBM System X3400 Server (4 Qty.) and b) IBM DS3400 FC System Storage (2 Qty.) Servers and Storages are used to store open-source datasets; open-source library; student projects; research papers; courseware materials, such as presentation, demo, video, e-book etc. and provides download facility to students via ftp service. 5. SR Research EyeLink 1000 Eye Tracker (1 Qty.): EyeLink 1000 Eye tracker is a video input based system, which measures the point of gaze (where one is looking) on a screen. Eye trackers are used in research on the visual system, in psychology, in cognitive linguistics and in product design. Several B. Tech and M. Tech semester projects based on this device have been done and some projects and research works are going on.



	<p>6. Emotive EEG NeuroHeadset (1 Qty): The NeuroHeadset has 14 electrodes as well as a two-axis gyroscope for detecting head movements. The device detects 13 kinds of movement - six directions (left, right, up, down, forward, and "pull/zoom") and six rotations (clockwise/anti-clockwise rotation, turn left and right, and sway backward and forward), plus one other visualization ("disappear"). The angular velocity of one's head can be measured in the yaw and pitch (but not roll) directions by the gyros embedded in the device. Several B. Tech and M. Tech semester projects based on this device have been completed and some projects and research are continue.</p> <p>(ii) A Cheap Neuroprosthetic hand apparatus using a non-invasive BCI A cheap apparatus is presented using a non-invasive BCI (by Emotiv Systems) and a 3D printed prosthetic hand for such specially abled people so that they may be able to perform some specific day-to-day tasks. The choice of the headset was done keeping in mind that it should be cheap, can be positioned by subject itself and can transmit data wirelessly. The apparatus has been tested on amputees and with normal people too using computer-based GUI.</p>
Extra – Curricular activities	<p>(i) Coordinator of the Interactive Session committee (Engineering branch) in the 6th Science Conclave held during Dec 08- Dec 14, 2013 in IIIT-A.</p> <p>(ii) Workshop Chair of IEEE Computational Intelligence Workshop- CIW' 2014 to be held during Oct 13-15, 2014 at IIIT-Allahabad.</p>
Awards/Honours/Recognition received, if any	<p>Professional Awards-</p> <p>(i) Senior Member, IEEE (ii) Fellow IETE (iii) Member CSI</p> <p>Administrative Experience : 19 years ; (i) Chief Vigilance Officer IIIT-A at present. (ii) Expert Member of Selection Committees at various Universities. (iii) Member, Advisory Committee, Centre of Behavioural and Cognitive Sciences (CBCS), Allahabad University. Member of IT Infrastructure Committee, University of Allahabad.</p> <p>Conferences Organized-</p> <p>(i) Program Co Chair: 5th International Conference on Intelligent Human Computer Interaction, 3-5 Dec 2013, Sydney, Australia.</p>
Training Programmes Organized (April 2013- March 2014)	Organizing an IEEE Computational Intelligence Workshop- CIW' 2014 to be held during Oct 13-15, 2014 at IIIT-Allahabad.



**List of Devices (1 to 5) purchased from FIST Project
available in SILP lab, IIIT-Allahabad**



1. DG5-V Hand Data Glove 3.0 (1 Pair):

Hand Data Glove is an input device for human-computer interaction worn like a glove. In a Data Glove, five sensor strips captures bending of fingers, and a motion tracker captures the rotation movement of wrist. Thus this device converts hand movement into digital data, which can be recognized as gesture such as Sign Language. Therefore, several Human-computer programs can be developed, which could be controlled through user's hand movements. Several B. Tech and M. Tech semester projects based on this device have been done.

2. Face Tracker Device (1 Qty.):

Face Tracker Device converts the movements of parts of a person's face (such as forehead, eyebrow, cheek, lip, Chin etc.) into digital signals using camera and laser light. This digital signal is used to produce computer animation for movies, games, or real-time avatars. Because the motion of computer graphics characters is derived from the movements of real people, it results in more realistic computer character animation.

3. The Mirage Augmented Reality Head-mounted display (1 Qty.):

Head-mounted display (HMD) is a Virtual Reality display device, worn on the head that has a small display optic in front of eyes. It allows a computer-generated virtual image to be superimposed on a real-world view. Several student-semester projects based on this device have been done.

4. a) IBM System X3400 Server (4 Qty.) and b) IBM DS3400 FC System Storage (2 Qty.)

Servers and Storages are used to store open-source datasets; open-source library; student projects; research papers; courseware materials, such as presentation, demo, video, e-book etc. and provides download facility to students via ftp service.

5. SR Research EyeLink 1000 Eye Tracker (1 Qty.):

EyeLink 1000 Eye tracker is a video input based system, which measures the point of gaze (where one is looking) on a screen. Eye trackers are used in research on the visual system, in psychology, in cognitive linguistics and in product design. Several B. Tech and M. Tech semester projects based on this device have been done and some projects and research works are going on.

6. Emotive EEG NeuroHeadset (1 Qty.):

The NeuroHeadset has 14 electrodes as well as a two-axis gyroscope for detecting head movements. The device detects 13 kinds of movement - six directions (left, right, up, down, forward, and "pull/zoom") and six rotations (clockwise/ anti-clockwise rotation, turn left and right, and sway backward and forward), plus one other visualization ("disappear"). The angular velocity of one's head can be measured in the yaw and pitch (but not roll) directions by the gyros embedded in the device. Several B. Tech and M. Tech semester projects based on this device have been completed and some projects and research are continue.

Introduction of SILP Lab (#4222)

Speech, Image and Language Processing Lab abbreviated SILP lab, provides facilities to researchers and students to perform research and experiments in computer science and Information Technology. The core area of these research and experiments are:

- (a) Automatic speech and speaker recognition;
- (b) Text to Speech and vice versa conversion;
- (c) Music analysis and retrieval;
- (d) User's Eye movement Analysis for HCI and behaviour recognition;
- (e) Language Processing;
- (f) Document Summarization;
- (g) Virtual reality systems such as Augmented Reality HMD, Face tracker and Hand data gloves;
- (h) Information retrieval;
- (i) Image Processing;
- (j) EEG Signal analysis;
- (k) Video Processing for HCI and visual surveillance;
- (l) Cognitive processing and modelling;
- (m) Affective computing.

All M. Tech students and Research scholars, supervised by Prof. U. S. Tiwary, are the member of this lab. This lab opens 24 X 7 days for research and experiments.

Prof. Om Prakash Vyas
Professor



Research Interests:

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

Academic Achievements

- Dean (R&D) in many policy initiatives of IIIT-A for inculcating research culture
- Contributed as Member Secretary-Academic Council in organizing meetings and all related activities
- One Collaboration proposal between IIIT-A & Technical University of Kaiserslautern (Germany) is under process

Subjects	Particulars
Academic Achievements	<u>Brief Particulars:</u> <ul style="list-style-type: none"> ➤ Dean (R&D) in many policy initiatives of IIIT-A for inculcating research culture. ➤ Served as Member Secretary- IIIT Board of Management. ➤ Served as Member Secretary-IIITA Academic Council in organizing meetings and all related activities.



Publications	<p>PUBLICATIONS DURING THE YEAR</p> <ol style="list-style-type: none"> 1. Bhawana Rudra, O P Vyas. Service Oriented Network Architecture: Significant issues and Principles of Communication. In International Journal of Computational Science and Engineering (IJCSE), Inderscience, July 2013. 2. Bhawana Rudra, A. P. Manu, O. P. Vyas. Exploration of Security Levels for the Flexible Services using SOA Mechanisms. In International Journal of Information Privacy, Security and Integrity (IJIPSI), Inderscience, July 2013. 3. Bhawana Rudra, O P Vyas. Investigation of Security Issues for Service Oriented Network Architecture. International Journal of Security and Communication Networks, Wiley, July 2013. 4. Bhawana Rudra, O P Vyas, Understanding and Mitigating Security issues in Service Oriented Network Architecture. International Journal of Security and Networks (IJSN), January 2014. 5. Bhawana Rudra, Ashok Viswakarma, O P Vyas. Detection and Prevention of DoS attacks in Service Oriented Network Architecture. International Journal of Next Generation Networks. August 2013 6. Bharat Singh, Nidhi Kushwaha, and Om Prakash Vyas. A Feature Subset Selection Technique for High Dimensional Data Using Symmetric Uncertainty. Journal of Data Analysis and Information Processing, July 2014. 7. Nidhi Kushwaha, Raman Goyal, Pramiti Goel, Siddharth Singla, O. P. Vyas, LOD Cloud Mining for Prognosis Model (Case Study: Native App for Drug Recommender System). Advances in Internet of Things, 4, pp.20-28, 2014. 8. Akhileendra Pratap Singh, OP Vyas, Shirshu Verma. Flexible Service Oriented Network Architecture for Wireless Sensor Networks. International Journal of Computers Communications & Control, 9, pp. 610-622, Aug. 2014. (SCI) 9. Bharat Singh, Raghvendra Singh, Nidhi Kushwaha, O. P. Vyas. Advanced Computing, Networking and Informatics-Volume 1. Springer International Publishing, 2014, pp.519-528. 10. Monika Rani, Maybin K. Muyebe, and O. P. Vyas. A Hybrid Approach Using Ontology Similarity and Fuzzy Logic for Semantic Question Answering. Advanced Computing, Networking and Informatics-Volume 1. Springer International Publishing, pp 601-609, 2014 11. Jyothi Pillai , O.P. Vyas and Maybin K. Muyebe. A Fuzzy Algorithm for Mining High Utility Rare Itemsets – FHURI , Int. J. on Recent Trends in Engineering and Technology, Vol. 10, No. 1, Jan 2014 12. Nidhi Kushwaha, O. P. Vyas. Leveraging Bibliographic RDF Data for Keyword Prediction with Association Rule Mining (ARM), Data Science Journal , 13, pp.119-126, 2014. 13. Jyothi Pillai, O. P. Vyas. Exploration of Soft Computing Approaches in Itemset Mining. Emerging Methods in Predictive Analytics: Risk Management and Decision-Making: Risk Management and Decision-Making, 270, 2014. 14. Bharat Singh, O. P. Vyas. A Meta-Heuristic Regression-Based Feature Selection for Predictive Analytics. Data Science Journal, 13, pp.106-118, 2014. 15. Rajesh Mahule, O. P. Vyas. Towards a Scalable Approach for Mining Frequent Patterns from the Linked Open Data Cloud. Advanced Computing, Networking and Informatics-Volume 1. Springer International Publishing, pp.137-144, 2014. 16. Nidhi Kushwaha, O. P. Vyas. SemMovieRec: extraction of semantic features of DBpedia for recommender system. In Proceedings of the 7th ACM India Computing Conference (COMPUTE '14). ACM, New York, NY, USA, Article:13 , 9 pages, 2014. 17. Bharat Singh, Jitendra Singh Shankhwar, O P Vyas. Optimization of Feature Selection method for High Dimensional Data using Fisher Score and Minimum Spanning Tree, In 11th International IEEE Conference INDICON, Pune, Maharashtra, 2014 (Best Paper Award)
Work done in Projects	<ul style="list-style-type: none"> ➤ The ATB (Army Technology Board) was Coordinated as Institute Research project with MCTE- Mhow for development of "Network Simulation Testbed"
Particulars of Academic Work during the year	<ul style="list-style-type: none"> ➤ 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	<ul style="list-style-type: none"> ➤ Served as Chairman/Member of various organizing Committees in 'Science Conclave of Noble Laureates'2012. ➤ Reviewer of many International Conferences and Journals. ➤ Contributed as Professor Incharge (Estate).





Research Interests

Microelectronics, Optoelectronic devices

Publications

4. Publications

4.1 Research Papers

1. Paper(s) Published in Refereed Journals

Full reference of the Paper as:

Title of Paper	Name of the Journal	Place of Publication	Volume & Issue No.	Year	Pages from-to	Impact Factor
Effect of Nitrogen Containing Plasma on Interface Properties of Sputtered ZrO ₂ Thin Films on Silicon	Materials Science in Semiconductor Processing	Elsevier	Volume 19	2014	145-149	1.4
Stress Induced Degradation in Sputtered ZrO ₂ Thin Films on Silicon for Nano-MOSFET'S	Physics of Semiconductor Devices, Environmental Science and Engineering	Springer	Part IV	2014	555-558	1.2
Conduction and Field Induced degradation in Thin ZrO ₂ Films Sputtered in Nitrogen Containing Plasma on Silicon	Journal of Materials Science: Materials in Electronics	Springer	Volume 25 No.3	2014	1583-1588	1.96
Electrical Characterization of the MFeOS and MFeNS Gate Stacks for Ferroelectric FETs	Applied Physics Letter	American Institute of Physics	Volume 104	2014	0929071-4	3.8
Radiation Induced Charge Trapping in Sputtered High-k Dielectric Thin Films on Silicon	IEEE Transactions on Nuclear Science	IEEE	Volume 61 No.4	2014	2397-2401	1.4



2. Paper(s) published in Conferences

Title of Paper Presented	Name of the Conference	Name of the organizing Institution / University	Dates on which the Conference was held	Name of supporting Professional Organization such as IEEE, ACM, AIMA etc.
Effect of X-ray Radiation and Current Stress on Electrical and Reliability Characteristics of High-k thin films	7th ISSS International conference on Smart Materials Structures and Systems.	IISC, Bangalore	08-11 July, 2014	ISSS
Surface passivation properties of Al ₂ O ₃ for enhanced c-silicon solar cell efficiency	International Conference on Energy Efficient LED Lighting and Solar Photo Voltaic Systems	IIT-Kanpur	27-29 Mar., 2014	IETE, Kanpur

Whether proceedings of Conference published (*If so, give details*)

- a. National Journals with full reference as in 4.1 above
 b. International Journals with full reference as in 4.1 above

3. Papers Communicated

Name of the Journal	Place of Publication	Date & Year of expected Publication	Impact factor of the Journal
Ionizing Radiation Effects on Electrical and Reliability Characteristics of Sputtered Ta ₂ O ₅ /Si Interface	Taylor & Francis	Under Review	0.5
On the Surface Passivation of c-Silicon by RF Sputtered Al ₂ O ₃ for Solar Cell Application	Springer	Under Review	1.96

4. Research Projects Awarded in last 5 years

Name of the Funding Agency	Title of Project	Funds allocated & purposes	Duration of Project	PI or Co-PI (<i>If Co-PI, name of the Principal Investigator</i>)
Solar Energy Research Initiatives, DST, New Delhi	Development and application of atomic layer deposition for high efficiency c-Si Photovoltaic solar cells	Rs.216.00 Lacs	3 Years	Prof. B.R. Singh



5. Courses taught in July-December, 2013 Semester / January-June, 2014 Semester

Class	Year & Semester	Subjects taught	No. of lectures taken	Your level of satisfaction of teaching (pl. tick O)
M.Tech III sem. and B.Tech, ECE VII th sem	2013, July-Dec.	MEMS	35+	A- Very good
B.Tech ECE.Vsem	2013, July-Dec.	Power Electronics	35+	
M.Tech I Sem	2013, July-Dec	VLSI Technology	35+	
M.Tech MI IInd sem.	2014, Jan - June	Advanced VLSI devices & Technologies and Test & Verification	32	
B.Tech ECE, IV Sem	2014, Jan - June	Microelectronics Technology	32	

6. Academic Plan - Your Academic Action Plan for the next two years (Maximum 2 pages)

A project entitled "Development and application of atomic layer deposition for high efficiency c-Si Photovoltaic solar cells" has been sanctioned by Solar Energy Research Initiatives, DST, New Delhi. We are in the process of procuring and setting up the facility. Our aim is to establish the ALD process and implement it on semi processed solar cells. Also the entire measurement set up for life time and efficiency measurements is likely to be established under this project.

7. Brief information about support to IIIT-A administration (Out one para)

Member Secretary: Board of Management
Member: Academic council



**Prof. Hari Prakash
Professor**



Research Interests
Physics

Sl.No	Subjects	Particulars
1.	Publications during the year (2013-2014):	<p>a. International Journals</p> <p>1. On the polarization of non-Gaussian optical quantum field: Higher-order optical- polarization, Ravi S Singh, Hari Prakash, Annals of Physics, Volume 333, pp 198-205(June 2013)</p> <p>2. Quantum Teleportation of Single Qubit Mixed Information State with Werner-Like State as Resource, Hari Prakash & Vikram Verma arXiv:1305.4259 [quant-ph](May 2013)</p>
2.	Participation in Seminars/Workshops/Conferences/Symposiums etc. During the year (Apr'2013-Mar'2014)	<p>a. International</p> <p>International Program on Quantum Information, held at Institute of Physics, Bhubaneswar, India (Feb.17-28, 2014). I delivered Invited Talk on "QUANTUM TELEPORTATION"</p>
3.	Research & Development	I am doing research in "Quantum Optics and Quantum Information"

**Prof. Ramji Lal
Professor**



Research Interests
Mathematics, Group Theory, Cryptography & Algebraic K-Theory

1.	Publications during the year (2013-2014):	<p>International Journals</p> <p>1. "Topological Right Gyro groups and Gyro Transversals" Communications in Algebra, 41, 3559-3575, June 2013.</p> <p>2. "Weak Classification of Finite Groups" Asian European Journal of Mathematics 2014(17 pages)</p> <p>3. "Twisted Automorphisms of Right Loops" Communications in Algebra (15 pages), to appear.</p>
2.	Participation in Seminars/Workshops/Conferences/Symposiums etc. During the year (Apr'2013-Mar'2014)	<p>National</p> <p>1. "On Schur Multiplier and Related Topics" at HRI Allahabad March 1-March 8 (2014) Topic of the talk: "Schur Multiplier and K- Theory"</p> <p>2. "Topology and Geometry" at HRI Allahabad, Dec 2013 Topic of the Talk: "Geometry of Surfaces"</p> <p>3. "Galois Theory, Finite fields and Cryptography" (Sponsored by The three NASI) at IITA and at NASI Allahabad, June 24 –June 26,2013 Topic of the talk: "Galois Theory and Solvability by Radicals"</p>





Research and Teaching Experience
above 24 years

Subjects	Particulars
Full name, as published in the Institute records, with prefix and suffixes, of degrees and distinctions, if any.	Dr. Anupam Total Research & Teaching Experience: 25 years +
Academic Designation and Qualification	Professor, Coordinator of M.Tech. (Human-Computer Interaction). Qualification: M.Tech. (CS&E), PhD(IT), Post-Doc Researcher (United Kingdom)
Academic Achievements of the year 2013-2014	Brief Particulars: Additional Research Degrees/ distinction achieved during 2013-2014 only * Principal Investigator of the INDO-UK "BURD" Project funded by DST, India & EPSRC, UK (Jan'2013 – Dec'2015) * Designated as officiating Dean (Academics) on January 17, 2014. * Organized Intl. Conference IITM 2013 at IIIT-A as its Program Chair (under the banner of Springer, Germany). * Two students submitted their PhD thesis in Nov./Dec., 2013. * Supervised five M.Tech. Students for their thesis work and nearly 105 BTech students for their Mini./ Major projects.
Publications during the year (2013-2014):	1).Book: Special Issue on Intelligent Interactive Technologies and Multimedia (Ed.) of International Journal of "Image and Graphics" by World Scientific Pub., Singapore, Vol. 13, No. 2, April 2013.
List of Books (give full details of publication)	
	2). Publications of Articles/Research Papers in Journals/Magazines: a. International Journals: 05
List of Publications in Refereed International Journals	
List of Publications in International/ National Conferences	
Participation in Seminars/Workshops/Conferences/Symposiums etc. during the year (Apr'2013 – Mar'2014) [Names of Workshops etc. only]	b. National: 01 c. International: 03 As above
Work done in projects undertaken in the Institute (Apr' 2013- Mar'2014)	1) Specify the contributions made during the year * As PI of the INDO-UK "BURD" project (funded by the DST), carrying out project development on "Distributing Industrial Optimizations Tasks to Rural Worker" in collaboration with the UK PI at the University of Strathclyde, Scotland, UK. * DST's FIST project (had prepared & submitted the proposal as PI): carried out project developments related to Gesture- Recognition & HCI using HMD, VR Data Gloves as well as Eye-tracking equipment. 2) Brief project ABSTRACTS OF OBJECTIVES/BENEFITS, PROGRESS and RESULT, if any, with project related photographs etc. If Investigator / Co-Investigator, provide information as in(2) Please refer Annexure 2 (having details related to the ongoing INDO-UK "BURD" project)



Research & Development during the year 2013-2014	<p>a. R & D Activities/ Inventions, if any (give only names and brief relevant particulars in support)</p> <ul style="list-style-type: none"> * Development of 2D & 3D Packing/ Shape alignment algorithms and also 2D & 3D Geometric reasoning tests under the INDO-UK "BURD" project. * Supervising the "Interactive Technologies & Multimedia" Lab at IITA to carry out training and R&D in related areas. * Development of Computer Vision & Soft-computing algorithms in areas such as Gesture Recognition, Biometric Identification, Smart Home, HCI, Surveillance and Remote Sensing Image Processing etc. * Development of GPU-Accelerated Vision and Visualization/ Animation Algorithms.
Extra – Curricular activities (Apr'2013-Mar'2014)	<p>Briefly Name the Extra-Curricular Activities (with photographs, articles etc.)</p> <ul style="list-style-type: none"> * Performed the duties of Dean (Acad) during the 9th Convocation on March 10, 2014. * Professor In-Charge Examination (July'2012 onwards). * Contributed being part of the committees for "Menu, Food and Hospitality" and "Screening of Applicants" of the 6th Science Conclave, December 08-14, 2013.
Awards/Honours/Recognition received, if any	<p>a. National level</p> <ul style="list-style-type: none"> * Honored for Distinguished Academic Achievements at the EDUSHINE 2014 event organized by United Group of Institutions, United Campus, Allahabad. * Member of Board of Management (BOM) at IITA. * Member of Academic Council at IITA. <p>b. International level</p> <ul style="list-style-type: none"> * Served as Guest Editor of special issue on IITM of the World Scientific Journal entitled "Image and Graphics", Vol. 13, No. 2, April, 2013. * Invited Reviewer of Intl. Journals: IEEE Trans. on GRS; IEEE Trans. on ITS, Intl. J. RS and Intl. J. GIS (Taylor & Francis), Journal of Supercomputing (Springer), "Sensors" journal (MDPI), National Academy Science Letters (Springer) and others. * Invited Reviewer of Intl. Conferences: IEEE IGARSS, ACM COMPUTE, IMCIC, INDICON and others.
Training Programmes Organized (April 2013-March 2014)	<p>Give names of</p> <p>(a). In-Campus Training Programs with duration</p> <p>(b). Off-Campus Training Programs with duration</p>
Any other Achievements/Distinctions not included in the above	<ul style="list-style-type: none"> * As Professor In-Charge Examination (July'2012 onwards): Carried out several assignments of work related with the Controller of Examinations. * As officiating Dean Academics (17 Jan., 2014 onwards): Contributed in recruitment of new faculty members, Syllabus refinement and also in introduction of the Dual degree courses at IITA.

List of Publications in Referred International Journals (2013-14)

Title of Paper	Name of the Journal	Publisher/ Place of Publication	Volume & Issue No.	Year	Pages from-to
Hand Gesture Recognition Towards Vocabulary and Application Independency	International Journal of "Image and Graphics"	World Scientific Pub., Singapore	Vol. 13, No. 02	April, 2013	1340001-1 to 1340001-16
GPU-accelerated Interactive Visualization of 3D Volumetric Data Using CUDA	International Journal of "Image and Graphics"	World Scientific Pub., Singapore	Vol. 13, No. 02	April, 2013	1340003-1 to 1340003-15
An Assessment of the Impact of Dimensionality Reduction on the Speed and Accuracy of Hyperspectral Image Classification	International Journal of Advanced Computer Research (Impact Factor: 1.863)	ACCENTS	Vol. 3, No. 3, Issue 11	Sept., 2013	436 - 441
Interactive 3D Remote Visualization of Medical Volume Data in Distributed Environment	International Journal of Advanced Computer Research (Impact Factor: 1.863)	ACCENTS	Vol. 3, No. 3, Issue 11	Sept., 2013	239 - 245
Minutiae Fusion Based Framework for Thumbprint Identification of Identical Twins	International Journal of Intelligent Systems & Applications	MECS Press, Hong Kong	Vol. 6, No. 1	Dec., 2013	84 - 101



List of Publications in International / National Conferences (2013-14)

Title of Paper Presented	Name of the Conference (page numbers)	Name of the organizing Institution / University	Dates on which the Conference was held	Name of supporting Professional Organization such as IEEE, ACM, AIMA etc.
An Interactive Framework for Abandoned and Removed Object Detection in Video	INDICON 2013 (pp. 1 - 6)	IIT Bombay, Mumbai	13-15 Dec'2013	IEEE
Vision-based Multimodal Human-Computer Interaction using Hand and Head Gestures	ICT 2013 (pp. 1288 - 1292)	Noorul Islam University, Thuckalay (Tamil Nadu)	11-12 Apr'2013	IEEE
Intelligent Video inpainting System for Texture Reconstruction	ICCCT 2013 (pp. 60 – 65)	MNNIT, Allahabad	20-22 Sept.'2013	IEEE
HMM Based Multi-Person Activity Recognition considering Efficient Individual and Interactive Features	ICCCCM 2013 (08 pages)	UIT, Allahabad	03-04 Aug.'2013	IEEE

List of Books

Name of the Book	Name of the Publishing House (with full reference)	Date & Year of Publication	ISSN No.
Special Issue on Intelligent Interactive Technologies and Multimedia (Ed.) of International Journal of "Image and Graphics"	World Scientific Pub., Singapore	Vol. 13, No. 2, April, 2013	ISSN: 0219 - 4678

ANNEXURE - 2

Details of the DST funded INDO-UK "BURD" Project

Project Title: Distributing Industrial Optimization Task to Rural Workers

Project start date: Jan'2013 (formal letter of approval received)

India PI: Prof Anupam Agrawal, IIIT Allahabad

UK PI: Professor Jonathan Corney, University of Strathclyde, Scotland (UK)

Aim of the project: *To investigate if it is economical and technically feasible for industrial optimisation tasks to be outsourced to rural BPO workers.*

The **three phases** of the project are as follows:

Phase 1 (11 to 12 months) - Capabilities: Document economic context and establish the capabilities of Indian and British BPO platform and worker capabilities through series of idealised 2D and 3D trials. This first phase will establish base lines measurements and provide the experience required for the later phases of the project.

Phase 2 (12 months) - 2D Studies: Investigation (costs, performance, speed) of Industrial 2D problems (e.g. nesting, routing, symmetry etc.) using real data. The use of engineering data will allow the value of the BPO work to be quantified for different levels of performance and provide vital input to the business study.

Phase 3 (10 to 12months) - 3D Studies: Investigation of Industrial 3D problems (e.g. feature recognition, shape similarity, symmetry detection etc.) using real data. These will be the most demanding problems tackled by the project and workers will need to have a command of 3D CGI to successfully complete the tasks. It would help to develop viable industrial work-flow for embedding a BPO approach to geometric optimisation in commercial CAD/CAM systems and also to establish a sustainable business model for both manufacturing industry and rural BPO providers.

Progress made so far:

Phase 1 completed, Phase 2 nearly completed (experimental trails on two more BPO centers have been planned), Phase 3 is just started.



Photos:



Visit of UK PI Prof Jonathan Corney at IIIT-A in March 2013



RCUK Event in New Delhi in Nov. 2013: Project Progress Presentation



Experiments/ Trials at Rural Shores's BPO Centre at Kanker

Dr. Anurika Vaish
Associate Professor



Research Interests

Economics, Accounting & Finance, Digital Divide and E-governance, Operation Management and related issues

Sl. No	Publications during the year (2013-2014)		
1.	Title	Year of Publication	Name of the Journal ,Forum /Venue
a.	Key Factors leading ROI of E-commerce Websites -An User's Perspective	2013	International Journal of Business and General Management, IASET , USA
b.	Sustaining Environment & Organization Through e- waste Management: A Study of Post Consumption Behavior in Mobile Industry in India	2013	International Journal of Logistics Systems & Management, Inderscience Publishers
c.	Artificial Immune System based Mobile Agent Platform Protection	2013	International Journal on Computer Standard and Interfaces, Elsevier Standards
d.	Content Fusion in traditional and new media: A Conceptual Study	2013	Journal of Internet Commerce Taylor & Francis



2.	Project Undertaken	Abstracts of Objectives Progress and Result	Investigator /Co-investigator
	DST/RC-UK	India -UK Collaborative Research initiative in (Bridging the urban & rural device) distributing industrial optimization costs to rural worker. 3 yrs ongoing	PI-INDIA- Dr. Anupam Agawal Co-PI- INDIA- Dr. Anurika Vaish & Prof. M. Krishnan
3.	Awards/Honours/Recognition received, if any		Received ABP NEWS National B-School Awards in Best Government Engineering College Category in 2013

Dr. Shekhar Verma
Associate Professor



Research Interests

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

Subjects	Particulars
Publications during the year (2013-2014)	<p>International Journals</p> <ol style="list-style-type: none"> 1. Goutele, S., Singh, A.K., Gurjar, D., Verma, S., "Performance analysis of fuzzy logic-based geographical node-disjoint path routing for WSNs", International Journal of Electronics, 101 (4), pp. 435-440, 2014. 2. Chaurasia, B.K., Verma, S., "Secure pay while on move toll collection using VANET", Computer Standards and Interfaces, 36 (2), pp. 403-411, 2014. 3. Pandey, M., Verma, S., "Privacy provisioning in wireless sensor networks", Wireless Personal Communications, 75 (2), pp. 1115-1140, 2014. 4. Kumar, M., Verma, S., Agarwal, N., "GMCA: A greedy multilevel clustering algorithm for data gathering in wireless sensor networks", International Journal of Communication Networks and Distributed Systems, 11 (2), pp. 198-213, 2013. 5. Singaravelu, P., Verma, S., "Performance analysis of multivariate cryptosystem schemes for wireless sensor network", Computers and Electrical Engineering, 39 (6), pp. 1880-1893, 2013. 6. Tomar, R.S., Singh, S., Verma, S., Tomar, G.S., "A novel ABC optimization algorithm for graph coloring problem", Proceedings - 5th International Conference on Computational Intelligence and Communication Networks, CICN 2013, 2013. 7. Patel, K., Rora, K.K., Singh, K., Verma, S., "Lazy wavelet transform based steganography in video," Proceedings - 2013 International Conference on Communication Systems and Network Technologies, CSNT 2013, pp. 497-500, 2013 8. Chaurasia, B.K., Verma, S., Tomar, G.S., "Trust computation in VANETs", Proceedings - 2013 International Conference on Communication Systems and Network Technologies, CSNT 2013 6524440, pp. 468-471, 2013. 9. Tomar, R.S., Verma, S., Tomar, G.S., "Cluster based RSU centric channel access for VANETs", Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 7420, pp. 150-171, 2013. 10. Bagwari, A., Tomar, G.S., Verma, S., "Cooperative spectrum sensing based on two-stage detectors with multiple energy detectors and adaptive double threshold in cognitive radio networks", Canadian Journal of Electrical and Computer Engineering, 36 (4), 6776586, pp. 172-180, 2013. 11. Tomar, R.S., Verma, S., "Lane change trajectory prediction using artificial neural network", International Journal of Vehicle Safety, 6 (3), pp. 213-234, 2013. 12. Debnath, A., Singaravelu, P., Verma, S., "Efficient spatial privacy preserving scheme for sensor network", Central European Journal of Engineering, 3 (1), pp. 1-10, 2013.
Participation in Seminars/Workshops/Conferences/Symposiums etc.	List of Papers in conferences attached AS ABOVE
Work done in projects undertaken in the Institute	Project Title: SIMBED Funding Agency - Army Technology Board The project is complete and final report is to be submitted





Research Interests

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

Subjects	Particulars			
Publications during the year 2014-2015	1). Names of Books published			
	Name of the Book	Name of the Publishing House	Date & Year of Publication	ISBN No.
	“Energy Efficient Wireless Sensor Networks using Learning Techniques” in book titled “Case Studies in Intelligent Computing”	Taylor & Francis	Sept, 2014	978-1-4822-0703-3
	2). Publications of Articles/Research Papers in Journals/Magazines:			
	b. International Journals			
	Title of Paper	Name of the Journal	Year	
	Flexible Service Oriented Network Architecture for Wireless Sensor Networks	International Journal of Computers Communications & Control	2014	
Participation in Seminars/Workshops/Conferences/Symposiums etc.	International			
	Title of Paper Presented	Name of the Conference		
	Multi-Agent data aggregation in wireless sensor network using source grouping.	In Proceedings of Third International Conference on Advances in Computing, Communications and Informatics		
	Scrutinizing Localized Topology control in WSN using rigid graphs	Accepted for publication in International Conference on Sustainable Computing- -March-2015		
Research & Development during the year	Patents accepted/filed No. of Patent Applied:1			





Research Interests
Robotics, Electronics

Subjects	Particulars
Publications during the year	International Journals: 14

Research Publications through:
<http://scholar.google.co.in> [as on Feb25, 2015]



	All	Since 2010
Citations	218	173
h-index	8	8
i10-index	8	6

Pavan

Chakraborty
Indian Institute of Information Technology Allahabad
[Artificial Intelligence - Robotics & Instrumentation](#)
Verified email at iitaa.ac.in

h-index is the largest number h such that h publications have at least h citations. The second column has the "recent" version of this metric which is the largest number h such that h publications have at least h new citations in the last 5 years.
i10-index is the number of publications with at least 10 citations. The second column has the "recent" version of this metric which is the number of publications that have received at least 10 new citations in the last 5 years.

	Title / Author	Cited by	Year
1.	A C2DM Based Framework for Detection and Notification of Terrorist Activities on Android Platform R Doriya, K Suraj, P Chakraborty Lecture Notes on Software Engineering 3 (4)		2015
2.	Less computationally intensive fuzzy logic (type-1)-based controller for humanoid push recovery VB Semwal, P Chakraborty , GC Nandi Robotics and Autonomous Systems 63, 122-135	8	2015
3.	A novel Approach to Human Gait Recognition using possible Speed Invariant features A Nandy, R Chakraborty, P Chakraborty , GC Nandi International Journal of Computational Intelligence Systems 7 (6), 1174-1193		2014
4.	Gait identification using component based gait energy image analysis A Nandy, A Pathak, P Chakraborty , GC Nandi Signal Propagation and Computer Technology (ICSPCT), 2014 International Conference on (IEEE)		2014
5.	Dynamic vehicle traffic routing problem: Study, implementation and analysis using ACO and GA R Doriya, N Wadhwa, K Suraj, P Chakraborty , GC Nandi Control, Instrumentation, Communication and Computational Technologies (ICICCT), 2014 International Conference on		2014
6.	An approach towards rescue robotics in bore well environment M Raj, A Bansal, A Makhal, P Chakraborty , GC Nandi Communications and Signal Processing (ICCSP), 2014 International Conference on... Pages 1097-1100 IEEE.		2014
7.	Verification of the Spectral Classification of Stars Using the Hipparcos Catalogue D Deb, P Chakraborty Publications of the Astronomical Society of Australia 31, e046		2014
8.	Person tracking and segmentation for human gait biometric system A Nandy, P Chakraborty , GC Nandi		2014



	International Journal of Biometrics 6 (3), 205-230		
9.	Gait Biometrics: An Approach to Speed Invariant Human Gait Analysis for Person Identification A Nandy, S Bhowmick, P Chakraborty , GC Nandi Proceedings of the Second International Conference on Soft Computing for Problem Solving (SocProS 2012), December 28-30, 2012 Pages 729-737 Publisher Springer India		2014
10.	A speed invariant human identification system using gait biometrics S Bhowmick, A Nandy, P Chakraborty , GC Nandi International Journal of Computational Vision and Robotics 4 (1), 3-22	1	2014
11.	A Sensor-Based Technique for Speed Invariant Human Gait Classification A Nandy, S Bhowmick, P Chakraborty , GC Nandi Intelligent Computing, Networking, and Informatics, 549-556	1	2014
12.	Biped model based on human Gait pattern parameters for sagittal plane movement VB Semwal, SA Katiyar, P Chakraborty , GC Nandi Control, Automation, Robotics and Embedded Systems (CARE), 2013 ...	13	2013
13.	Gait biometrics: A vision based approach for cloths invariant walking pattern classification S Bhowmick, A Nandy, P Chakraborty , GC Nandi Signal Processing, Computing and Control (ISPPC), 2013 IEEE International ...		2013
14.	Speed Invariant, Human Gait Based Recognition System for Video Surveillance Security A Nandy, P Chakraborty , GC Nandi Intelligent Interactive Technologies and Multimedia, 325-335		2013

Participation in Seminars/Workshops/Conferences/Symposiums etc.	National : 1
Work done in projects	1. Human Gait Analysis 2. Autonomous Navigational Test Bed (ANT) 3. Cloud Enabled Robotics 4. Social Robots

1. Human Gait Analysis

We had developed a portable non-invasive low cost wearable sensor based biometric suit HGOD (Human Gait Oscillation Detector) which could be applicable to different applications like, (i) Human Identification; (ii) Human Robot Interaction in medical surgery based robot and others; (iii) Gesture Classification; (iv) Human Computer Interaction; (v) Diagnostic Gait Signature Detection; (vi) Find the effect on gait with different age and body weight (vii) Analysis of abnormal gait signature etc. We have already verified the theoretical concept of human locomotion from our practical data. We have used HGOD for Personal recognition system with better feature selection procedure, with real time pattern recognition algorithm, which can help us to recognize the person.

Though HGOD was simple and strait forward in acquiring the gait signature, it requires full cooperation of the person for recognizing his gait signature. A video based technique is more complex, but it has the potential of acquiring the gait biometrics signature without the knowledge of the person. This technique, therefore provides an important innovation in the field of surveillance and security. Presently existing biometric identification techniques, such as DNA, Finger print, Iris and face detection, has a limitation. They either require a close proximity from the detecting sensor or cooperation from the individual, forced or voluntary.

The primitive issues in gait recognition are the large intra class variation due to condition changes like camera view point, wearing different clothes, varying walking speed and walking with carrying different loads such as bags, suitcases etc. These variations drastically affect the classifications. We therefore had set up a Gait Lab within the ambit of Robotics and AI lab where we have done intensive study on Human gait signature for diagnosis of healthy and disordered subjects. Figure 1 illustrates the lab setup. The gait was simultaneously imaged using three cameras covering the frontal and sagittal planes of the human body locomotion.

Fig.1. Descriptions of camera arrangements in two sagittal planes and one frontal plane



Fig. 2. Normal walking of healthy adult male subject



Fig. 3. Normal walking of disorder adult female subject



Fig. 4. Normal walking of healthy male child subject



2 Autonomous Navigational Test Bed (ANT).

The other projects which we have been working on are on Autonomous Navigational Test-bed (ANT). The idea of IITA ANT, originated from creation of a real platform to implement different Artificial Intelligence (AI) and Life Simulation (LS) methods for Navigation and Surveillance purpose. The purpose is to develop and implement a navigational test bed using Subsumption architecture with different layered modules. These Modules are: 1) Tele-operation, 2) Obstacle avoidance, 3) Lane detection, 4) Localization, 5) Terrain mapping using stereoscopic vision, 6) Tracking Target person, 7) Hand gesture communication, 8) speech Command control.

Tele-operation and different module for controlling the car such as hand gesture recognition, speech command recognition, terrain mapping, obstacle avoidance and lane as well as building recognition are being developed in parallel by different team members (Students connected with the Robotics and AI Lab). Each module has its own limitations and constraints. It is hoped that on completion, these modules will be implemented on the ANT. This innovation will help build an autonomous vehicle for transport, for surveillance and for Lunar and Planetary mission. In Transportation, the techniques developed will allow to design mechanism for accident avoidance auto-driving and localization. In surveillance, an unmanned surveillance is a longstanding need for security, for defense and for natural calamities. It could take active part in wars (Mines removal) or terrorist attacks. India's further Chandrayaan missions have lunar rover planned. The techniques developed in ANT will be of great help.

3. Cloud Enabled Robotics

ANT leads us to 2 specialized research areas: 1) Cloud enabled Robotics and 2) Human-Robot Interaction for the Social Robots. Cloud enabled robots is one of the developing area. As one might visualize, instead of depending on "in-house" resources, robots can potentially leverage the cloud architecture to deliver instant information and to handle computationally intensive tasks that may not be possible due to the limited on board computational devices of the robot. Tasks such as vision processing and mapping are indeed computationally intensive. Mobile robots are generally battery powered where power consumption is limited. Large processing on-board will require large amount of power which the robot has to spare. Cloud-enabled robots can offload CPU-heavy tasks to remote servers. 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.



Research is going on to develop a framework that can enable heterogeneous robots to offload their computational load with the help of a private cloud and can make the access to the web to behave intelligently.

4. Social Robots

Research on Human-Robot Interaction for the Social Robots is being done for creating a robot that can interact socially in our daily lives the robot should be featured with some capabilities to help humans. The most important capability is that the robot should be having self-localization and mapping capability by which it can create a map of the environment and can update the map through iterative process for dynamic objects. As the hands are the main actuators of a human being the robot should be containing arms and fingers that can easily grasp or lift or bring some object that can be a highly useful task in our daily life. Communication through Natural Language Processing is been considered as the most typical communication for the human-human interaction as well as human-robot interaction.

We have already worked on designing an Indian Sign Language (ISL) based Human Robot Interaction (HRI) system for Speech and Hearing Impaired Persons (SHIP). SHIP could communicate to a Humanoid robot using ISL. The Humanoid robot could use its camera to record and register the gesture. The gesture is then deciphered and translated to speech. Speech could also be deciphered and translated to ISL for the understanding of the SHIP. Reorganization of ISL gesture in a very controlled environment has been achieved for single words with a good accuracy. As yet, only limited number of gestures has been considered. Interaction between Humanoid robots has been achieved by simulation. The likely impact of the innovation will be for the Speech and Hearing Impaired Persons (SHIP). We are trying to build this system as a translator and a service based robot as a helping agent for speech and hearing impaired persons. More research in other aspects of social robotics is being investigated.





Research Interests

Human Resource Management, Organizational Behavior

Extra-Curricular activities

1. Co-ordinator, MBA –IT
2. Student Counsellor
3. Member, Sexual Harassment Committee at work place.
4. Member of Grievance Cell
5. Was an active member organizing committee of all four Science Conclaves – a congregation of Noble laureates held at Indian Institute of Information technology, Allahabad, India, in Dec 2008, 2009, 2010, 2011, 2012, 2013
6. Was faculty in-charge of the Dramatics Club at IIIT-A (since 2010-June 2013).

Training Programmes Organized

- Workshop on women security sensitization 13th -14th April'13



Research Interests

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

Subjects	Particulars
Academic Achievements of the year	Ph. D supervision Supervised M.Tech theses
Publications during the year	2). Publications of Articles / Research Papers in Journals / Magazines: a. National Journals - 03 b. International Journals- 03 <ol style="list-style-type: none"> 1. Ashwath Rao, Anshuman Dwivedi, Manish Goswami, B. R. Singh, "Effect of nitrogen containing plasma on interface properties of sputtered ZrO₂ thin films on silicon", Elsevier Materials Sciences in Semiconductor Processing, Vol 19, pp 145-149, 2014. 2. Shabi, Anush, and Manish Goswami., "A Low Power Preamplifier Latch based Comparator Using 180nm CMOS Technology" IEEE Asia-Pacific Conference on Postgraduate Research in Microelectronics & Electronics (PrimeAsia) - pp. 208-212, 2013. 3. Jitendra Jain, Shobhit Singh and Manish Goswami, "Design of Wideband Current Conveyor (CC-II) based Oscillator for Low-Voltage Application using 180nm CMOS Technology," IEEE CARE- pp. 1-5, 2013 4. Saloni, Manish Goswami, B R Singh, "4-6 Variable resolution ADC " IEEE- ISED - pp. 72-76, 2013. 5. Atul Kumar, Ashwath Rao, Manish Goswami, B. R. Singh, "Electrical Characterization of MfeOS gate stacks for ferrielectric FETs", Elsevier Materials Sciences in Semiconductor Processings, Vol 16, pp 1603-1607, 2013. 6. Kavindra Kandpal, Saloni Varshney, and Manish Goswami, "A High Speed-Low Power Comparator with Composite Cascode Pre-amplification for Oversampled ADCs," Journal of Automation and Control Engineering in Vol. 1 No. 3, 2013
Research & Development	<ul style="list-style-type: none"> • Designing the ASIC for variable resolution ADC
Particulars of Academic Work during the year	Subject Taught: <ol style="list-style-type: none"> 1. Mixed Signal Design (III sem M.Tech Microelectronics) 2. VLSI Design (VI sem B.Tech ECE) 3. Analog Design (II sem M.Tech Microelectronics 4. Hardware Design Methodology (II sem M.Tech) 5. Analog Devices and Circuits (III Sem B.Tech) 6. Guided B.Tech and M.Tech students for the project work 7. Related Lab Work and Project assessment



Extra-Curricular activities	<ol style="list-style-type: none"> 1. Member of different committees in Science Conclave- 2013. 2. Efferevescence-2013 3. Handling Microelectronics Website 4. Project coordinator for M.Tech MI
Awards / Honours / Recognition received, if any	Bagged Runners Up award in CADENCE All India Design contest 2013
Any other Achievements / Distinctions	IEEE Member a. VSI member

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, Computational Neuroscience

Publications during the year (2013-2014):

1. Tripathi, Shiv PN; Jaiswal, Manas; Singh, Vrijendra; Securing DNA Information through Public Key Cryptography, MIS REVIEW: An International Journal, 19,1, 45-59, 2013 ~3LJ (Airiti Press)
2. Suman, Preetam; Karan, Subhdeep; Singh, Vrijendra; Maringanti, R; Algorithm for Gunshot Detection Using Mel-Frequency Cepstrum Coefficients (MFCC) Proceedings of Ninth International Conference on Wireless Communication and Sensor Networks, 155-166, 2014 Springer India.
3. S. K. Rae V. Singh, et al., "Perishable food inventory management: A retailer's perspective", International Journal of Business and General Management, USA, Vol. 2, Issue 2" 1 -10,2013.
4. Parvathy. A, Ravi Shankar Choudhary, V. Singh, "Legal Issues Involving Cryptography In India", International Journal of Computer Application (IJCA), Vol. 2, Issue 3, 66-77,2013.
5. S. K. Rai, V. Singh, et al., "A novel model for supply chain management of perishable goods for Indian retail industry using CSR activity and contribute to green environment", VSRD International Journal of Business, No.5, 181 -190,2013.
6. Jalal, Anand Singh; Singh, Vrijendra; A robust approach for background subtraction with shadow removal for moving object detection International Journal of Signal and Imaging Systems Engineering, 6, 3, 188-202, 2013.
7. AS Jalal, V Singh, "The State-of-the-Art in Visual Object Tracking", Informatica: an International Journal of Computing and Informatics, 36 (3), 227-248, 2013.

Participation in Seminars/workshops/Conferences/Symposiums etc.

Sixth Science Conclave December 8 - 14, 2013

Work done in projects undertaken in the Institute: Wireless Sensor Networks for Protecting Wildlife and Humans

Research & Development during the year

- a. Supervised one International Faculty under CV Raman Senior Fellowship, FICCI, New Delhi
- b. Doctoral Thesis Supervised: 01
- c. M. Tech. Thesis Supervised: 07
- d. MBAIMSC LIS Projects Supervised: 04





Research Interests

Information Security, Cyber Law, Risk Management, Network Threat Protection

Sl.No	Subjects	Particulars
1.	Publications during the year (2013-2014):	<p>1. Satya Prakash, Abhishek Vaish, Natalie Coul, Saravana Kumar G, T.N. Srinidhi, Jayaprasad Botsa, Child Security in Cyberspace Through Moral Cognition, International Journal of Information Security and Privacy, USA, 7(1),20-33, January-March 2013</p> <p>2. Kumari, P.; Vaish, A, "Brainwave's energy feature extraction using wavelet transform," <i>Electrical. Electronics and Computer Science (SCEEC~). 2014 IEEE Students' Conference on</i>, vol., no., pp.1,5, 1-2 March 2014</p> <p>3. Kumari, P.; Kumar, S.; Vaish, A, "Feature extraction using empirical mode decomposition for biometric system," <i>Signal Propagation and Computer Technology (ICSPCT). 2014 International Conference on</i>, vol., no., pp.283,287, 12-13 July 2014</p> <p>4. Morozov A.A., Vaish A., Polupanov A.F., Antciperov V.E., Lychkov 1.1., Alfimtsev A.N., Deviatkov V.V. Development of Concurrent Object-oriented Logic Programming System to Intelligent Monitoring of Anomalous Human Activities // BIODEVICES 2014: Proceedings of the International Conference on Biomedical Electronics and Devices (ESEO, Angers, Loire Valley, France, 3-6 March, 2014) / Ed. by Alberto Cliquet Jr., Guy Plantier, Tanja Schultz, Ana Fred, and Hugo Gamboa. - SCITEPRESS, 2014. - pp.53-62. - This report has won the best paper award.</p>
2.	Work done in the projects undertaken in the Institute (Apr'2013-Mar'2014)	<p>Development of logic programming approach to intelligent monitoring of anomalous human activities supported by DST-RFBR P-159</p> <p>We develop a research led software platform based on the Actor Prolog concurrent object-oriented logic language and a state-of-the-art Prolog-to-Java translator for examining the intelligent visual surveillance. The platform includes the Actor Prolog logic programming system and an open source Java library of Actor Prolog built-in classes. It is created to facilitate our research of the intelligent monitoring of anomalous people activities and studying the logical description and analysis of people behavior .</p>
3.	Extra - Curricular activities (Apr'2013- Mar'2014)	Won Table Tennis Champion at IIIT-A
4.	Awards/Honours/Recognition received, if any	Best Paper Award for paper entitled "Development of Concurrent Object Oriented Logic Programming System to Intelligent Monitoring of Anomalous Human Activities at International Conference on Biomedical Electronics and Devices at France, March 3-6, 2014.
5.	Training Programmes Organized (April 2013- March 2014)	Conducted 1 st Summer School in High Performance Computing at Nalchik, Russia. May, 2013



Dr. Sanjai Singh
Assistant Professor



Research Interests

Structural, Electronic and Optical Properties of Nanostructures, Structural and Electronic properties of High Tc Superconducting Materials, Quantum Computing

Subjects	Particulars
Participation in Seminars/Workshops/Conferences/Symposiums etc.	a. National :- 1 National seminar on IT Applications in Energy Management during April 15-16, 2013. 2. National seminar on Human brain - a mystery organ during August 20-21, 2013.
Any other Achievements/Distinctions not included in the above	Working as Faculty Incharge of IIIT-A extension campus known as Rajiv Gandhi Institute of Information Technology, Amethi since inception of the campus.

Dr. Manish Kumar
Assistant Professor



Research Interests

Data Management in Wireless Sensor Network, Database Systems, Data Mining, Distributed Databases, Mobile Data Management

Subjects	Particulars
<u>Publications during the year</u>	<ol style="list-style-type: none"> "Secure Data Aggregation in Wireless Sensor Networks using Homomorphic Encryption", <i>International Journal of Electronics</i> 102.4 (2015): 690-702. [SCI journal (IF-0.6)] "Analysis of stock volatility clustering using ANN", <i>Information Resources Management Journal (IRMJ)</i> [Accepted for publication] Chapter titled "Rules Extraction using data mining in Historical data" for the upcoming book "Data Mining and Analysis in Engineering field"(2014): 89. [IGI-Global publishers, USA] Chapter titled "Rule Optimization of Web-logs data using Evolutionary Technique" for the upcoming book "Data Mining and Analysis in Engineering field" (2014): 180. [IGI-Global publishers, USA]
Participation in Seminars / Workshops / Conferences / Symposiums etc.	<ol style="list-style-type: none"> Organized Workshop on Computational Intelligence organized during 13-15th October 2014. Delivered lecture on "Privacy preserving data mining" in Workshop on Computational Intelligence organized during 13-15th October 2014.
Work done in Projects undertaken in the Institute (Apr '2011-Mar'2012)	M.Tech: 03 M.Tech theses in the area of Inference and aggregation of Wireless Sensor Networks. B.Tech: 04 Btech Project related to Data Mining and databases.
Research & Development	Research in the area of "Data Management in Wireless Sensor Networks" and Data Mining Submitted 02 Project proposals in DIT
Particulars of Academic Work during the year	M.Tech Software systems for knowledge Data engg. Mobile Data Management B.Tech Theory of Computation Data Mining and Warehousing
Extra-Curricular activities	Participated in Institute various activities
Administrative duties	Faculty-in-charge (M.Cell), Advisor (Sports)
Training Programs Organized	Workshop on IEEE Computational Intelligence organized during 13-15 th October 2014





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

Areas of interest: Cognitive Technologies, Wireless Communication, DSP, RF

Teaching Experience: Jun 6, 2013 as Asst. Prof. (PB-IV, AGP 9000), IIITA
Jun 6, 2010 as Asst. Prof. (PB-III, AGP 8000), IIITA
Sept 5, 2006 as Lecturer (PB-III, AGP 7000), IIITA
Oct 9, 2003 as Lecturer (8000-275-13500), DAVV, Indore

Publications

(A) Paper(s) Published in Refereed Journals

- Ashutosh Kumar Singh, Neetesh Purohit, "An optimised fuzzy clustering for wireless sensor networks, International Journal of Electronics", Taylor & Francis, Volume 101, Issue 8, 2014.
- Kaushalendra Pandey, Neetesh Purohit, Ajay Agrawal, "Efficient Clustering Technique for Cooperative Wireless Sensor Network", International Journal of Computer Network and Information Security (IJCNIS, Hongkong, DOI: 10.5815/ijcnis.2014.10.05, Published Online September 2014 in MECS (<http://www.mecs-press.org/>)
- Rachit Garg, Gaurav Mishra, Vishal Kesari, Neetesh Purohit, "Beam-Steering in a Three-Element Circular Antenna-Array", International Journal of Microwave and Wireless

Technologies, Cambridge University press, USA, DOI:

<http://dx.doi.org/10.1017/S1759078714000312> (About DOI), Published online: 14 March 2014.

- Ashutosh Kumar Singh, Neetesh Purohit, etal. "Analysis of Lifetime of Wireless Sensor Network with Base station Moving on Different Paths" International Journal of Electronics, Taylor & Francis, pp. 1- 12, 2013 DOI: www.tandfonline.com/doi/full/10.1080/00207217.2013.794480
- Ashutosh Kumar Singh, Neetesh Purohit, etal. "Performance Evaluation of Fuzzy based congestion optimization approach for sensor networks" International Journal of Computational Systems Engineering, Inderscience, 2013 DOI: www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijcsyse
- Ashutosh Kumar Singh, Neetesh Purohit, etal. "Fuzzy Logic Based Clustering in Wireless Sensor Networks: A Survey" International Journal of Electronics, Taylor & Francis, Vol. 100, Issue. 1, pp. 126- 141, 2012.
- Ashutosh Kumar Singh, Neetesh Purohit, etal. "An Energy Efficient Approach for Clustering in WSN using Fuzzy Logic" International Journal of Computer Applications, Foundation of Computer science, New York, USA. Volume 44, No.9, pp. 8-12, 2012
- Ajay Bhardwaj, Neetesh Purohit, "A Network Detection and Selection Scheme in Heterogeneous Wireless Network", International journal of scientific & engineering research, VOLUME 3, ISSUE 10, 43-48, 2012.
- Ankit Jain, Neetesh Purohit, etal. "An Efficient Clustering Technique for Deterministically Deployed Wireless Sensor Network", International Journal of Computer Applications, Foundation of Computer Science, Vol 59 No. 6, 35-40, 2012.
- Vishal Kesari, Neetesh Purohit, M. Thumn, "Analysis of Ohmic Quality Factor of Circumferentially Corrugated Circular Cavities", Journal of Infrared, Millimeter, and Terahertz Waves, Springer, Vol 31 No.4, 510-520, 2010.
- Neetesh Purohit, Sanjiv Tokekar, "Analysis of a BTS Failure Tolerant Scheme for GSM Network", International Journal of Wireless Communication, Vol 11, No.2, 2009.

(B) Paper(s) published in Conferences

- N. Lulla, N. Purohit, "An Improved Algorithm for Efficient Computation of MFCC", IEEE International Conference INDICON 2014, Pune, India, Dec 11-13, 2014.
- P.S Pandey; N.Purohit, "Improving Multicasting approach in UMTS network," IEEE International Conference on Green Computing, Communication and Electrical Engineering (ICGCCCE 2014), 6-8 March 2014
- Sandeep Shukla, Saurabh Shukla, Neetesh Purohit, "PAPR Reduction In SC-FDMA Using NCT Techniques", CIMTA- 2013, Elsevier, University of Kalyani, September 27-28, 2013. **Selected as Best paper of the conference.**
- Ajay Bhardwaj, D. Gurjar, Neetesh Purohit, "An Optimized Network Selection Scheme for Heterogeneous Wireless Networks", IC3-2013, IEEE, IIIT, Noida, August 8-10, 2013.
- Devendra Gurjar, Abhishek Singh, Ashutosh Singh, Neetesh Purohit, "Development of FUS Algorithm to Improve HSDPA Performance in MIMO Supported Cellular Network", SCES 2013, IEEE, MNNIT, Allahabad, April 12-14, 2013.
- Kirti Dhawaj, Rachit Garg, Gaurav Mishra, Neetesh Purohit, "Design and Analysis of Dual Capacitively Loaded C-PIFA", WiMoN 2012, Springer, AIRC Chennai, July 13-15, 2012.
- Himanshu Agrawal, Ankit Jain, Neetesh Purohit, "A New Scheme for Cooperative Communication in LEACH Based Wireless Sensor Network", CICN-2011, IEEE, MIR labs, Gwalior, Oct 7-9, 2011.
- Ashutosh Kumar Singh, Abhijit Alkesh, Neetesh Purohit, "Minimization of Energy Consumption of Wireless Sensor Networks using Fuzzy Logic" CICN-2011, IEEE, Gwalior, Oct 7-9, 2011.
- Ashutosh Singh, Kaushal Pal, Neetesh Purohit, "A Novel Approach for Lifetime Analysis of Sensor Network using Fuzzy Logic", INDICON-2011, IEEE, Hyderabad, Dec 16-18, 2011.



- Akshit Malhotra, Vaibhav Sharma, Prateek Gandhi, Neetesh Purohit, "UDP Based Chat Application", ICCE-2010, **IEEE**, Chengdu, China, April 16-18, 2010.
- Abhinav Verma, Himanshu Agrawal, Neetesh Purohit, "Performance Analysis of Wireless Sensor Network with Virtual MIMO", INDICON-2010, **IEEE**, Kolkata, Dec 17-19, 2010.
- Pritish Varadwaj, Bhumika Arora, Neetesh Purohit, "Detection of splice sites using support vector machine", IC3 – 2009, **Springer**, JPIT Noida, Aug 17-19, 2009.
- Neetesh Purohit, Pritish Varadwaj and Sanjiv Tokekar, "Reliability Analysis of Wireless Sensor Network", ICON 2008, **IEEE**, December 12-14, 2008, New Delhi.
- Neetesh Purohit and Sanjiv Tokekar, "Survivability Index for GPRS Network", ICON 2008, **IEEE**, December 12-14, 2008, New Delhi.
- Neetesh Purohit and Sanjiv Tokekar, "A New Measure of Survivability for a Cellular Network", WCSN 2008, **IEEE**, December 27-29, 2008, IIIT, Allahabad.
- Neetesh Purohit and Sanjiv Tokekar, "Performability and Survivability analysis of GSM", WCSN 2008, **IEEE**, December 27-29, 2008, IIIT, Allahabad.
- Neetesh Purohit and Sanjiv Tokekar, "Performance Analysis of GPRS Downlink traffic after a BTS Failure", WOCN 2007, **IEEE**, July 2-4, 2007, Singapore.
- Neetesh Purohit and Sanjiv Tokekar, "Performance Analysis of GPRS Uplink traffic after a BTS Failure", WOCN 2007, **IEEE**, July 2-4, 2007, Singapore.
- Neetesh Purohit, Rahul Yadav and Sanjiv Tokekar, "Survivability Analysis of a Sectorized Cellular Network", INDICON'07, **IEEE**, Sept 6-8, 2007, Bangalore.
- Neetesh Purohit, and Sanjiv Tokekar, "Performance Analysis of EDGE after a BTS Failure", WCSN'07, **IEEE**, December 13-15, 2007, IIIT, Allahabad.
- Neetesh Purohit, and Sanjiv Tokekar, "Survivability Index for a GSM network", WCSN'2007, **IEEE**, December 13-15, IIIT, Allahabad.
- Neetesh Purohit and Sanjiv Tokekar, "Analysis of a New Fixed Channel Allocation Scheme for a Sectorized GSM Cellular Network", WOCN 2006, **IEEE**, April 11-13, 2006, Bangalore.
- Neetesh Purohit and Sanjiv Tokekar, "Performability Analysis of a Fault tolerant Sectorized Cellular Network", INDICON'2006, **IEEE**, September 15-17, 2006, New Delhi.
- Neetesh Purohit and Sanjiv Tokekar, "Analysis of an Algorithm to Reduce the Impact of Cell Failure in a Cellular Mobile Network", WCSN'2006, **IEEE**, Dec 17-19, 2006, Allahabad.

Books:

Name of the Book	Name of the Publishing House (with full reference)	Date & Year of Publication	ISBN No.
<ul style="list-style-type: none"> • Contributed chapter-5 (single author) titled, "The physical layer aspects of wireless networks", in the book titled, Technologies and Protocols for the Future of Internet Design: Reinventing the Web Edited by Deo Prakash Vidyarthi, Jawaharlal Nehru University, India. • Reviewed 4 chapters of the book titled "TCP/IP Protocol Suite" IV edition, authored by B. A. Forouzan. • Reviewed the book titled "Linear feedback Control Systems", authored by V. Krishnamurthi. 	IGI, USA. Tata McGraw Hill, New Delhi. Tata McGraw Hill, New Delhi	Feb 2012 2009 2006	978-1-4666-0203-8,

Invited Talks:

- "The Smart Antenna", One Week Workshop On Advances in Wireless and Optical Networks (AWON-2014), MNNIT Allahabad, June 02 - 07, 2014
- 'Evolution of Communication systems: From Telephone to 4G', MAVECOM-2013, MNNIT Allahabad, July 22-27, 2013.
- 'Antenna design issues for modern systems', WINMAD 2013, MNNIT Allahabad, July 8-13, 2013
- 'The suitability analysis of SDR in various networks', a workshop on Designing the Communication Systems using Software Defined Radio (SDR) and Labview, May 7-8, 2013, IIITA.
- 'Utilizing renewable energy resources in Cellular mobile networks', National Seminar on IT Applications in Energy Management, RGIIT, Amethi, April 15, 2013
- 'The philosophical shifts in the Comm. System design', Seminar, NRI, Bhopal, March 23, 2013
- 'The antenna and RF design issues for Wireless sensor network', WCSN-2012, Thailand, Dec 20, 2012
- 'The antenna design issues for low power applications', WARD- 2012, IIIT-A, Sept 27-30, 2012
- 'Principles of Stochastic Modeling and Simulation', Indian Africa Training Program, IIITA, October 15-November 3, 2012
- 'WSN: Physical layer Design Issues', WCSN-2011, NMDC-IIITA at Panna national park, Dec 5-9, 2011
- 'Standardization of Cellular Networks', International Seminar on Standardization of Communication Networks, IIITA, April 29, 2011
- 'Information Technology: Origin and Evolution', CSI Workshop, CTE, Udaipur, June 19, 2010

Workshops/Conferences/summer schools organized

- **Coordinator**, Second workshop on Antenna and RF Design for Low Power Applications, scheduled to be organized during Sept 16-21, 2013, IIITA.
- **Coordinator**, Workshop on Designing the Communication Systems using Software Defined Radio (SDR) and Labview, May 7-8, 2013, IIITA.
- **Co-Chair** (Publication), WCSN-2013, Dec 16-19, 2013, IIITA.
- **Coordinator**, workshop on Antenna and RF Design for Low Power Applications, 2012, IITA.
- **Co-chair**, organizing committee, WCSN 2012, Dec 19-23, 2012, Naresuan University, Phitsanulok, Thailand.
- **Co-coordinator**, Summer school 2008, IIITA



Ph.D. (Supervised)

Status/ Date of Award of Ph.D.	Topic of Ph.D. Thesis	Name of the Awarding University/Institution	Name of the student
Awarded in March 2014 (Under Sole supervision)	Development of Fuzzy Logic Based Improved Schemes for Wireless Sensor Networks	IIIT-A	Shri Ashutosh Singh
Ongoing (Under Sole supervision)	Development and analysis of Multimedia Broadcast and Multicast Techniques over Wireless Networks	IIIT-A	Shri Purnendu Pandey
Ongoing. (Under co-supervision , the Supervisor is Prof. B. R. Singh)	Development of a New Scheme for Enhancing the Mobility in 4G Wireless Networks	IIIT-A	Shri Nitin Goyal
Just Joined (Under Sole supervision)	Yet to be decided	IIITA	Shri Mahendra Shukla

Supervision to B. Tech. and M. Tech Students

Supervised more than 100 B. Tech projects and more than 40 M. Tech. Thesis in past decade

Other relevant Information

- Looking after various Library related affairs in the capacity of Faculty Incharge of library, IIITA.
- A member of Academic Council of the IIITA.
- Active Member of IEEE and ACM.
- Chair, Bharat Swachh Abhiyaan at IIIT Allahabad, etc.

Dr. Pragya Singh
Assistant Professor



Research Interests

Women Entrepreneurship, Case Studies, Cross Cultural Management, Communication & Soft Skill Development, etc.

Publications during the year (2013-2014)

1.	Project Id	Roll No.	Name	Paper Title	Project Type	Published (Y/N)	Published In (Journal/Conference)	Details Of Journal Conference, Paid/Unpaid, tier/Non Tier
a.	Group Id	Prag21668		Analysis-and Comparison of Open Source & Proprietary Digital forensic Tools		Paper Presented	14 th National Conference	T1
	Prag21668	ims2012067	Irman Ali		Research			
	Prag21668	ims2012069	Atul Raj		Research			
	Prag21668	ims2012023	Praveen Kumar					
b.	Group Id	Prag23045		Analysis Of Android Vulnerabilities and Modern Exploitation Techniques		Paper Published	International Journal	UnPaid
	Prag23045	ims2012047	Vaibhav Vilasrao Deshmukh		Research			
	Prag23045	ims2012014	Himanshu Vijay Shewale		Research			
	Prag23045	ims2012012	Sameer Raghunath Patil		Research			
2.	Extra – Curricular activities	*Participation as an active member of the help desk in Science Conclave 2013. *Handled responsibility as active member of different committees in (a) Effervescence 2013 (b) Convocation 2014 *Member of flying Sqad Committee in 2014 Mid Sem. Examination.						



Dr. B. Srinivas Sanjeev
Assistant Professor



Research Interests

Structural Biology, Parallel Computing

Subjects	Particulars
Research & Development during the year	R&D Activities/ Inventions, if any: 1. Cloud computing for protein data 2. Contact map based conformational epitope prediction 3. OpenCL based ORF prediction

Dr. Rajat Kumar Singh
Assistant Professor

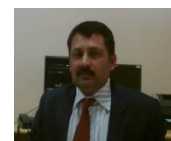


Research Interests

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

Subjects	Particulars
<u>Publications during the year</u>	Publications of Articles / Research Papers in Journals / Magazines: International Conference: 1 Durga Pavan Nudurupati and Rajat Kumar Singh, "Enhancing Coverage Ratio Using Mobility in Heterogeneous Wireless Sensor Network" Elsevier CIMTA 2013, Kolkata, India, Procedia Technology, Vol. 10, pp. 538-545, September, 2013
Participation in Seminars / Workshops / Conferences / Symposiums etc.	International: 1 Presented above paper in the First International Conference on Computational Intelligence: Modeling Techniques and Applications (CIMTA) 2013 at Dept. of Computer Science & Engineering, Univ. of Kalyani, Kalyani, Nadia, West Bengal, India, on 28 th Sep'13
Training Programs Organized (Apr'2013-Mar'2014)	Organized an On-Campus Workshop on Antenna and RF Design (WARD-2013) during Sept. 16-21, 2013.

Dr. Madhvendra Misra
Assistant Professor



Research Interests

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

Subjects	Particulars
Publications during the year	2). Publications of Articles/Research Papers in Journals/Magazines: a. National Journals Shagun Srivastave and Madhvendra Misra "A Fitness Analysis towards Technology Forecasting Method Choice for Telecom Sector" India "Indore Management Journal", Special issue ISSN: 0975-1653(2013) pp.87-102.



	<p>b. International Journals S Pandey, M Singh, P Chaurasia, M Misra "Role of plug and play devices and service level agreement in data recovery system." <i>Int. J. of Business Continuity and Risk Management</i> 4.2 (2013): pp-155.</p> <p>Tewari, S.K. and Misra, M. "Marketing efficiency: a construct to evaluate strategic ICT adoption." <i>Int. J. Business Excellence</i> 6.6 (2013): pp-735.</p> <p>Sumant Kumar Tewari and Madhvendra Misra,. "Evaluating and Designing Research Methodology for Investigating Research Problem Having Interdisciplinary Applications." <i>Journal of Supply Chain Management Systems</i> 2.2 (2013): 24-36.</p> <p>Tewari, Sumant Kumar, and Madhvendra Misra. "Developing supply chain evaluation framework through performance assessment approach." <i>Int. J. of Business Performance and Supply Chain Modelling</i> 5.No.1 (2013): pp-28.</p>
Participation in Seminars/Workshops/Conferences/ Symposiums etc. during the year	<p>National "E-Governance in India: A Comparative Study with US & Australia." <i>International Conference on Recent Trends of Computer Technology in Academia ICRTCTA 2012</i>. 2012. "A Fitness Analysis towards Technology Forecasting Method Choice for Telecom Sector in India". "5th International Conference on Excellence in Research and Education" IIM, Indore 9th-12th May 2013</p>

Dr. Vijay Kumar Chaurasiya
Assistant Professor



Research Interests

Wireless and Mobile Networks

Subjects	Particulars
Publications during the year	<p>Publications of Articles/Research Papers in Journals/Magazines: International Journals</p> <ol style="list-style-type: none"> 1. Need Of Impact Calculation and Measured For Healthcare Privacy Breaches in India, ISSA Journal
Participation in Seminars/Workshops/Conferences/ Symposiums etc. during the year	<p>d. International</p> <ol style="list-style-type: none"> 1. Identity Theft Risk Calculation, 9th national Conference on ITS 2. Improved Secure address Resolution Protocol, 5th International Conference (CSIA) 3. A quantized Model for Computer Forensic Investigation, 6th IRF International Conference
Extra – Curricular activities	<ol style="list-style-type: none"> 1. Chairman of Organizing Committee for Annual Cultural Festival of the Institute Effervescence, 2014 2. Member of Organizing Committee for Foundation Day of the Institute

Dr. Sonali Agarwal
Assistant Professor



Research Interests

Database, Datamining & Warehousing, E-Governance

Subjects	Particulars
Publications during the year	<ol style="list-style-type: none"> 1). Names of Books published <u>NA</u> <p>Publications of Articles/Research Papers in Journals/Magazines Paper(s) Published in Refereed Journals Divya Tomar, Sonali Agarwal, "A Survey of Data Mining approaches for Healthcare" published in International Journal of Bio-Science and Bio-Technology Vol.5, No.5 (2013), pp. 241-266 http://dx.doi.org/10.14257/ijbsbt.2013.5.5.25.</p>
Participation in Seminars / Workshops / Conferences / Symposiums etc. during the year	<p>(Give only names of Seminars etc. and TITLE of papers presented) (Annexure -B) Paper(s) published in International Conferences</p> <ul style="list-style-type: none"> • Sonali Agarwal, Divya Tomar, Siddhant Verma, "Prediction of Software defects using Twin Support vector Machine" presented in IEEE Second International Conference on Information Systems and



	<p>computer Networks ISCON 2014, March 1-2, 2014, Mathura, India.</p> <ul style="list-style-type: none"> • Divya Tomar, Sonali Agarwal, "Predictive Model for diabetic patients using Hybrid TSVM" presented in Fifth International Conference on Advances in Communication, Network, and Computing (CNC 2014), February 21-22, 2014, Chennai, India. • Neha Rathore, Divya Tomar, Sonali Agarwal, "Predicting the survivability of Breast Cancer patients using Ensemble approach" presented in International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT-2014), February 07-08, 2014, Ghaziabad, India. • Sonali Agarwal, Sanjeev Kumar Sinha, "Data Mining based Pervasive System Design for Intensive Care Unit" presented in 2014 International Conference on Computer Communication and Informatics (ICCCI -2014), January 03 – 05, 2014, Coimbatore, India. • Subham Khanna, Sonali Agarwal, "An Integrated Approach towards the prediction of Likelihood of Diabetes", presented in the International Conference on Machine Intelligence Research and Advancement, (ICMIRA-2013), December 21-23, 2013, Katra, Jammu, India . • Manoj Kumar, Manish Shukla, Sonali Agarwal, "A Hybrid Approach Of Requirement Engineering In Agile Software Development", presented in the International Conference on Machine Intelligence Research and Advancement, (ICMIRA-2013), December 21-23, 2013, Katra, Jammu, India . • Akhilesh Kumar Yadav, Divya Tomar, Sonali Agarwal, "Clustering of Lung Cancer data using Foggy K-means"presented in 3rd International Conference on Recent trends in Information Technology (ICRTIT-2013), July 25-27, 2013, Chennai India. • Manoj Kumar, Manish Sharma, Sonali Agarwal, G. N. Pandey, "An E Governance Model Using Cloud Computing Technology for Developing Countries", presented in 2013 International Conference on e-Learning, e-Business, Enterprise Information Systems, and e-Government (EEE'13), July 22-25, 2013, World Congress of Computer Science, Computer Engineering and Applied Computing, Las Vegas, Nevada. <p style="text-align: center;">Paper(s) published in National Workshops</p> <ul style="list-style-type: none"> • Subham Khanna, Sonali Agarwal, "A Systematic Approach For The Classification of Diabetes Disease: Application of Iterative Learning Process" presented in National Seminar on Data Mining Applications in Healthcare, June 1-2, 2013, Indian Institute of Information Technology, Allahabad. • Divya, Akhilesh Yadav, Sonali Agarwal, "Cloud enabled Data Mining framework for Monitoring Healthcare especially for Rural India", presented in National Seminar on Data Mining Applications in Healthcare, June 1-2, 2013, Indian Institute of Information Technology, Allahabad. • Manoj Kumar, Manish Shukla, Sonali Agarwal, "Data mining for Pediatric Health Care" presented in National Seminar on Data Mining Applications in Healthcare, June 1-2, 2013, Indian Institute of Information Technology, Allahabad. • Mr. Manoj Kumar, Mr. Manish Sharma, Dr. Sonali Agarwal, "Optimization of Electricity Consumption using Ambient Intelligence", presented in National Seminar cum Workshop for Rural Empowerment, April 15-16, 2013, Rajiv Gandhi Institute of Information Technology, Amethi. • Dr. Sonali Agarwal, "A Data Mining based Energy Management for Load Prediction", presented in National Seminar on IT Applications in Energy Management, April 15-16, 2013, Rajiv Gandhi Institute of Information Technology, Amethi. •
<p>Extra – Curricular activities (Apr'2013-Mar'2014)</p>	<p>Extra-Curricular Activities</p> <ul style="list-style-type: none"> • Received CSIR Seminar Grant and organized a National Seminar on Data Mining Applications in Healthcare. • Supervised and conducted Foundation Day 2013 as a as a Faculty In charge PMP Club. • Supervised and conducted Effervescence 2013 as a Faculty In charge PMP Club. • Worked as member, Stage and Cultural Committee during Science Conclave 2013 for supervising the work. • Actively participated for improving the performance of First Year students in IIIT Allahabad and RGIIT Amethi. The performance was indeed improved to a great extent and further efforts are on during this semester as well. • Extremely keen to support IIITA administration for excellence in academic and extra curriculum activities or any other work assigned to me. •





Research Interests

Digital Image Processing, Data-compression, Biometrics Systems (Hand, Finger-print, Face, Multimodal, etc.), Pattern Recognition and Digital Image Watermarking

Subjects	Particulars
Publications during the year	Publications of Articles/Research Papers in Journals/Magazines a. International Journals: 03 [1] A robust logo watermarking technique in divisive normalization transform domain, <i>Multimedia Tools and Applications</i> , vol.72, no.3, pp.2653-2677, 2014 (Springer). [2] Rightful ownership through image adaptive DWT-SVD watermarking algorithm and perceptual tweaking," <i>Multimedia Tools and Applications</i> , vol.72, no.1, pp.723-748, 2014 (Springer). [3] A semi automated statistical algorithm for object separation," <i>Circuit System and Signal Processing</i> , vol.32, no.6, pp.3059-3078, 2013 (Springer).
Participation in Seminars/Workshops/Conferences/ Symposiums etc. during the year	International: 01 [1] 10th Summer School on Biometrics, June 10-15, 2013, Sponsored by IEEE, IAPR and Organized by University of Sassari, Italy.
Work done in projects undertaken in the Institute (Apr' 2013- Mar'2014)	3) Specify the contributions made during the year 4) Brief project ABSTRACTS OF OBJECTIVES/BENEFITS, PROGRESS and RESULT, if any, with project related photographs etc. If Investigator / Co-Investigator, provide information as in(2)
Research & Development during the year 2013-2014	b. R & D Activities/ Inventions, if any (give only names and brief relevant particulars in support) [1] SERB-DST ITS Grant for Young Scientists, by Department of Science and Technology, Government of India, 2013-14. <ul style="list-style-type: none"> • Amount: Rs. 2, 54,000/-Only • Status: Completed (Compliance Report Submitted to DST)
Extra – Curricular activities	[1] Faculty Chairman, Technical Club, IIIT Allahabad, 2013-14. [2] Faculty Coordinator, IEEE Students' Branch, IIIT Allahabad, 2013-14. [3] Observer, AICTE New Delhi, CMAT Allahabad, 2014. [4] Executive Committee Member, IEEE UP Section, IIT Kanpur, 2014
Any other Achievements/Distinctions not included in the above	Specify in brief [1] Technical program Committee Member, IEEE-MEDCOM-2014 (International Conference on Medical Imaging, m-Health & Emerging Communication Systems)





Research Interests

Corporate Finance, Capital Market related issues, Investment Management

Subjects	Particulars
Publications during the year	<ol style="list-style-type: none"> 1. Nandkeolyar, D., Pandey, N., Kiran, R., and Kumar, S., (2013). "Managing Business Planning and Growth: A Case of Small Scale Service Business Enterprise (SSSBE) in India", Case -Reference No. 513-085-1, The Case Centre (European Case Clearing House), http://thecasecentre.org/educators/, accessed August 2013 2. Nandkeolyar, D., Pandey, N., Kiran, R., and Kumar, S., (2013). "Madhu Automobiles: Managing Marketing Strategy for Success", Case -Reference No. 513-114-1, The Case Centre (European Case Clearing House), http://thecasecentre.org/educators/, accessed December 2013 3. Nandkeolyar, D., Pandey, N., Kiran, R., and Kumar, S., (February 2014). "Marketing Strategies of SMBs with special reference to Automotive and Light Engineering companies: Insights from India", International Journal of Management Research and Review, Vol. 4, No. 2, pp. 300-312.
Participation in Seminars/Workshops/Conferences/Symposiums etc. during the year	<ol style="list-style-type: none"> 1. Bansal, Y., Kumar, S., Verma P., (2013). "Inclusion of commodity futures for portfolio diversification: An empirical investigation", 2013 India Accounting & Finance (IAF) International Conference on "Emerging Financial Markets Landscape: The journey until now and road ahead", 9th-10th September, 2013, organized by Indian Institute of Management (IIM), Lucknow. 2. Nandkeolyar, D., Pandey, N., Kiran, R., Kumar, S., (2013). "Marketing Strategies for Small and Medium Enterprises in the face of global recession and beyond", International Conference on "Spectacular Execution – the need of the hour today" 27th - 29th December, 2013, organized by Pravish Rajnam Centre for Management Education in association with Bhartiya Chetana Avam Prakashan Samiti, New Delhi. 3. Singh, D., Jaiswal, P., Srivastava, S., Kumar, S., (2014). "An Empirical Investigation about Portfolio Diversification Benefits of Gold", 14th International Conference on "Advances & Challenges in Global Business, Management, Economics, Tourism and Information Technology", 1st -2nd February, 2014, organized by The Research Development Association, Jaipur (Rajasthan). 4. Bansal, Y., Kumar, S., Sharma H., (2014). "Indian Commodity Futures: Diversification tool for Industry", AICTE sponsored National Seminar on "Management Perspectives to Combat Recession", 6th-8th March, 2014, organized by Swami Vivekananda Institute of Engineering and Technology, Banur (Ramnagar), District Patiala (Punjab) .
Research & Development during the year	<ol style="list-style-type: none"> 1. Supervised Ms. Gagandeep Kaur on the topic "Employee attrition in ITeS call center in selected clusters of North India" as a Co-Guide in Thapar University, Patiala. (Degree Awarded) 2. Supervised Mr. Dilip Nandkeolyar on the topic "Business Planning & Marketing Strategy in the Context of Globalisaton for Small & Medium Enterprises in India" as a Co-Guide in Thapar University, Patiala. (Degree Awarded)
Extra – Curricular activities	<ol style="list-style-type: none"> 1. Editor-in-Chief, B-Cognizance- An E-Magazine, published at MBA(IT)-MSCLIS Division, at Indian Institute of Information Technology (IIIT-A) Allahabad





Research Interests

Mobile Agent Security, IPV 6 Security, Intrusion Detection System

Subjects	Particulars
Publications during the year	<p><u>International Journal</u></p> <ol style="list-style-type: none"> 1. Venkatesan S., Chellappan C., Anurika Vaish, Dhavachelvan P. and Prabhu C., "A Collaborative Model to Mitigate the TCP SYN Flood Attack in IPv4/IPv6 Environment", accepted to publish in International Journal of Information and Computer Security, Inderscience Publishers. <p><u>International Conference</u></p> <ol style="list-style-type: none"> 1. Preeti Yadav, Savita Gupta and Venkatesan.S (2014), 'Trust model for Privacy in Social Networking using Probabilistic Determination' Proceedings of 4th International Conference on Recent Trends in Information Technology (ICRTIT 2014), Madras Institute of Technology, Anna University, Chennai. (Best Paper Award). 2. Ragini, Parul Mehrotra and Venkatesan.S (2014), 'An efficient model for Privacy and Security in Mobile Cloud Computing', Proceedings of the 4th International Conference on Recent Trends in Information Technology (ICRTIT 2014), Madras Institute of Technology, Anna University, Chennai.
Participation in Seminars/Workshops/Conferences/Symposiums etc. during the year	Delivered Invited talk in AVSC - 2014 workshop organized by Motilal Nehru National Institute of Technology (MNNIT), Allahabad. Title: Security Vulnerabilities in the Network Protocols.
Particulars of Academic Work during the year	<p>Subjects Taught for B.Tech, MS -Cyber Law & Information Security and MBA- IT</p> <ol style="list-style-type: none"> 1) Data Structures and Algorithms 2) Introduction to Programming 3) Fundamentals of Information Security 4) PCI & DSS <p><u>Project Guidance</u></p> <ol style="list-style-type: none"> 5) Supervised two M.Tech Students 6) Supervised four batches of MS & MBA students. 7) Supervised seven batches of B.Tech Students
Extra-Curricular Activities	Member of Science Conclave committee during 5 th Science Conclave 2013.
Awards/Honours/Recognition received, if any	Best Paper Award for "Trust model for Privacy in Social Networking using Probabilistic Determination", in the 4th International Conference on Recent Trends in Information Technology (ICRTIT 2014), organized by Madras Institute of Technology, Anna University, Chennai.
Any Other Achievements/Distinctions not included in the above	<p>Membership</p> <ol style="list-style-type: none"> 1) ACM 2) CRSI



Research Interests

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

Subjects	Particulars
Publications during the year	<ol style="list-style-type: none"> 1. GA-NR for Optimal Design of Water Distribution Networks, Krishna Singh, Mitthan Kansal, Kusum Deep, <i>International Journal of Operational Research</i>, 20(3), 2014. 2. Fuzzy Based Interactive Method for Solution of Bi and Multi-level Programming Problems by Krishna Pratap Singh, Kusum Deep, M. L. Kansal, <i>International Journal of Information and Decision Sciences</i>, 6(2), 2014.
Participation in Seminars/Workshops/Conferences/Symposiums etc. during the year	Organizing Member of Science Conclave- 2013
Research & Development	<p>Thesis Supervisor for</p> <ol style="list-style-type: none"> 1. 5 Mtech Students 2. 20 B.Tech Students
Extra – Curricular activities	Delivered Invited Talks in Workshops in MNNIT Allahabad. Reviewer of Various journals and Conferences





Research Interests

Photonic Crystals, Photonic band gap materials, Left handed materials, Heat and mass transfer (specific to space and biotechnological applications), Space environmental modeling (Theoretical & Experimental)

Subjects	Particulars
Publications during the year	
4.1 <i>Research Papers</i>	
Published in International Refereed Journals	
Title of Paper	Name of the Journal
Place of Publication	Volume & Issue No.
Year	Pages from-to
From Left Handed Materials to Invisible Cloak: Recent Advances	<i>The Himalayan Physics</i>
online	4, 4
2013	18-26
Participation in Seminars/Workshops/Conferences/ Symposiums etc. during the year	
5.1 National Conferences/Seminars	
(i) Attended a 5 day Short-Term course on Recent Trends in Nonlinear Systems and Dynamics (RTNSD – 2013) from 10-14 June 2013 at MNNIT, Allahabad	
Research & Development during the year 2013-2014	<p>c. R & D Activities/ Inventions, if any (give only names and brief relevant particulars in support)</p> <p>(i) Successfully Guided two European Nationals from France, they are M. Tech. (Physics Engineering) Students worked on different subjects for their research internship Namely:</p> <p style="margin-left: 40px;">a) Mr Valentin Contat and</p> <p style="margin-left: 40px;">b) Mr Quentin Izzanic</p> <p>d. Patents accepted/filed (Reference name TITLE)</p> <p style="margin-left: 40px;">i). Indian</p> <p style="margin-left: 40px;">ii).International</p>
Extra – Curricular activities	
1. Contributed actively as a Noble Laureate Escort Committee member in the 6 th Science Conclave in December 2013 with 1997 Physics Noble Laureate Prof Claude – Cohen Tannoudji.	
Training Programmes Organized (April 2013- March 2014)	
In-Campus :	
(a) (i). Organized 5-day workshop on “Advance Material and Instrumentation in Biomedical Engineering (AMIBE - 14)” from 11-15 March 2014 in Division of Applied Sciences at IIIT Allahabad Sponsored by DST, CSIR and NASI Allahabad.	
(ii). Organized one day Children Science Meet Programme in Collaboration with The National Academy of Sciences, India (NASI) on 11 th March 2014.	
Particulars of the Academic work during the year	
Taught following courses during the stated period:	
<ul style="list-style-type: none"> • Physics - 2 (Phys – 232) - (M. Tech. (BME) 2nd semester • Mathematics – 2 (MAT – 232) - B. Tech. (IT) 2nd semester at IIIT Allahabad and RGIIT, Amethi • Mathematics and Biostatics (MBS – 132) – M. Tech. (BI) 1st semester • Physics – 3 (Phys – 332) - (M. Tech. (BME) 3rd semester • System Simulation and Modeling (SMS -732) - B. Tech. (IT) 7th semester • Fluid Mechanics (FM-431) - (M. Tech. (BME) 4th semester 	





Research Interests

Clinical diagnostics using various detection based Lab on chip and nanofabricated devices, Bio-mems, Immunoassay lab-on-a-chip devices, Real-time PCR chip based detection technology, Flow cytometer chip, Cell sorting chip, Cell electroporation, Cellular-chip for single cell analysis, On chip bacterial growth studies, Blood on chip analysis, Dielectrophoresis (DEP) chip, Electrophoresis chip, Biosensing using novel techniques (i.e. based on nanowires, quantum dots etc.) with conventional approaches and conventional techniques with novel approaches, MEMS drug delivery systems and micropumps, Clinical therapeutics using nanomaterials, Implantable biomedical devices, Nanotechnology

Subjects	Particulars
Academic Achievements of the year	<p>Brief Particulars:</p> <ul style="list-style-type: none"> Working in collaboration with Prof. Amit Agrawal, Microfluidics Lab, Department of Mechanical Engineering, IIT Bombay, India, for development of bio-microfluidic devices and achieving satisfactory progress in the research project undertaken. Working in collaboration with University of Allahabad, India, for creating Porous Metal-Organic Frameworks, applied for of various sensor platforms development.
Publications during the year	<p>Publications of Articles/Research Papers in Journals/Magazines:</p> <p>b. International Journals:</p> <ul style="list-style-type: none"> Nishant Kumar, Amit Prabhakar, M. Tikekar, S.G. Singh, and A. Agrawal, <i>Blood flow in non-circular microchannel under pulsating condition</i>, Journal of Micro-Nano Scale Transport, Volume 4, Number 1, 33-50, 2014. Amit Prabhakar, Y V Bala VarunKumar, Siddhartha Tripathi, Amit Agrawal, <i>A novel, compact and efficient microchannel arrangement with multiple hydrodynamic effects for blood plasma separation</i>, Microfluidics and Nanofluidics, DOI: 10.1007/s10404-014-1488-6.
Participation in Seminars/Workshops/Conferences/Symposiums etc.	<p>e. National:</p> <ul style="list-style-type: none"> Jagdish Prasad, Amit Prabhakar and Krishna Srivastava, <i>Fluorescent Sensors for Quantifying the Metal Ions Content in Living Systems</i>, Inorganic Chemistry Section of the 51st Annual Convention of Chemists, Indian Chemical Society, Kolkata, at the Department of Chemistry, Kurukshetra University, kurukshetra (Haryana). <p>f. International:</p> <ul style="list-style-type: none"> Bharadwaj, R., Tripathi, R., Prabhakar, A., Mukherji, S., <i>S-shaped SU-8 optical waveguide immobilized with gold nanoparticles for trace detection of explosives</i>, Fourth Asia Pacific Optical Sensors Conference, China.
Work done in projects undertaken in the Institute	<p>5) Specify the contributions made during the year:</p> <p>Achieved satisfactory progress in most of the research project undertaken, which are mentioned below.</p> <p>6) Brief project ABSTRACTS OF OBJECTIVES/BENEFITS, PROGRESS and RESULT, if any, with project related photographs etc.</p> <p>Title of the various Projects undertaken in the Institute:</p> <ol style="list-style-type: none"> Design and development of MEMS devices for separating blood plasma from whole human blood. Optical Waveguide Temperature Sensor for Microfluidic Application. SU-8 Optical Waveguide Based Chip-Scale Humidity Sensor. Development of a Micro-Chip for Reconstituting Organ-Level Lung Functions. Development of Optical Platform for Particle Detection in Micro-channel. Development of MEMS Based Coulter Counter. Breathing Rate Monitor. Blind Helper stick. Design of Novel & Potent Anti Resistant Herbicides Using Bioinformatics Approaches. Advance Peripheral BUS Design and Verification.
Research & Development during the year 2013-2014	<p>e. R & D Activities/ Inventions, if any (give only names and brief relevant particulars in support)</p> <p>f. Patents accepted/filed (Reference name TITLE)</p> <p>i). Indian:</p> <ul style="list-style-type: none"> A cost effective and disposable micropump for lab on chip applications, (Final stage of Patent Application), Application No: O/Ref MUM/14-15/00346- JM/nm, Amit Prabhakar, B.S. Bharat, Prof. Amit Agrawal. <p>ii).International: None</p>



Extra – Curricular activities (Apr'2013-Mar'2014)	1) Acting as organizing member for 7 th Science Conclave to be held on 8-12 December 2014, at IIT Allahabad. 2) Acting as Faculty In-charge of Cultural Council, IIT Allahabad.
Awards/Honours/Recognition received, if any	c. National level : None d. International level: None

Dr. Pramod Kumar
Assistant Professor



Research Interests

Magnetocaloric effect, Shape-memory alloy, Negative magnetization, Spin wave dynamics, Strongly correlated electron systems, Hall and quantum hall effect, Graphene (Preparation and device fabrication), Scanning tunneling microscopy, Topological Insulator, Photovoltaic effects

Subjects	Particulars
Publications during the year	<ol style="list-style-type: none"> Complex magnetic behavior of sawtooth Fe chains in $\text{Rb}_2\text{Fe}_2\text{O}(\text{AsO}_4)$: L. D. Sanjeeva, Pramod Kumar and S. J. Hwu, <i>Phy. Rev. B</i> 89 (2014) 014426. Stable Graphite Exfoliation by Fullerene Intercalation via Aqueous Route: R. Kumar,* Pramod Kumar,* S. Naqvi, N. Saxena, J. Gaur, G. D. Sharma, R. Bharadwaj, J. K. Kushwaha, and S. Chand, <i>J Mater. Chem. C</i> 38 (2014) 4922. Crystal structure and negative magnetization in Sm_2Al and $\text{Sm}_{1.988}\text{Gd}_{0.012}\text{Al}$, 2014 <i>Physica B Physica B</i> 448 (2014)6. Anomalous magnetoresistance in topological insulator Bi_2Te_3: Proximity-induced superconductivity effect, Pramod Kumar and Rachana Kumar, 2014 <i>Physics Express</i> (Submitted)
Participation in Seminars/Workshops/Conferences/Symposiums etc. during the year (Apr'2013 – Mar'2014) <u>[Names of Workshops etc. only]</u>	<ol style="list-style-type: none"> National International International conference on Magnetic Materials and Applications (ICMAGMA 2014), India. International symposium on Polymer Science and Technology (Macro 2015)
Work done in projects undertaken in the Institute	<ol style="list-style-type: none"> We have studied magnetoresistance in Bi_2Te_3 and GaAs materials with superconducting contacts. GaAs showed the positive resistance correction, whereas negative resistance correction was observed in Bi_2Te_3. We also observed periodic oscillations in the $dR/d B$ vs B plots in Bi_2Te_3. These periodic oscillations originate from a coexistence of proximity-induced superconductivity with a normal linear region created either by temperature or application of magnetic field. In addition at high magnetic fields ($> 2\text{T}$) and low temperatures (1.5K), we observed Shubnikov de Hass oscillations on Bi_2Te_3 magnetoresistance data. Graphene is a wonder material possessing unique properties; however, graphene prepared by exfoliation of graphite has property to restack because of van der Waals interactions to form graphite. This restacking can be prevented by insertion of large molecules like fullerene, which not only exfoliates graphite layer but also prevents restacking of prepared graphene sheets. The present article also describes a mild method of graphite oxide synthesis (GO) for lower degree of oxidation resulting in less defected (ruptured carbon framework) graphene sheets. Exfoliation is performed by intercalation of large fullerene molecules by aqueous reaction of fullerene hydroxide (fullerenol) with the epoxy functionalities on graphite oxide to prepare fullerene intercalated graphite (G-Fol). Fullerene functionalization of GO to form G-Fol has been established by FTIR spectroscopy, UV-Vis spectroscopy, TGA and number of layers has been ascertained by Raman spectroscopy, XRD and HRTEM. Stable exfoliation of G-Fol has been confirmed by change in absorbance with time. Photoluminescence property of the material is also evaluated by fluorescence emission and excitation measurement at different excitation and emission wavelengths, respectively. The present article explains a new method of exfoliation of graphite to form stable functionalized graphene layers with fewer defects for future applications as buffer layer in electronic devices.

Work done in projects undertaken in the Institute

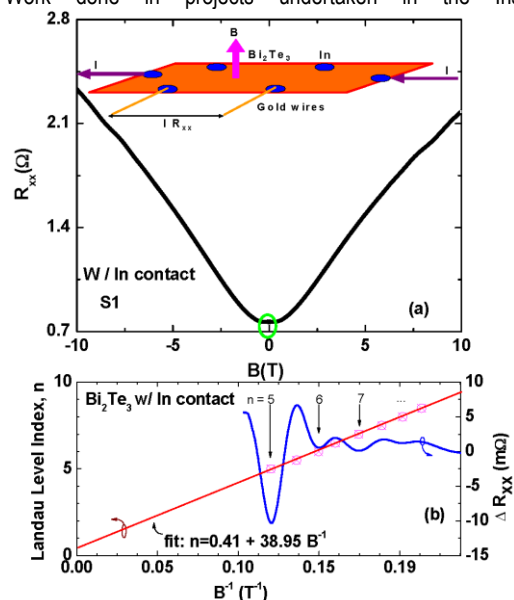
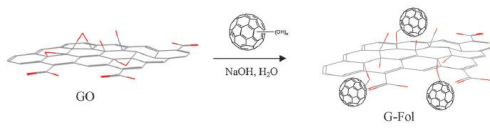


Fig.1 (a) Longitudinal resistanc (R_{xx}) of Bi_2Te_3 at 1.5 K in field range of $\pm 10\text{T}$. Inset shows the In contacts on the surface of Bi_2Te_3 flakes. Magnetic field applied along the C-axis and current is flowing within the plane (b) Shubnikov-de Hass (SdH) oscillations (after subtracting 2nd order polynomial from R_{xx}) and Landau levels with inverse of magnetic fields and red line linear fitted data.



 <p>Fig. 2 Synthesis of fullerene intercalated graphene by the reaction of GO with NaOH solution of fullerene.</p>	
<p>Training Programmes Organized (April 2013- March 2014)</p>	<p>Give names of (a). In-Campus Training Programs with duration 1ST WORKSHOP ON ADVANCE MATERIAL AND INSTRUMENTATION IN BIO MEDICAL ENGINEERING (AMIBE 2014): March 8-12, 2014, Indian Institute of Information Technology Allahabad, INDIA. (b). Off-Campus Training Programs with duration NA</p>

Dr. Ashutosh Mishra
Assistant Professor



Research Interests

Bioelectrics, Biomechanics, Learning Machines, Distributed Computation and Modeling/Simulation, Biomedical Signals & Processing

Sl.No	Subjects	Particulars
1.	Academic Achievements of the year 2013-2014	Brief Particulars: Instructed 6 courses (of which 2 were offered for the first time) Supervised two MTech Thesis of Mr. Amit Chouracia and Mr. Ashish Birla Finalized the Doctoral Thesis review of Mr. R. Periyasami of IIT Delhi.
2.	Participation in Seminars/Workshops/Conferences/Symposiums etc. during the year (Apr'2013 - Mar'2014)	National - WSB2013 - At HIT Allahabad (Organizing Member and Speaker). Title - "Neural Networks"
	Extra - Curricular activities (Apr'2013-Mar'2014)	1. Divisional Coordinator for Applied Science & Biomedical Engineering. 2. Program—Coordinator for Biomedical Engineering. 3. Faculty member for Networking Committee.

Dr. Nidhi Mishra
Assistant Professor



Research Interests

Synthetic Medicinal Chemistry and Natural Product Chemistry

Subjects	Particulars
Participation in Seminars/Workshops/Conferences/Symposiums etc. during the year	National 1. Chemistry at the interface of innovative researches in science and technology, Dept of chemistry, university of Allahabad, Feb 27-28, 2014, NO inhibitory novel flavonones. 2. National seminar on human brain, RGIT Amethi, August 20, 2014, Parenting and the brain
Training Programs Organized (April 2013- March 2014)	Give names of (a). In-Campus Training Programs with duration Member organizing team AMIBE workshop (b). Off-Campus Training Programs with duration





Research Interests

Biofilms, their applications in Bioremediation, Wastewater Treatment Systems, Catalytic Biofilms for Future Bio-processes, novel protein identification, utility of proteins in disease diagnosis, molecular detection and characterization of pathogens

Subjects	Particulars
Publications during the year	2). Publications of Articles/Research Papers in Journals/Magazines: a. National Journals b. International Journals – 01, TITLE- DECONTAMINATION OF SALMONELLA TYPHIMURIUM ON CHICKEN EGG SHELL SURFACE BY ACIDIFIED SODIUM CHLORITE AND CELL FREE CULTURE SUPERNATENT OF LACTIC ACID BACTERIA (UNDER REVIEW)
Training Programmes Organized (April 2013- March 2014)	Give names of (a). In-Campus Training Programs with duration WORKSHOP ON ADVANCED MATERIALS AND INSTRUMENTATION IN BIOMEDICAL ENGINEERING (AMIBE 2014), 11-15 MARCH 2014 (MEMBER ORGANIZING COMMITTEE) (b). Off-Campus Training Programs with duration



Specialization / Areas of interest : Business Informatics
(Decision Support Systems, Business Intelligence, Information System Strategies)

- M.C.A. & Ph.D.
- Ph.D. title : “*Exploring some Data Mining techniques for Decision Support System through efficient Knowledge Management*”-2009
(Done from R.S. University Raipur (CG) under Supervision of Prof.U. S. Tiwary of IIIT Allahabad)
- Post Doctoral Fellowship ” *Developing Information System with Business Intelligence*” done at Technical University of Kaiserslautern-Germany under Prof. Oliver Wendt of Deptt. of Business Intelligence (BISOR) in 2010-11.

3. For the past two semesters, for each course taught
(a) the course title, (b) the academic program the course belongs to (e.g., BTech, ECE)

For Current Semester: (July-Dec.2014)

- Object Oriented Methodologies (using Java)- B.Tech.(IT) 3rd Sem.
- Strategic Management & Information System strategies (MBA-IT)

For immediate Past Semester: (Jan.-May.2014)

- Database Management System-MS (CLIS)
- Expert Systems & Applications- MBA (IT)

1. Publications

1. **Research Papers (Total) : 07**
2. Paper(s) Published in Refereed Journals : 01
3. Paper(s) published in Conferences: 06
- 4.



Full reference of the Paper as:

Title of Paper	Name of the Journal	Place of Publication	Volume & Issue No.	Year	Pages from-to	Impact Factor/citation index
Analyzing and Designing Energy Efficiency in Wireless Sensor Networks	International Journal of Engineering Research & Technology (IJERT),	India	ISSN:2278-0181, Vol. 01, issue	2013		1.76 (Value is Based on IJERT CRM + Google Scholar Report)

5. Paper(s) published in Conferences

Title of Paper Presented	Name of the Conference	Name of the organizing Institution / University	Year of Publication	Name of supporting Professional Organization such as IEEE, ACM, AIMA etc.
Knowledge Management Approach with Temporal Data mining for Business Intelligence	11 th National Conference on Role of Mathematical Sciences In Science and Technology Jointly organized by Indian Society of Mathematics and Mathematical Sciences	Department of Mathematics and Statistics D.D.U Gorakhpur University	2014	Indian Society of Mathematics and Mathematical Sciences
Analysis for Problems and Challenges in Big Data using Porter's Five Force Model	11 th National Conference on Role of Mathematical Sciences In Science and Technology Jointly organized by Indian Society of Mathematics and Mathematical Sciences	Department of Mathematics and Statistics D.D.U Gorakhpur University	2014	Indian Society of Mathematics and Mathematical Sciences
Predictive Analytics of CRM using Decision Tree	11 th National Conference on Role of Mathematical Sciences In Science and Technology Jointly organized by Indian Society of Mathematics and Mathematical Sciences	Department of Mathematics and Statistics D.D.U Gorakhpur University	2014	Indian Society of Mathematics and Mathematical Sciences
Intrusion Detection Techniques: A comparative study of performances and advances.	Innovative Trends in Computer Science and Information Technology	Central College of Engineering and Management, Raipur	2014	CGCOST, Raipur
Energy Efficient Election Protocol for Wireless Sensor Networks	IEEE International Conference ICCPCT-2013	Nurullslam Center for Higher Education, KumaraCoil (TN)	2013.	IEEE Digital Library, Jul 2013

6. Ph.D. (Completed and Supervised)

a. Awarded (Yes / No)

If Yes details: (My Thesis got submitted in May 2008 and was awarded degree in August 2009)

Date of Award of Ph.D.	Topic of Ph.D. Thesis & Name of Supervisor	Name of the Awarding University/Institution	self/student
August 2009	<i>Exploring Some Data Mining Techniques for Decision Support System through efficient Knowledge Management.</i> (Supervisor- Prof.U.S.Tiwary-IIIT Allahabad)	Pt.R.S.University Raipur (CG)	Self

Post Doctoral Fellowship (DAAD - Short Research stay)	Technical University of Kaiserslautern (Germany) (Business Informatics Group)	Title: " Developing Business Intelligence for Information System"	Dec. 2010	Jan. 2011
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- b. If No, whether Registered for Ph.D. (Self or being Supervised)
Two Ph.D. Thesis Supervised, One got Submitted

Date of Registration	Topic of Research	Name of the Guide	Name of the Institution/University where registered	Likely date of submission of Dissertation	Type self/ Being Supervised
26/10/2010	Analyzing the MAC Protocols of Wireless Sensor Networks for Energy Efficiency	Dr. Ranjana Vyas	MATS University Raipur (CG)	Submitted in 13.01.2014	Supervised
Progress of Work (in 01 Page as Ann.1)					

7. Membership/Fellowship of reputed Professional Societies, if any with details

DAAD Fellowship	Government of Germany
Microsoft -MIC Coordinator	Microsoft Inc USA

Dr. Guttula.Satyavani
Assistant Professor



Subjects	Particulars
Publications during the year	2). Publications of Articles/Research Papers in Journals/Magazines: a. National Journals b. International Journals:1 International Journal: Asian Journal of Medical Sciences Acceptance in November 2013 and Publication in 6(5) 2014. Title of the Paper: Frequency Estimation of Prothrombin allelic polymorphisms in Indian Population Author: Guttula Satyavani
Participation in Seminars/Workshops/Conferences/Symposiums etc. during the year	Two day workshop on "Recent Trends in Bioinformatics" 17-18, May 2014, Visakhapatnam, Andhra Pradesh. Dr. G. Satyavani



5. RESEARCH AND PROJECTS

5.1 PROJECTS OF THE INSTITUTE

S.No.	NAME OF RUNNING PROJECT IN F.Y. 2013-14	Funding Agency	Project Cost	Period of Project
1	To Establish and Operationalize Bio-Technology (Bioinformatics) Centre--IRCB	DST	6210000	2002-14 extend up to 2014
2	Establishment of Joint Indo-Russian Centre for Bio-Technology at IIT, Allahabad	DBT	1,87,00,000	2003-14 Exted for 5 year from Oct 2008
3	Digital Library Mega Centre-Language Technology and content Development & Content Creation in Tibetan, Sanskrit & English	MIT	10500000	2009-14
4	Information Security Education & Awareness	MCIT	8251500	2006-14
5	Development of English to Indian Language Machine Translation System	MCIT	12809000	2011 - July 2013
6	Development of Indian to Indian Language Machine Translation System	MCIT	2956000	2010- Apr 2013
7	Development of Robust Document analysis and Recognition system for printed Indian Scripts (OCR)	MCIT	7170500	2010- Jul 2013
8	Allahabad Michigan University Collaborative Fund	Michigan Uni. DST	3088984	2007-14
9	Fund for Improvement of S & T Infrastructure in Universities and Higher educational Institutions (Fist Program-2007)	DST	1,40,00000	2007-13
10	Development of Algorithm Using ECG Bio-signal & Bio-Images	DST	3100000	2008-10
11	Technology Incubation and Development of Entrepreneurs (Tide Scheme)	DIT	16500000	2008-14
12	Institutional partnership project (IPP) -Centre of Excellence in Micro-Electronics & Microsystems ,EPFL, and Lausanne Under -Indo Swiss Project	DST	4159600	2009-12
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	DST	1,65,50,000	2008-2014
14	Establishment of North Zone Resource Centre of Generating Contents,Mentors,Teachers etc.by Conducting Specialized short term HRD Courses for IT/ITES Sector	MCIT	5,00,00000	2008-12
15	Methods for Compensation & Localization of Interferences in Ultra wide-band wireless Sensor Networks	DST	2503960	2009-2012
16	Setting UP of an ASEAN -INDIA Science & Technology Library	19150	\$'729753	2009-12
17	Allahabad High Court Digitalization Project	19150	51100000 (For Two Year)	2012-2017
18	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	DST	5397620	2009-13
19	Development of a Neuron like system for Real Time Visual Object Detection	DST	2884040	2009-12
20	Development of a Computer aided Microscopic pool for structural deri-vation of pathologically significant proteins	ICMR	2683391	2010-13



21	National Mission on Education through Information & Communication Technology (ICT)	MHRD	1,50,00000	2009-2011
22	Development of new method and algorithms to identify exon-intron boundary and finding signatory signal pattern for genetic abnormalities like autism-(A-8.25)	DST	2070860	2010-13
23	Inspire Awards-2010	DST	73000000	2009-10
24	Disaster Management system for large scale deployment of sensor network using a fault tolerant mechanism	DST	15847800	2011-14
25	Army Technology Board-Network simulation Testbed at MCTE,MHOW	CDA Jabalpur	1444000	2011-14
26	DISTRIBUTING INDUSTRIAL OPTIMIZATION TASKS TO RURAL WORKER - INDO UK BURD PROJECT	DST	6088130	2012-14
27	Indo-US project Wireless Sensor Network (WSN) for protecting Wildlife and Humans	DietY	8100000	2012-14
28	Topological Materials and Application Science and Research Board	DST	2330000	2012-15
29	Indian Oil Corporation Ltd	IOCL		2010-15

5.2 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 prephenolic 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 pfGC5941 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-Glucopyranonose (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 moth old wheat callus with leaf like green spots; (c) Shots regeneration on MS basal Medium from callus; (d) Vector map of pfGC5941with 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. “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 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 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)

10. 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.

11. 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

12. 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).

13. Development of robust document analysis and recognition system for Indian Scripts – Nepali and Tibetan

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 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.



14. 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, 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



5.3 PROJECTS BY RESEARCH SCHOLARS

COMPUTATIONAL APPROACHES TO STUDY THE HOST-PATHOGEN PROTEIN-PROTEIN INTERACTION AND THEIR APPLICATION

Objective: -

This work is focused on prediction of new drug targets for pathogen infections like Malaria and HIV that would be of great utility for humanity, as there is a large need to develop new drugs to fight against these serious diseases.

Current drug targets for pathogen infections involve only a single protein. However, proteins rarely act in isolation, and the majority of biological processes occur via interactions with many proteins, so protein-protein interactions (PPIs) offer a realm of unexplored potential drug targets and are thought to be next-generation targets for drugs.

Problem Definition:-

1. Studying of Various Host-Pathogen protein-Protein interactions.
2. Finding of new potential drug targets with the help of Host-Pathogen protein-protein interaction networks.
3. In silico drug designing against the predicted potential drug targets.
4. In-vivo synthesis and testing of predicted drugs against various pathogens.

Summary of Work: -

1. Protein networks studies, with a focus on Protein-Protein Interactions (PPI).
2. Recent approaches to create disease-related host pathogen proteins interaction networks.
3. Protein-Protein Interactions information linking with other Omics data.
4. Through PPI studies novel pivot proteins will be identified and their 3D-models will be generated for analysis.
5. 3D models will be used for docking and based on docking studies drug and peptide designing will be carried out.
6. Predicted drugs and peptides will be synthesized and tested on the various pathogens.

Name of Supervisor:

Dr. C. V. S. Siva Prasad

Name of Research Scholar:

Kamal Kumar Chaudhary

Roll No.: RS107

Name of Division where working:

Division of Applied Sciences and IRCB

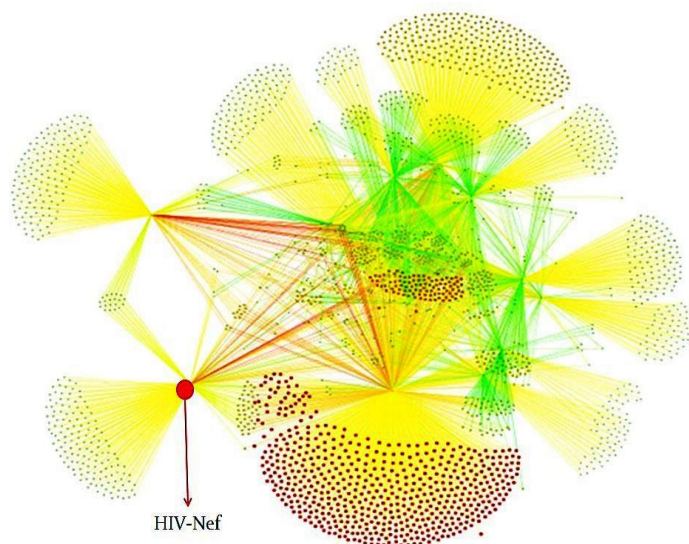


Fig.1: Showing HIV-Nef in HIV-1 & Human PPI Network drawn on Cytoscape

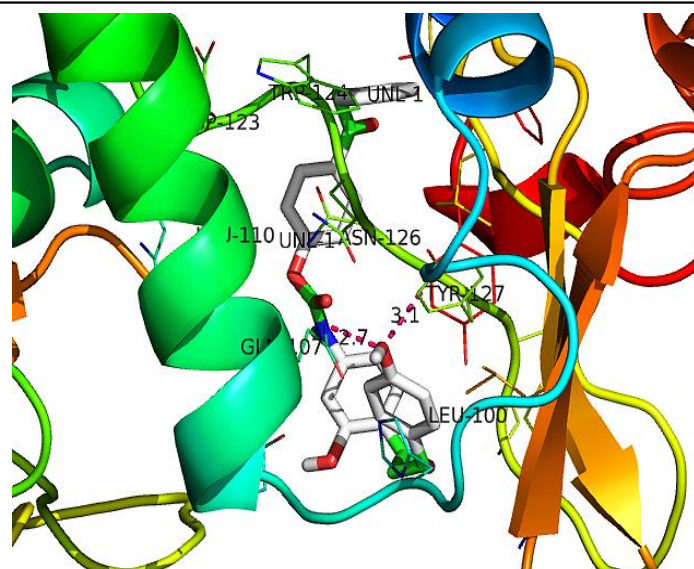


Fig.2: Docked Structure of top Ligand and target protein

QUANTIFICATION OF READERS' VISUAL ATTENTION ON DIGITAL TEXT DOCUMENTS TO ANALYSE 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.

Name of Supervisor:

Prof. R. C. Tripathi.

Name of Research Scholar:

Santosh Kumar Barnwal.

Roll No.:

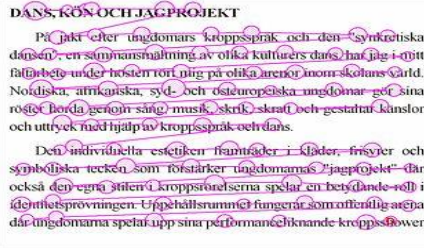
RS128 (session 2012-13)

Name of Division where working:

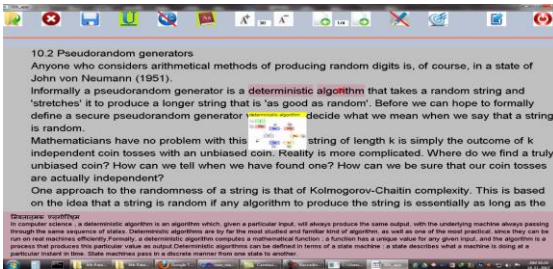
IT DIVISION



EyeLink 1000 at SILP Lab in IIIT-A



Eye-movement during reading



Displaying related information



Displaying Questions for comprehension



Analysis of multisensory images in remote sensing

Analysis of remote sensing images plays a vital role in various application domains such as Defence, Agriculture, and Urban planning and so on. The study of earth characteristics is not an easier one it's been always a challenging one because of the rapid changes in the earth surface day by day. This particular reason makes me to work on these with greater eagerness. Although we have different types of images interpreting from a single image will never give exact or high proportioned outputs but we will achieve these by combining the images for interpreting the required information precisely. The analysis always gives a positive recognition in interpretation. In our proposed system we are going to analyze the remotely sensed images and the combinations of those images to get a concise outputs and further comparisons.

Name of Supervisor: Prof.AnupamAgrawal

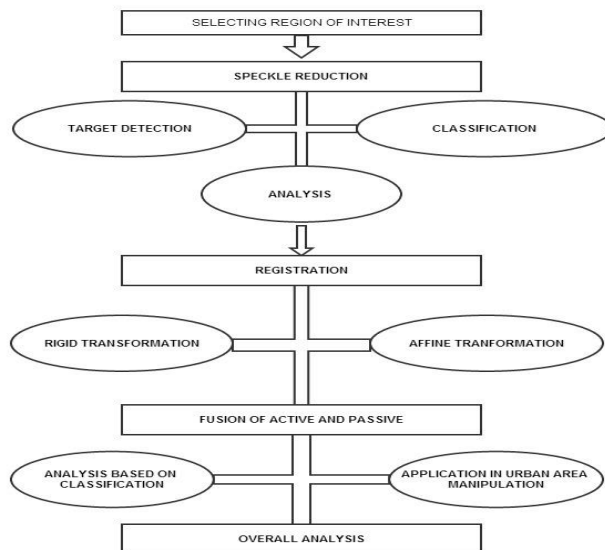
Name of Research Scholar:Mangalraj.P

Roll No.: RS 133

Name of Division where working: IT



Proposed work flow



Title of the Thesis / Research Project



Robust Image Feature Description, Matching and Applications

Brief Note on the Project and its Outcome

1. Work done so far

1. The image retrieval is still challenging to retrieve the most similar images of a given image from a huge database more accurately and robustly. Most of feature descriptor having better retrieval performance degrades in the case of illumination change. To circumvent this problem, we compensated the varying illumination in the image using multi-channel information. We used red, green, blue channel of RGB color space and I channel of HSI color space to remove the intensity change in the image. Finally, we designed an illumination compensated color space to compute the feature descriptor over it. The experimental results suggest that proposed brightness invariant color transformation can be applied effectively in the retrieval task.

2. Future work plan

Most of the descriptors are designed to be invariant to a certain type of transformations and if we apply these descriptors into a different scenario it fails even if the amount of transformation for which it is designed increases its performance decreases rapidly. We are focusing on the designing of such a descriptor which can be used in multiple type transformations such as rotation, scaling, illumination difference, etc.

Name of Supervisor: Dr. Rajat Kumar Singh

Name of Co Supervisor: Dr. Satish Kumar Singh

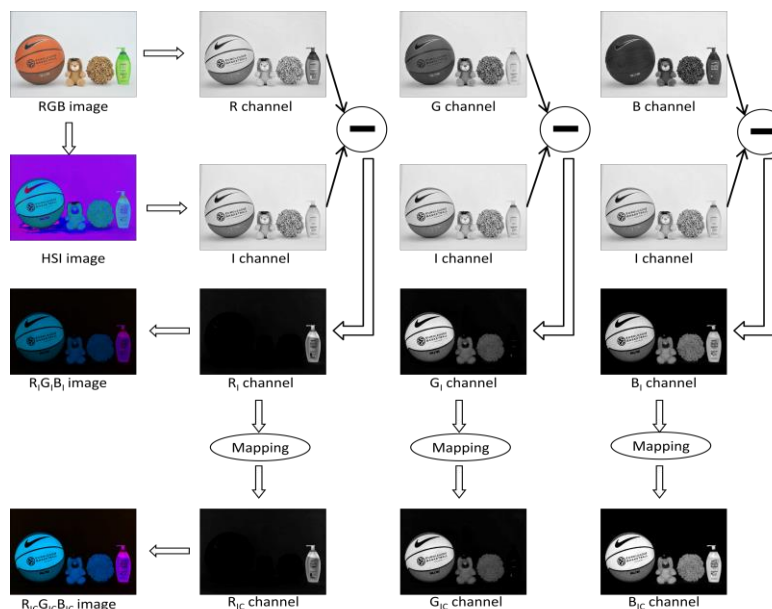
Name of Research Scholar: Shiv Ram Dubey

Roll No.: RS136

Name of Division where working: ECE

Images of active Research being done / Labs etc.

Work flow of illumination compensation in $R_I G_I B_I$ color space



Self-Photograph



Title of the Thesis / Research Project “Cloud enabled Robots”

Brief Note on the Project and its Outcome

Cloud enabled robots is one of the developing area. As one might visualize, instead of depending on "in-house" resources, robots can potentially leverage the cloud architecture to deliver instant information and to handle computationally intensive tasks that may not be promising due to the limited on board computational devices of the robot. Tasks such as vision processing and mapping are indeed computationally intensive. It is not cost feasible and is also unnecessary for the heterogeneous team serving robots to move with an on board large computational device. There are number of limitations of the conventional robot like Embeddedsystems / Robots have limited capacity to carry programs that handle all possible situations; Unforeseeable environmental situations can occur; Faults can occur and without on-site repair; The users want to modify the system (requirements) without stopping the system. Building a global map to avoid replication of exploration of the same environment resulting in wastage of time and increase in the inefficiency of the system by new introduced robots in the environment is one of the examples of cloud-enabled robots. Therefore, the major feature of my research involves the development of a framework that would enable heterogeneous robots to share data, upload them to the cloud for processing of computationally intense algorithms and can make the access to the web to behave intelligently.

Name of Supervisor:

Dr. Pavan Chakraborty

Name of Co Supervisor: NA

Name of Research Scholar: Rajesh Doriya

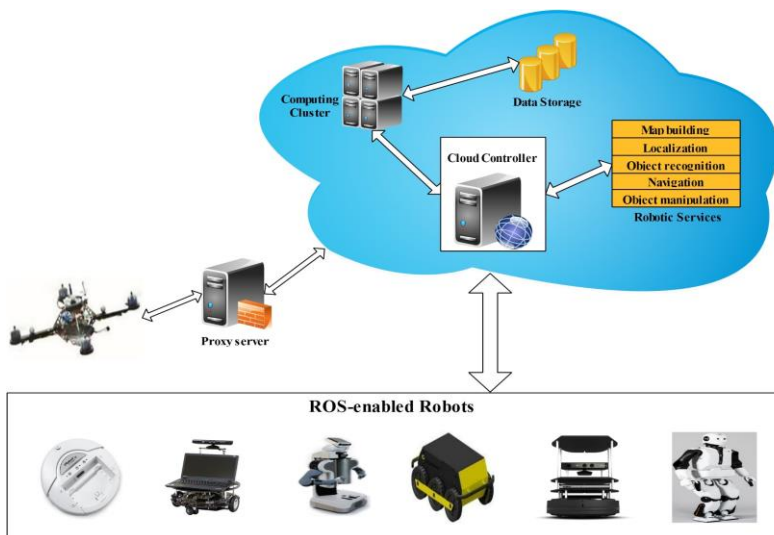
Roll No.: RS69

Name of Division where working: IT

Self- Photograph



Images of active Research being done / Labs etc.



Gold & Inflation Relationship: An Analytical Perceptive

Inflation is prevailing at high levels in many developing countries like India. It is the most important concern of the people as it badly affects their standard of living. The conclusion of the study should provide with analytical insight into the strategic value that the gold possesses in the period of inflation. It would measure the impact of gold in reducing the inflationary pressures on the economy. Further, it would help investors through a technological framework, to derive the level of investment (%) into commodity such as gold, in order to reduce the negative effects of inflation. The study proposes to draw the kind of relationship between gold & inflation, based on the analysis a model/prototype would be developed that facilitates the calculation of inflation percentage along with restoring mechanism keeping gold as catalyst to arrest & combat with the normal inflation range in various situations of inflation, deflation/recession or the case may be.

Literature Review and component analysis has been completed and currently working on development of the financial model in accordance to the research topic using time series data on the Indian Economy

Name of Guide / Faculty:

Dr. Anurika Vaish

Name of Research Scholar:

Purav Parikh

Roll Number:

RS 120

Name of Division where working:

MANAGEMENT DIVISION

Chart: Gold and MSCI India in INR (2 Sep 2002=100)



Users group Identification through internet usage in Cyberspace

Brief Note on the Project and its Outcome

The cyber security itself is a vast area consisting of many issues like cyber bullying, Identity Theft, Child pornography, etc. Out of the number of issues, the child protection from cyber bullying is one of the important aspects to bring the usage of the future Internet towards right direction. In this research we are trying to identifying the user group over the internet while they are accessing the internet with the help of their usage pattern.

The proposed research can be envisaged as very significant problem for the India in identifying and protecting children in cyberspace and also obtain the benefits out of those researches. The lacks of dedicated techniques that can be used for efficiently manage the protection of child in cyberspace. Use of internet can increase to the child victimization and harm to their mental status and by providing this solution like identification of child user group over the internet, the children, parents as well as cyber world would be benefited specially in India.

Name of Supervisor: Dr. Shirshu Varma

Name of Co Supervisor:

Dr. Abhishek Vaish

Name of Research Scholar:

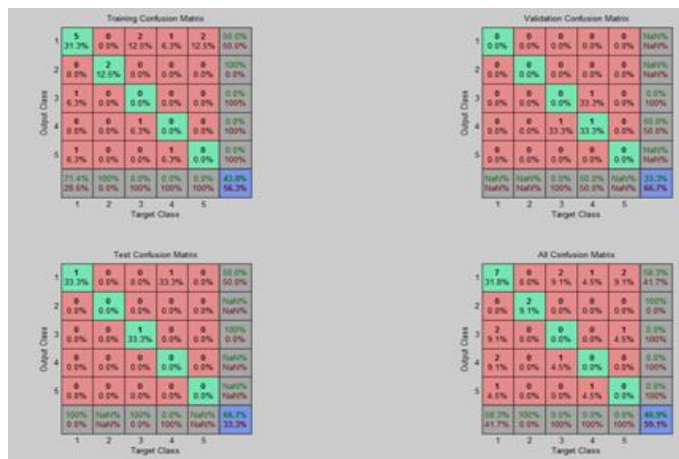
Satya Prakash

Roll No.: RS79

Name of Division where working:
Cyber Law and Information Security



Images of active Research being done / Labs etc.



Above confusion matrix simulates teen's data to know the pattern and addition level of internet use



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



Title of the Thesis / Research Project = Exploration of Flexible Service Oriented Network Architecture for Wirelss Sensor Network

Brief Note on the Project and its Outcome

There has been an increase in software and hardware resources for the current applications of Wireless Sensor Network and effort has been carried out to fulfill the future unseen demands by the research and scientific communities to provide way for the innovation in this area. Current Wireless sensor network is designed for specific applications with tightly coupled architecture but future Wireless Sensor Networks are envisioned to comprise large number of heterogeneous services for wide range of applications. A new flexible architecture is required, having support to unforeseen demand of applications and users. Therefore we propose a service oriented model based architecture “Flexible Service Oriented Network Architecture for the wireless sensor networks”. The proposed architecture provides the facility to the developer and scientific communities for the development or innovation of service in sensor network without worrying about the difficulty of change in current tightly coupled architecture. As a part of our research work we have done the implementation of localization method for sensor network as a service.

Name of Supervisor: Prof. O. P. Vyas

Name of Co Supervisor:

Dr. Shirshu Varma

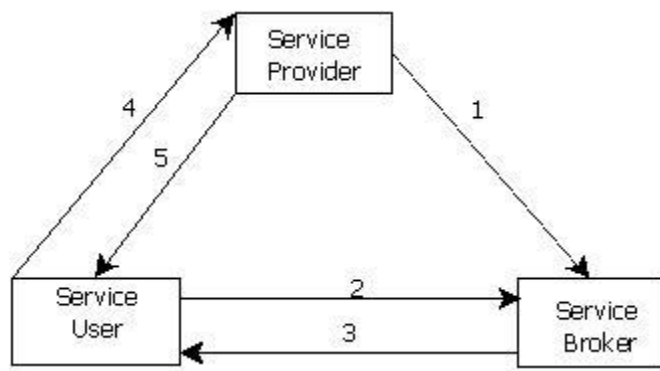
Name of Research Scholar:

Akhilendra Pratap Singh

Roll No.: Rs-112

Name of Division where working: IT

Images of active Research being done / Labs etc.



Service Oriented Model



Trust Based Modeling and Prediction of Socio-Technical Attack in Cyberspace

Brief Note on the Project and its Outcome

Socio-technical attack is an organized approach which is defined by the interaction among people through maltreatment of technology with some of the malicious intent to attack the social structure based on trust and faith. In the huge and complex social network formed using cyberspace or telecommunication technology, the identification or prediction of any kind of socio-technical attack is always difficult.

This challenge creates an opportunity to explore different methodologies, concepts and algorithms used to identify these kinds of community on the basis of certain pattern, properties, structure and trend in their linkage.

Name of Supervisor:

Dr. Abhishek Vaish

Name of Research Scholar:

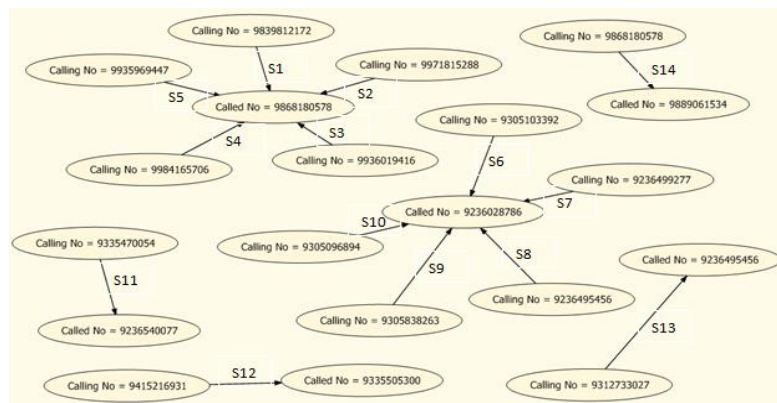
Preetish Ranjan

RS105

Name of Division where working:

Department of Information Technology

Apriori algorithm over the Call Detail Record



Dynamic Spectrum Access and Management in Cognitive Radio Networks

Nowadays everyone involved in designing next generation of wireless networks. With spectrum becoming a never-scarcer resource, it is critical that new systems utilize all available frequency bands as efficiently as possible. In my research work, we would like to put up milestone for the cutting edge of future wireless communications.

Dynamic Spectrum Access and Management in Cognitive Radio Networks gives the user to use such type of flexible device by which they can use dynamic spectrum access methods, scheme.

Frequency spectrum is a limited resource for wireless communications and may become congested owing to a need to accommodate the diverse types of air interface used in next generation wireless networks. To meet these growing demands, the Federal Communications Commission (FCC) has expanded the use of the unlicensed spectral band. However, since traditional wireless communications systems also utilize the frequency bands allocated by the FCC in a static manner, they lack adaptability. Also, many studies show that while some frequency bands in the spectrum are heavily used, other bands are largely unoccupied most of time. These potential spectrum holes result in the under-utilization of available frequency bands. In fact, cognitive radio based on dynamic spectrum access has emerged as a new design paradigm for next generation wireless networks. Cognitive radio aims at maximizing the utilization of the limited radio bandwidth while accommodating the increasing number of services and applications in wireless networks.

Name of Supervisor: Prof. U. S. Tiwari

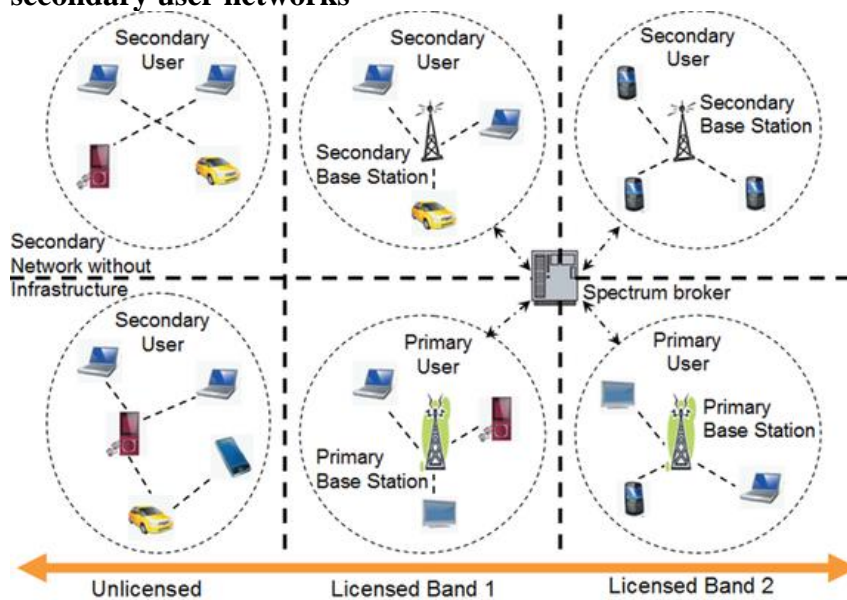
Name of Research Scholar: Amit Kumar Gupta

Roll No.: RS 123

Name of Division where working: IT



A cognitive radio network architecture with primary and secondary user networks



Exploring Linked Open Data Cloud Mining

ONE-TWO PARAGRAPH WRITEUP

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

THE IMAGE OF THE LOD CLOUD [30] - THIS IMAGE SHOWS DATASETS THAT HAVE BEEN PUBLISHED IN LINKED DATA FORMAT, BY CONTRIBUTORS TO THE LINKING OPEN DATA COMMUNITY PROJECT AND OTHER INDIVIDUALS AND ORGANIZATIONS.

EXPERIMENTAL DATA

- **DBpedia**: cross-domain, 3.5 million things, 8.9 million URIs.
- **Geonames**: geographical domain, 7 million URIs.
- **NYTimes**: media domain, 10,467 subject news.
- **LinkedMDB**: media domain, 0.5 million entities.

THE PROPOSED MODEL

ROLE OF “LDIF API” [17] WITHIN THE ARCHITECTURE OF A LINKED DATA APPLICATION



Combining Data Mining and Ontology Engineering for knowledge Discovery

One of the challenges in information retrieval is providing accurate answers to a user's question. The user query analysis can be done in much the same way as syntax analysis is (based on key words) but to reach appropriate answer Semantic analysis (based on meaning) is required for question answering. The Ontology plays a vital role in understanding such ambiguous user questions and help retrieve appropriate answers. Ontology represents information in the Semantic approach rather than Syntactic approach. Ontology provides bridge between Application and Data. Ontology is used for knowledge sharing and reuse. Ontology represents knowledge in a graph conceptual diagram where each node show either document or word. This project deal with proposing an appropriate search methodology based on ontology engineering for semantic information retrieval.

A framework for exploring Knowledge Discovery by implementing working effective search methodology based on semantic ontology using fuzzy logic concepts. To find Search Methodology which retrieve accurate result as per user's query. Semantic based answer retrieval system rather

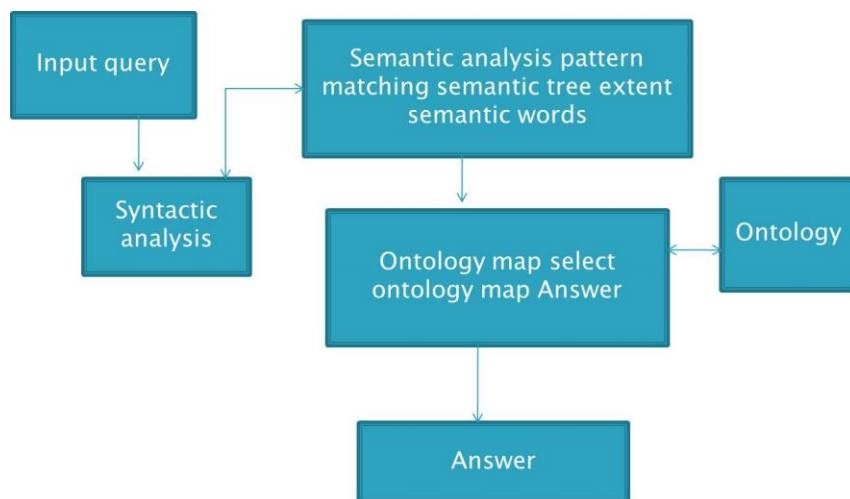
Name of Supervisor: Prof. Dr. O. P. Vyas

Name of Research Scholar: Monika Rani

Roll No.: RS 130

Name of Division where working: IT

Architecture of Ontology based System



Title of the Thesis / Research Project

SKILL GAP IN INDIAN IT SECTOR

Brief Note on the Project and its Outcome

As compared to other sectors, IT sector has grown brilliantly worldwide. Software industry is basically a service based sector where the caliber of any organization depends on the competency of its workforce. . Thus, to meet global challenges and growth in the highly competitive global market, IT industry must employ and retain people with sufficient knowledge and skills, but with outburst of opportunity in IT sector, availability of skilled and experienced manpower is a major HR issue. My study mainly deals with two questions:

1. What are the major skill gaps (if any) of software industry pertain to human resources?
2. How and to what extent this issue can be addressed?

**Name of Supervisor: Dr.Vijaishri
Tewari**

Name of Co Supervisor:

**Name of Research Scholar: Richa
Singh Dubey**

Roll No.: RS134

**Name of Division where working:
MBAIT**

Self-Photograph



Title of the Thesis / Research Project: Predictive Data Mining in Healthcare

Brief Note on the Project and its Outcome

Healthcare industry generates large amounts of complex data about patients, hospitals resources, disease diagnosis, electronic patient records, medical devices etc. The large amount of data is a key resource to be processed and analyzed for knowledge extraction that enables support for cost-savings and decision making. Data mining brings a set of tools and techniques that can be applied to this processed data to discover hidden patterns that provide healthcare professionals an additional source of knowledge for making decisions. The huge amount of data involved in healthcare organization makes the usage of data mining techniques very promising. One of the most significant challenges of the data mining in healthcare is to obtain the quality and relevant data. It is difficult to acquire the precise and complete healthcare data. It contains several missing values and noises. Before applying data mining techniques in healthcare data it is essential to perform some pre-processing techniques. The presented research is concerned with classification tasks and related issues which may appear in patients records such as incomplete information, irrelevant and/or redundant pieces of information and imbalanced class. This research proposed a Weighted Least Square Twin Support Vector Machine (WLSTSVM) to handle class imbalanced problem which is very common in healthcare data and its performance is also evaluated against 5 benchmark datasets. This research also proposed a novel Multiclass Least Twin Support Vector Machine classification approach which can produce promising results with healthcare dataset. The focus of this research is to develop a predictive healthcare model that will not only improve its performance in terms of accuracy and other performance evaluation parameters as well as will handle real healthcare data problem. A disease diagnostic model by using improved TSVM will be the outcome of this research project.

Name of Supervisor: Dr. Sonali Agarwal

Name of Research Scholar: Divya

Roll No.: RS-140

Name of Division where working:
Information Technology



Title of the Thesis / Research Project “Study of Multimedia Broadcast & Multicast Techniques for Modern Wireless Network”

Brief Note on the Project and its Outcome

Multicasting is emerging as an enabling technology for multimedia transmissions over wireless networks to support several groups of users with flexible quality of service (QoS) requirements. Although multicast has huge potential to push the limits of next generation communication systems, it is however one of the most challenging issues currently being addressed. Once this aspect is resolved through modification it will ultimately improve other aspects related to it like throughput, robustness, quality of service etc.

Thus the sheer motivation is to improve the multicasting technique so that it can better facilitate the flow of data thus improving the quality of services like multimedia, video conferences, sharing of files etc.

So the first aspect is to know exactly the types of multicasting technique and the second step is to exactly find the ways and means to improve the multicasting technique in wireless environment and the last step is to design and implement those techniques in desired wireless scenario to better facilitate the services such as multimedia.

Name of Supervisor: Dr. Neetesh Purohit

Name of Co Supervisor: NA

Name of Research Scholar: Purnendu Shekhar Pandey

Roll No.: RS-141

Name of Division where working: IT



Thesis Title

“Receptor Based Computational Studies on Designing Novel Drugs for Combating Cancers”

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 derivatives / analogues against this deadly disease by using structure and ligand based hybrid approach.

Name of Guide / Faculty:

Prof. (Mrs.) Krishna Misra

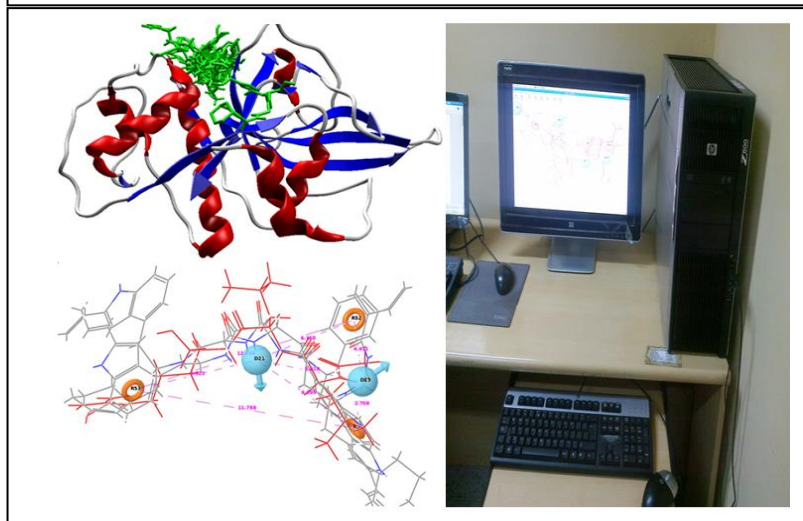
Name of Research Scholar:

Rajesh Kumar Kesharwani

(Roll No.): **RS68**

Name of Division where working:

**(APPLIED SCIENCE AND IRCB
DIVISION)**



ANALYSIS OF COMMODITY MARKET & PRICE FLUCTUATIONS IN NON-FERROUS METALS: A STUDY FOR HEDGING RISK

The aims, objectives and methodology of the research are briefly summaries:

- To analyze the market trend of the precious metal especially gold, platinum and silver.
- To study the price volatility of the precious metal this causes the fluctuation in the market during the past decade in the global market.
- Suggest a mathematical model/framework for hedging one of the various risks like exchange risk, volatility risk and political risk etc.
- In addressing this gap in knowledge, this study employs the empirical research methodology, although select the comparative as well as quantitative approach for doing the research.
- The study is being conducted in the India because this country is very well known for the precious metal reserves all over the world especially for gold and silver. And in the last decade India purchase 200 tonnes of gold which shows the potential for the investment in the country in the globe.

The research is on-track in terms of duration. Significant work has been made in writing the research paper related to the work. Although many challenges have been encountered during the past 27 months especially data generation and gathering.

Name of Supervisor:

Prof. Anurika Vaish

Name of Research Scholar:

Kavita Singh

Roll No.: RS116

Name of Division where working:

Finance and IT



Fiber Optic Sensing Systems for the Intrusion Detection, Localization and Classification with regard to Human & Wildlife

Fiber optic sensors are widely used for sensing and security applications. A Sensing fiber optic system has been developed and tested for intrusion detection to protect wild animals and forest wealth. The systems is kind of a virtual fence, an invisible underground fully distributed sensor which can operate in various environment noise conditions to avoid human – animal conflict at boundaries at villages within the forest.

Designed, developed and tested detection system based on interferometer technique for intrusion and animal movement. The main advantage of the proposed system is its simplicity and low cost. Two arms of the interferometer are buried in the soil. This ensures that the vibrations/pressure caused by trespassers or animal are transferred differently to each of the interferometer’s arms, significantly altering the signal by a number of periods. Gait analysis of the detected signal is compared to predefined samples that resemble a typical intrusion in a protected area. Localization and the classification of different animals is in progress.

Name of Supervisor:

Prof.M.Radhakrishna

Name of Co Supervisor:

Prof.B.R.Singh

Name of Research Scholar:

Philip B.Kassey

Roll No.: RS137

Name of Division where working:

Electronics & Communication
Engineering

Experimental results

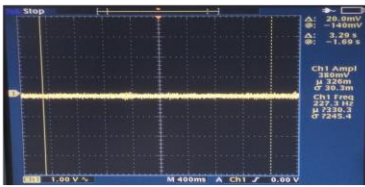


Fig 1:Signal shows without intrusion

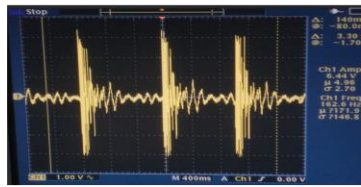


Fig 2:Signal shows intrusion while running

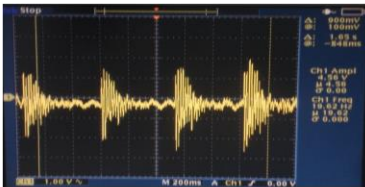


Fig 3:Signal shows intrusion while jaggung

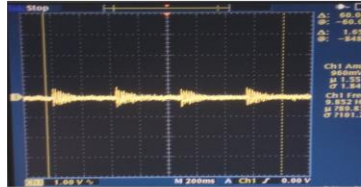


Fig 4:Signal shows intrusion while walking



Fiber Optic Sensor Cable Deployment at Chhatbir Zoo & Panna



Coupled Attacks in WiMAX Network Security

Brief Note on the Project and its Outcome

Worldwide-Interoperability for Microwave Access (WiMAX) is an emerging wireless technology which provides higher data transmission rate (70 Mbps) with a broad coverage (30 miles). Like other wireless networks, WiMAX network protocol layers are also sophisticated to many of the security flaws. Many of the vulnerabilities in WiMAX networks have been solved with the evolutions of WiMAX extension. However, there is a need of incorporated view of all security solutions and comparisons of those solutions.

Proposed research work includes the coupling of WiMAX Network attacks. Collaboration of multiple attackers (with synchronized activities) may accomplish disruption against the targeted network systems. Combined efforts of many attackers may be more destructive to the network security.

Some of the examples of coupled attacks are discussed below:

- i. Coupling of Scrambling and Water-Torture Attacks
- ii. Coupled Slammer Worm and SYN Flood attacks
- iii. Coupled Sybil Attacks
- iv. Cyber Attacks in Multi-Steps

Name of Supervisor: Dr. Vrijendra Singh

Name of Research Scholar: Vinod Kumar Jatav

Roll No.: RS 142

Name of Division where working: IT

Images of active Research being done / Labs etc.

Currently I am working on simulation of WiMAX Network on NS-3 Simulator.

Self-Photograph



6. The Infrastructural development

6.1 Infrastructural Facilities

The Jhalwa campus includes **three Computer Centers with several labs each, lecture halls, a newly built auditorium, electronic library, and a residential campus.** Various other facilities are under development. **The NSC complex** includes five laboratories, eight computer laboratories, five lecture halls, a conference room, auditorium, library, cafeteria, office space and other facilities. The total covered area is about 25,000 sq. ft. Besides this, there is an open space of 50,000 sq. ft. that is used for parking, lawns and sporting activities.

The new campus has been developed on **100 acres of land at Devghat, Jhalwa, on the outskirts of Allahabad.** 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.**

Penrose Geometry

This grid was chosen because the process of constructing a "**Penrose Universe**" has a remarkable congruence with the fundamentals of information theory. The basic units of information are aggregated in simple or complex sequences to provide a variety of "information structures" that span the entire range of human activity.

Sprawling on 100 acres lush green lawns and expanse of rich flora and diverse 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 IIT-Allahabad.

Elements of the new campus

Within the Penrose layout for the campus, a central zone has been marked out for the academic core consisting of an administrative building, lecture theater complex, electronic library, computer laboratories and research facilities. The sun pattern has been chosen for laying out the library and the lecture hall complex. The computer laboratories and the administrative buildings are **derived from selected tessellated blocks in the star pattern.** The lecture theater complex has **pentagonal lecture halls seating 100 students.** Multimedia labs, tutorial rooms, faculty rooms, language labs and meeting rooms are also included. The basement of the building contains the air-conditioning plant and other service machinery.

Also present is an **electronic library that provides students with connectivity to the latest technological material** through networked workstations. There will be a total of 140 systems distributed over two floors. Reading space is provided at convenient locations. The central portion has computer labs, while the arms of the building house faculty rooms and classrooms. The building has three levels, with an **area of approximately 3820 sq.m. The total covered area in the academic campus is approximately 15,600 sqm.** Dholpur stone and rough cast plaster are the two main finishes chosen for the building exteriors.



Sports facilities are located within the main campus, with a **500-seat sports complex**.

This infrastructure is proposed to accommodate the needs of the institute for **more than a decade**. The students have access to a **regular bus service from the Jhalwa campus to central Allahabad (the Nehru Science Centre campus)**. The bus service also covers the Naini and Civil Lines areas. The residential campus consists of a mens" hostel with **capacity for 240 students, womens" hostel for 60 students, 40-room air-conditioned guest house and staff residences for senior professors and other staff**. Faculty hostels with two-room and one-room units meant for visiting professors are also be provided.

There are separate hostels for men and women, with single rooms (for the senior most batches) and twin sharing rooms. The spacious accommodations are provided with computers, along with **24-hour backup power supply. The hostel mess caters to the students' meals. Facilities for recreation and sports like cricket, football, badminton and table tennis** are available with more on the way.

Salient Features in brief

- 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

- IIIT- Allahabad is the first academic campus in the country to implement.
- (BPL) (Broadband over Power Line) .

Sports: IIIT-Allahabad has an excellent physical activity infrastructure for its residents to ensure that academic development is duly supplemented by sufficient physical development as well. A good football ground – complete with spectator stands serves as the principal venue for most of the sports events organized by “Spirit” – the sports club of IIIT-Allahabad. A duly marked athletic track circumscribing the ground serves to provide for a safe track for not only the athletic events – but the early morning joggers as well. Aquatic sports are catered to by a 25*12m swimming pool that is maintained to strict hygiene standards. The institute also provides flood lit basketball, tennis and squash courts to ensure that students have sufficient venues to engage in games of their choice. To further complement these venues, the air-conditioned Student Activity Center (SAC) also houses a table tennis facility along with a billiards room for those interested in indoor activities.

Health Facility: The health center of the institute is a 24×7 functional body that provides OPD care and first aid facilities for the residents where prompt treatment for ailments and small wounds can be availed. A multi-bed hospital meant for admitting students with greater illness is also maintained. Facilities like ECG and Pathology for basic routine tests on weekdays are also available and can be availed as per need.

The Medical Claim and Accidental Insurance Policy (MCAIP) ensure timely hospitalization and the best of treatments available for the students. An ambulance meant for transporting patients from institute to Nazareth Hospital and SRN Hospital in case of major illness or emergency is available round the clock. Homeopathic treatment is available on selected days. The students are required to reveal their medical history of any type and nature such as asthma, epilepsy, HTN, diabetes or any other chronic illness, during the time of admissions so that proper treatment and care can be provided to them during emergencies or otherwise. A team of well qualified doctors headed by CMO Dr. R Dayal, ensure the best of health care for the residential students.

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.

Networking

IIITA has a well established network infrastructure both for the local (LAN) as well as access to the internet. It is a medium-size network and approximately consists of 2000 nodes. The internal design is powered by providing dedicated wired as well as shared wireless network to every node in the campus. The network spans through every building on the campus using optical cables where high quality equipments (including layer 3 managed switches) have been installed ensuring a high speed intranet access during all hours of the day. The internet is facilitated by a dedicated link from National Informatics Center of 250Mbps bandwidth including a redundant wireless link of 10Mbps to ensure connectivity in case of technical breakdown. A centralized server room in the lecture theater monitors all network behaviour and facilitates distribution of the secure network to the entire campus. The IIITA network



infrastructure is sophisticated and uses cutting edge technologies.

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.

Hardware: Computer laboratories and the administrative buildings are derived from selected tessellated blocks in the star pattern. Out of IITA'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.

INFRASTRUCTURE DURING XIth PLAN

Item of Expenditure	Particulars		
	Sl. No	Detail	Occupancy
Hostels (no. of seats created) (1280 - Ann-01)	IIT-A Jhalwa & RGIIT-A Campus		
	1.	Girls' Hostel - I	52
	2.	Girls' Hostel - II	88
	3.	Girls' Hostel - III	248
	4.	Boys' Hostel - I	264
	5.	Boys' Hostel - II	264
	6.	Boys' Hostel - III	264
	7.	Boys' Hostel - IV	352
	8..	Married Scholar Apartments	50
	9.	Boys' Hostel(Amethi)	218
	10	Girls' Hostel (Amethi)	60
	8.	TOTAL	1780
Faculty housing (no. of units by type created)	Type	Sqm.	Quantity
	A	55	08
	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
	Computer Centre - 3	30 Labs, 12 Lecture Halls & 35 Faculty Rooms
	Computer Centre - 1 <i>(Top Floor)</i>	02
	Computer Centre - 2 <i>(Top Floor)</i>	02
	Lecture Theatre <i>(Top Floor)</i>	02
Library facilities	CD-ROMs, Online databases, audio-video cassettes, books, e-journals, patents, e-standards, theses, project reports and Newspapers etc.	
Technology infrastructure and facilities	Swimming Pool	
	Auditorium	
	1) Pavilion 2) Volleyball Court 3) Lawn Tennis Court 4) Athletic Track	
	Squash Court	
	Cafeteria	
	1) Health Centre 2) Bank & Post Office 3) Telephone Exchange 4) Shops, Dormitory 5) Student Activity Centre	
	(RGIIT-Amethi) 1) Auditorium 2) Canteen	
Others	A. Computer Centre - 3 1) Lecture Halls 2) Faculty Rooms 3) Meeting Rooms 4) Laboratories 5) Essential Services Rooms	



	B. Director's Residence & Camp Office
	C. HVAC & associated work
	D. Internal Furnishing for academic buildings, Hostels and Auditorium
	E. Office equipments
	F. Upgrading of Internet & Wi-Fi Facilities
	G. Sewage Treatment Plant
	H. Spillover of 10 th Plan
	I. Expenditure towards Ongoing Constructions 1) Boys' Hostel - V 2) Residences Type II, III, IV

More Constructions

Name of the Building	Covered Area (in Sq.m.)
Boys' Hostel - V	19836.0
Girls' Hostel - III	10607.0
Additional Residences (54 nos.) [Type - I (06 nos.) Type - II (16 nos.), Type - III (20 nos.) and Type - IV (12 nos.)]	6424.15
Extension of Administrative Building	3660.00
Construction of Community Centre	705.00
Construction of Security Office cum Reception Complex	150.00
Construction of Bus Stops at Campus	186.00
Construction of 69 no. 4-wheeler and 109 no. 2-wheeler parking place at CC-3 building	1270.00
SUBTOTAL (ii)(c)	42838.15

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
	TOTAL			2325

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 suits), 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	10 20 10 - 28 02

More Residential Accommodation				
Sl. No.	Type of Quarter	Area	No. of Quarters approved by the Board	No. of Quarters constructed in First Phase
1.	Type – I	55 Sqm.	12 (2 blocks)	06
2.	Type – II	85 Sqm.	32 (2 blocks)	16
3.	Type – III	100 Sqm.	40 (2 blocks)	20
4.	Type – IV	120 Sqm.	24 (2 blocks)	12
5.			108	54



Classroom Infrastructure

1	Campus area in acres	100 Acres
2	Total number of class rooms - 32 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 - 108 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 - 72 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

6.2 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 GoI. Accordingly the lab has been developed to become one of the best labs with up-to-date facilities in Microelectronics.



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.

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.

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.

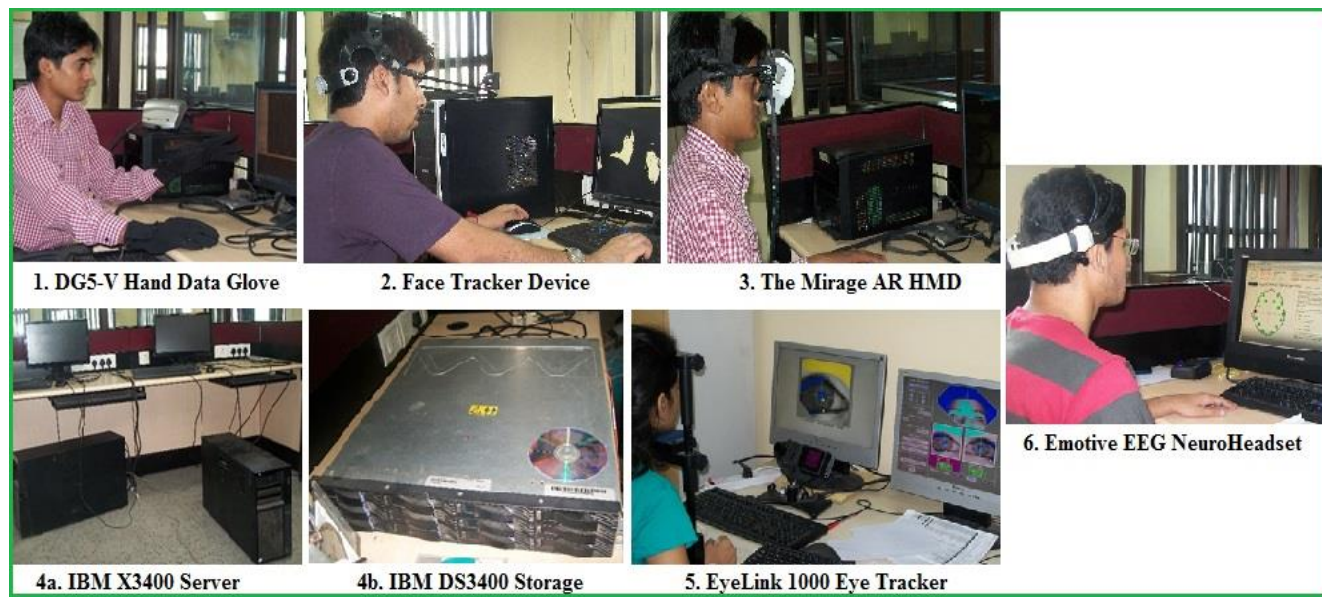
Following are some of the project modules –

- Development of Adaptive Modular Active Leg (AMAL)
- Maneuvering Robotics Arm using Robix Software
- 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



List of Devices (1 to 5) purchased from FIST Project

available in SILP lab, IIT-Allahabad



7. DG5-V Hand Data Glove 3.0 (1 Pair):

Hand Data Glove is an input device for human-computer interaction worn like a glove. In a Data Glove, five sensor strips captures bending of fingers, and a motion tracker captures the rotation movement of wrist. Thus this device converts hand movement into digital data, which can be recognized as gesture such as Sign Language. Therefore, several Human-computer programs can be developed, which could be controlled through user's hand movements. Several B. Tech and M. Tech semester projects based on this device have been done.

8. Face Tracker Device (1 Qty.):

Face Tracker Device converts the movements of parts of a person's face (such as forehead, eyebrow, cheek, lip, Chin etc.) into digital signals using camera and laser light. This digital signal is used to produce computer animation for movies, games, or real-time avatars. Because the motion of computer graphics characters is derived from the movements of real people, it results in more realistic computer character animation.

9. The Mirage Augmented Reality Head-mounted display (1 Qty.):

Head-mounted display (HMD) is a Virtual Reality display device, worn on the head that has a small display optic in front of eyes. It allows a computer-generated virtual image to be

superimposed on a real-world view. Several student-semester projects based on this device have been done.

10. a) IBM System X3400 Server (4 Qty.) and b) IBM DS3400 FC System Storage (2 Qty.)

Servers and Storages are used to store open-source datasets; open-source library; student projects; research papers; courseware materials, such as presentation, demo, video, e-book etc. and provides download facility to students via ftp service.

11. SR Research EyeLink 1000 Eye Tracker (1 Qty.):

EyeLink 1000 Eye tracker is a video input based system, which measures the point of gaze (where one is looking) on a screen. Eye trackers are used in research on the visual system, in psychology, in cognitive linguistics and in product design. Several B. Tech and M. Tech semester projects based on this device have been done and some projects and research works are going on.

12. Emotive EEG NeuroHeadset (1 Qty.):

The NeuroHeadset has 14 electrodes as well as a two-axis gyroscope for detecting head movements. The device detects 13 kinds of movement - six directions (left, right, up, down, forward, and "pull/zoom") and six rotations (clockwise/ anti- clockwise rotation, turn left and right, and sway backward and forward), plus one other visualization ("disappear"). The angular velocity of one's head can be measured in the yaw and pitch (but not roll) directions by the gyros embedded in the device. Several B. Tech and M. Tech semester projects based on this device have been completed and some projects and research are continue.

Introduction of SILP Lab (#4222)

Speech, Image and Language Processing Lab abbreviated SILP lab, provides facilities to researchers and students to perform research and experiments in computer science and Information Technology. The core area of these research and experiments are:

- (a) Automatic speech and speaker recognition;
- (b) Text to Speech and vice versa conversion;
- (c) Music analysis and retrieval;
- (d) User's Eye movement Analysis for HCI and behaviour recognition;
- (e) Language Processing;
- (f) Document Summarization;



- (g) Virtual reality systems such as Augmented Reality HMD, Face tracker and Hand data gloves;
- (h) Information retrieval;
- (i) Image Processing;
- (j) EEG Signal analysis;
- (k) Video Processing for HCI and visual surveillance;
- (l) Cognitive processing and modelling;
- (m) Affective computing.

All M. Tech students and Research scholars, supervised by Prof. U. S. Tiwary, are the member of this lab. This lab opens 24 X 7 days for research and experiments.

6.3 LIBRARY FACILITIES

The sun pattern has been chosen for laying out the library. The IIIT-A 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 25 systems distributed over two floors. Reading space is also provided at convenient locations. There is a premier section of Theses/Project Reports for the students. This new library has already acquired more than 50,000 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-Science Direct, Springer, Emerald Management, Harvard Business Review, Sage Online Journals 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
- 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 click. 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 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:

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Sl. No.	Collection							Cost (in Rs.)	
	Books	Journals			Magazine	CDs / Softwares	Lectures / Video Couses	Books	Journals
		National	International	Online					
1.	54146	57	85	12948	52	2775	1005	4,07,34,478.00	1,61,15,055.00

Following online full text 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. Emerald Management
7. Elsevier – SD (Computer Science)
8. Elsevier – SD (Business, Management & Accounting)
9. Sage Publication (Management & organization studies)
10. Sage Publication (Criminology)

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 IIT-A Library



7- Scholarship /Fellowship /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</p>	<p>For SC/ST Category – Full Fee + Maintenance Charges = 1200/- p.m. x 10 months</p> <p>For OBC / General / Minority Category</p> <p>U.P. Govt. Rates</p> <p>Plus Maintenance Charges = 1200/- p.m. x 10 months</p> <p>For Other States (OBC/Minority) – Reimbursement on respective State Govt. Rates</p>	



			Lakhs		
2.	INSTITUTE MERIT SCHOLARSHIP (Performance Award)				
	B.TECH / MBA / MSCLIS	Paid by Institute (IIIT-Allahabad)	<p>A. IIIT-A 1. B.Tech (IT) - 10 2. B.Tech (EC) - 06 3. MBA (IT) - 04 4. MS(CLIS) - 04 TOTAL - 24</p> <p>B. RGIIIT-Amethi 1. B.Tech (IT) - 06 GRAND TOTAL - 30</p> <p>Eligibility: Merit of 1st Year 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)	1. Merit of qualifying exam 2. 10% from each State Board 3. Minimum 80% attendance in a Semester 4. 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)	
4.	INSTITUTE MERIT-CUM-MEANS AWARD (INCOME-BASED)				
	B.Tech	Paid by Institute (IIIT-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. Muslim s, 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	Rs. 20,000/- per year	



			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.		
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), GoI	B.TECH Top 10 SC Top 05 ST (AIEEE Merit Ranking) <u>ELIGIBILITY</u> 1. AIEEE Merit Ranking 2. Non-recipient of	1. Full Refundable/Non-refundable Fee for year 2. Lodging 3. Boarding 4. Contingency/Book Exp. =3,000/- 5. Cost of Computer =45,000/-	



			other Scholarship 3. Successful performance in Annual Exam 4. Parents Annual Income Rs. 4.5 Lakh p.a.		
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	8,000 per month + Contingency @ 10,000 per annum	



			<u>Eligibility</u> 1. For GATE Scorers 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, GoI	Based on eligibility i) The candidate must have obtained Graduate degree in the relevant subject and obtained	5,000 per month No. of slots available = 1000 per year Tenure of award = two/three years depending upon tenure of	



			<p>admission at Postgraduate level for regular full time course in any of the Professional subject in a recognized University/Institution/College.</p> <p>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.</p> <p>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.</p>	<p>the PG Course</p> <p>Scholarship: @ Rs.5,000/- p.m. for M.Tech @Rs.3,000/- p.m. for other courses.</p> <p>Contingency: @Rs.15,000/- p.a. for M.Tech @Rs.10,000/- p.a. for other courses</p>	
16.	DLF SCHOLARSHIPS				
		DLF Foundation, Gurgaon	<p>Eligibility: parental annual income upto Rs. 1,80,000/-</p> <p>No. of scholarships = 4</p> <p>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>	Reimbursement Rs. 40,000/- per year covering tuition fees and allied expenses on books, instruments and equipments	



8. The Statistics

8.1 Financial Statistics of the Year

NON PLAN

Resource mobilization of the institute on the Non-Plan side during the year 2013-14 was to the tune of Rs.3553.97 lakhs out of which Grant-in-aid accounted for Rs. 1478.25 lakhs and the rest Rs. 2075.72 lakhs was raised through the internal resources of the Institute comprising mainly academic fees and return on investments.

The Grant-in-Aid of RS. 1478.25 lakhs was released by the Govt. in following installments

1. F.No.25-6/2013 TS-I/29-05-2013	Rs. 273.83 Lakh
2. F.No.25-6/2013 TS-I/10-08-2013	Rs. 547.67 Lakh
3. F.No.25-6/2013 TS-I/30-12-2013	Rs. 410.75 Lakh
4. F.No.25-6/2013 TS-I/28-03-2014	Rs. 246.00 Lakh

Total Rs. 1478.25 Lakh

The Non-Plan Expenditure was to the tune of Rs. 2794.65 lakhs resulting in excess of Rs. 1316.40 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. 3,000.00 Lakh in four installments as below for both Campuses of the Institute at Allahabad and Amethi.

1. F.No.25-5/2013 TS-I/28-05-2013	Rs. 500.00 Lakh
2. F.No.25-5/2013 TS-I/05-07-2013	Rs. 1000.00 Lakh
3. F.No.25-5/2013 TS-I/30-12-2013	Rs. 750.00 Lakh
4. F.No.25-5/2013 TS-I/14-03-2014	Rs. 750.00 Lakh

Total Rs. 3000.00 Lakh

The above approved Plan outlay for the year was to be utilized on a approval plan activities of the Institute. On the expenditure side, the Plan Expenditure during the year amounted to Rs. 3014.53 Lakh, the balance having been supplemented from Non Plan side.



8.2 RECEIPT AND PAYMENT ACCOUNTS OF PROJECTS BY MAJOR HEAD

FINANCIAL YEAR 2013-14

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	5.24	0	0	0.2	5.44	0.93	0	0	0	4.51	5.44
2	Establishment of Joint Indo-Russian Centre for Bio-Technology at IIT, Allahabad	0.89	0	0	0.04	0.93	0.84	0	0	0	0.09	0.93
3	Digital Library Mega Centre-Language Technology and content Development & Content Creation in Tibetan, Sanskrit & English	0.04	0	0	0	0.04	0.03	0	0	0	0.01	0.04
4	Information Security Education & Awareness	14.85	0	0	0.46	15.31	7.42	0	0	0.51	7.38	15.31
5	Development of English to Indian Language Machine Translation System	20.86	9.61	0	0.59	31.06	16.67	0	0	10.64	3.75	31.06
6	Development of Indian to Indian Language Machine Translation System	1.43	0	0	0.03	1.46	1.46	0	0	0	0	1.46
7	Development of Robust Document analysis and Recognition system for printed Indian Scripts (OCR)	5.13	0	0	0.17	5.3	3.4	0	0	0	1.9	5.3
8	Allahabad Michigan University Collaborative Fund	0.01	1.49	0	0.01	1.51	1.41	0	0	0	0.1	1.51
9	Fund for Improvement of S & T Infrastructure in Universities and Higher educational Institutions (Fist Program-2007)	1.16	0	0	0.05	1.21	0.03	0	0	0	1.18	1.21
10	Development of Algorithm Using ECG Bio-signal & Bio-Images	0.04	0	0	0	0.04	0.02	0	0	0	0.02	0.04
11	Technology Incubation and Development of Entrepreneurs (Tide Scheme)	9.07	0	0	0.15	9.22	5.09	0	2.2	1.64	0.29	9.22
12	Institutional partnership project (IPP) -Centre of Excellence in Micro-Electronics & Microsystems ,EPFL, and Lausanne Under -Indo Swiss Project	1.28	0	0	0.07	1.35	0.04	0	0	0	1.31	1.35
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	58.17	0	8.58	0.96	67.71	0.28	0	0	41.91	25.52	67.71
14	Establishment of North Zone Resource Centre of Generating Contents,Mentors,Teachers etc.by Conducting Specialized short term HRD Courses for IT/ITES Sector	156.57	0	0	5.55	162.12	11.5	0	100	0	50.62	162.12
15	Methods for Compensation & localization of Interferences in Ultra wide-band wireless Sensor Networks	5.81	0	0	0.18	5.99	5.67	0	0	0	0.32	5.99
16	Setting UP of an ASEAN -INDIA Science & Technology Library	5.95	0	0	0	193.6	2.61	0	0	0	64.59	193.6
17	Allahabad High Court Digitilization Project		184.4	0	3.25		52.65	0	28.75	45		
18	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	4.2	0	0	0.17	4.37	0.69	0	0	0	3.68	4.37
19	Development of a Neuron like system for Real Time Visual Object Detection	1.54	0	0	0.04	1.58	0.9	0	0	0	0.68	1.58
20	Development of a Computer aided Microscopic pool for structural deri-variation of pathologically significant proteins	2.65	0	0	0.08	2.73	1.3	0	0	0	1.43	2.73
21	National Mission on Education through Information & Communication Technology (ICT)	1.97	0	0	0.06	2.03	0.42	0	0	0	1.61	2.03
22	Development of new method and algorithms to identity exon-intron boundary and finding signatory signal pattern for genetic abnormalities like autism-(A-8.25)	2.04	0	0	0.08	2.12	0.16	0	0	0	1.96	2.12
23	Inspire Awards-2010	591.69	0	3.31	113.21	708.21	2.56	0	0	705.65	0	708.21
24	Disaster Management system for large scale deployment of sensor network using a fault tolerant mechanism	57.76	0	0	2.15	59.91	7.43	0	1.29	0.13	51.06	59.91
25	Army Technology Board-Network simulation Testbed at MCTE,MHOW	3.22	34.5	0	0.41	38.13	10.53	0	0	5	22.6	38.13
26	DISTRIBUTING INDUSTRIAL OPTIMIZATION TASKS TO RURAL WORKER - INDO UK BURD PROJECT	22.73	0	0	0.86	23.59	3.54	0	2.78	0.00	17.27	23.59
27	Indo-US project Wireless Sensor Network (WSN) for protecting Wildlife and Humans	24.17	40.91	0	0.52	65.6	44.97	0	0	0	20.63	65.6
28	Topological Materials and Application Science and Research Board	0	10.75	0	0.09	10.84	0	0	0	0	10.84	10.84
	Total	998.47	281.66	11.89	129.38	1421.4	182.55	0	135.02	810.48	293.35	1421.4

A : Opening Balance B : Grants Received from sponsoring Agencies C : Income on Investment D : Other Income E : Expenses
 F : Investments G : Fixed Assets Payments H : Other Payments I : Closing Balance



8.3 Degrees awarded

NINTH CONVOCATION (10th MARCH 2014)						
Number of Graduate Students declared eligible for Award of Degree						
Academic Batch	Name of Courses	No. of Students Passed				Total
		Boy(s)		Girl(s)		
		With Honours	Without Honours	With Honours	Without Honours	
Jul 2009 - Jun 2013	B.Tech. IT	42	160	07	14	223
Previous other batch	B.Tech. IT	00	03	00	00	03
Jul 2007 - Jun 2011	B.Tech. ECE	00	01	00	00	01
Jul 2008 - Jun 2012	B.Tech. ECE	00	04	00	00	04
Jul 2009 - Jun 2013	B.Tech. ECE	23	53	03	06	85
Number of Postgraduate Students declared eligible for Award of Degree						
Academic Batch	Name of Courses	No. of Students Passed				
		Spls.	Boy(s)	Girl(s)	Total	
Jul 2008- Jun 2010	M.Tech (IT)	MI	01	00	01	
Jul 2009- Jun 2011	M.Tech (IT)	RO	01	00	01	
Jul 2010- Jun 2012	M.Tech (IT)	IS	01	00	01	
		WCC	04	01	05	
		SE	03	01	04	
		HCI	03	00	03	
		RO	01	00	01	
		MI	01	00	01	
		BI	06	00	06	
Jul 2011- Jun 2013	M.Tech (IT)	IS	17	01	18	
		WCC	20	05	25	
		SE	15	09	24	
		HCI	09	03	12	
		RO	10	04	14	
		MI	13	07	20	
		IT	01	03	04	
Jul 2010 - Jun 2012	MBA	IT	01	03	04	
Jul 2011 - Jun 2013	MBA	IT	29	08	37	
Previous Other batch (Passing Year-2013)	MSCLIS		02	00	02	
Jul 2011 - Jun 2013	MSCLIS		49	12	61	
Ph.D.	Boy(s)	Girl(s)				
	08	00	08			



8.4 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 Alsyah 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

8.5 INDUSTRIAL COLLABORATIONS

The Institute has had industrial collaborations of its academic pursuits with renowned national and international organizations 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



collaborative organizations of the Institute are Corinex Canada, TCS, ISRO, Zensar, IBM, Maple Leaf, ALIMCO etc. Further, centers 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. These collaborations have given excellence and international recognition to its academics.

8.6 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)

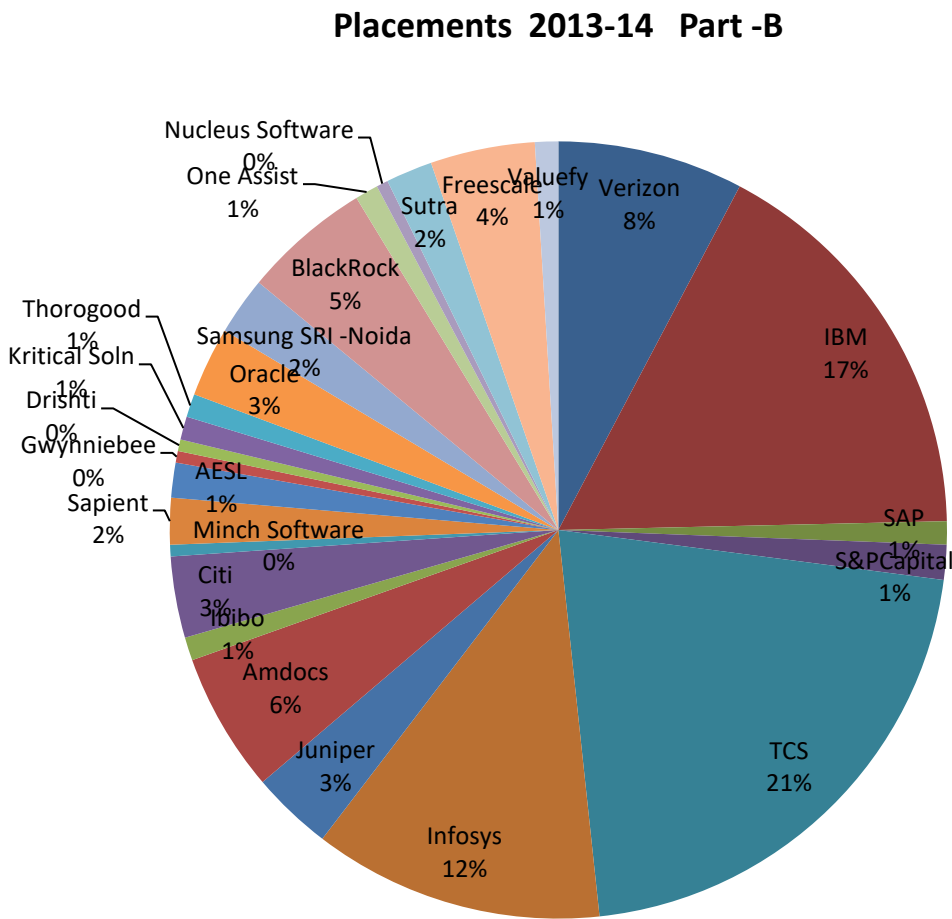
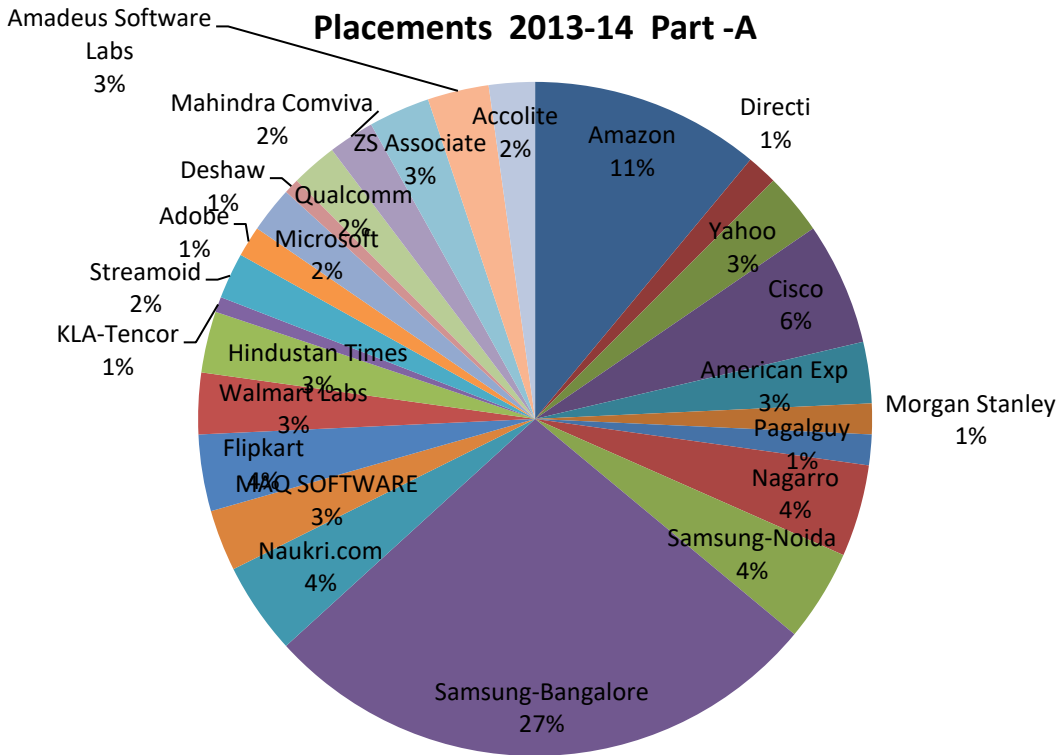
The UG & PG batches of passouts of the Institute have had placements in national / international organizations of repute every year. In a short span of time, the students of the Institute have not only made a mark in some of the best companies around the world, but are also making their presence felt in the highest corridors of academia.



8.7 Placements

S. No	Company	Number of Student Placed	S. No	Company	Number of Student Placed
1.	Amazon	15	26.	Verizon	16
2.	Directi	2	27.	IBM	35
3.	Yahoo	4	28.	SAP	2
4.	Cisco	8	29.	S&PCapital	3
5.	American Exp	4	30.	TCS	44
6.	Morgan Stanley	2	31.	Infosys	25
7.	Pagalguy	2	32.	Juniper	7
8.	Nagarro	6	33.	Amdocs	12
9.	Samsung-Noida	6	34.	Ibibo	2
10.	Samsung-Bangalore	37	35.	Citi	7
11.	Naukri.com	6	36.	Minch Software	1
12.	MAQ SOFTWARE	4	37.	Sapient	4
13.	Flipkart	5	38.	AESL	3
14.	Walmart Labs	4	39.	Gwynniebee	1
15.	Hindustan Times	4	40.	Drishti	1
16.	KLA-Tencor	1	41.	Kritical Soln	2
17.	Streamoid	3	42.	Thorogood	2
18.	Adobe	2	43.	Oracle	6
19.	Microsoft	3	44.	Samsung SRI -Noida	5
20.	Deshaw	1	45.	BlackRock	11
21.	Qualcomm	3	46.	One Assist	2
22.	Mahindra Comviva	3	47.	Nucleus Software	1
23.	ZS Associate	4	48.	Sutra	4
24.	Amadeus Software Labs	4	49.	Freescale	9
25.	Accolite	3	50.	Valuefy	2





8.8 Medal and Awards

List of B.Tech. (IT)

Students recommended for award of Institute's Medal
Academic Batch: July 2009– June 2013

		
GOLD Shivani Maheshwari RIT2009037	SILVER Udit Agarwal RIT2009079	BRONZE Rishabh Goyal IIT2009037

List of B.Tech. (ECE)

Students recommended for award of Institute's Medal
Academic Batch: July 2009– June 2013

			
GOLD Akshansh Jain IEC2009001	SILVER Gaurav Mishra IEC2009051	SILVER Narender Singh Bhandari IEC2009080	BRONZE Avinash Vaish IEC2009057



List of M.Tech. (IT)

Students recommended for award of Institute's Medal
Academic Batch: July 2011 – June 2013

					
GOLD Soumabha Bhowmick IRO2011005	SILVER Prachi Gupta IMJ2011006	SILVER Joyline Germine D'sa IMJ2011021	SILVER Akhilesh Kumar Yadav ISE2011006	SILVER Subham Khanna ISE2011013	BRONZE Abhijith P.S. IMJ2011002

List of MBA (IT)

Students recommended for award of Institute Medals
Academic Batch: July 2011 – June 2013

		
GOLD Aniruddha Guha Biswas IMB2011010	SILVER Anu Kumar P. B. IMB2011003	BRONZE Meera Singh IMB2011008

List of MSCLIS
Students recommended for award of Institute Medals
Academic Batch: July 2011 – June 2013

		
GOLD P.R. Sri Devi IMS2011004	SILVER Anushree IMS2011057	BRONZE Amrita Srivastava IMS2011063

Name of Student recommended for award of
Shashank Varma Memorial Gold Medal-2013


Shashank Varma Memorial Gold Medal-2013 Piyush Jindal IIT2012098

Name of Student recommended for award of
Megha Goyal Memorial Gold Medal-2013


Megha Goyal Memorial Gold Medal-2013 Nidhi Chincholikar IEC2011033

Name of Student recommended for award of
Nobel Laureate & Prof. Claude Cohen Tannoudji Gold Medal-2013


Prof. Claude Cohen Tannoudji Gold Medal-2013 Shivani Maheshwari RIT2009037

Name of Student recommended for award of
Dr. T.C.M. Pillay Memorial Gold Medal-2013


Dr. TCM Pillay memorial Gold Medal-2013 Shivani Maheshwari RIT2009037



**Name of Student recommended for award of
Shri T.N. Vaish Memorial Gold Medal – 2013**



Shri T.N. Vaish Memorial Gold Medal – 2013
Anuja Sethiya
IMB2011007

**Name of Student recommended for award of
Chancellor's Gold Medal-2013**



Chancellor's Gold Medal-2013
Soumabha Bhowmick
IRO2011005

**Name of Student recommended for award of
Pt. Yadu Nath Tiwari Memorial Gold Medal-2013**



Pt. Yadunath Tiwari Memorial Gold Medal-2013
P. R. Sri Devi
IMS2011004

**Name of Student recommended for award of
Prof. Dr. Ing. Matthias Kleiner Gold Medal -2013**



Prof. Dr. Ing. Matthias Kleiner Gold Medal-2013
Prachi Gupta
IMI2011006



8.9 Events of the Year

01 April 2013 to 31 March 2014

13 April	Decision making must for women to achieve goals': creating an environment through positive economic and social policies is needed for development of women to enable them realize their potential. These views were expressed by Dr. M. D Tiwari, Director, IIIT-A while inaugurating the workshop on gender sensitization on Jhalwa campus this morning. Tiwari said women's equality in power sharing and active participation in decision making, including decision making in political process at all levels should be ensured for the achievement of the goals of empowerment a software would be made to provide security to girl students for usage in mobile phones. He recounted many examples of administration, bravery and intellectual fields where women dominated over male.
15-16 April	IT application in Energy Management : IT applications useful in increasing energy efficiency' The Information Communication Technologies (ICT) application have significant role in management of energy by reducing emissions and increasing energy efficiency, said IIIT-A director MD Tiwari while speaking at the ninth foundation day of Rajiv Gandhi Institute of Information Technology, Amethi (RGIIT-A) on Monday . inaugurating the two day seminar on "IT application in energy management" Tiwari said technologies such as simulation, modeling analysis, monitoring and visualization tools offered by ICTs could allow to optimize the use of existing energy resources by taking in to account many factors such as energy demand.
7-8 May	Communication scholars to benefit from IIIT-A's two-day workshop: faculty members as well as budding techies specializing in electronics and communication engineering will receive tips about the cutting edge software defined radio (SDR) technology as well as Lab VIEW (Laboratory Virtual Instrument Engineering Workbench) of National Instruments at a two day workshop at Indian Institute of Information Technology, Allahabad (IIIT-A) The workshop is being jointly organized by IIIT-Allahabad and National Instruments, New Delhi. The software defined radio (SDR) is a promising technology for realizing a single transceiver for communicating over different types of networks (possessing different physical layer specifications) which is the primary requirement of the 4G networks
1-2 June	Seminar on data mining application in healthcare : The director IIIT-A Dr. M.D Tiwari said that the seminar would mainly discuss the tree main aspects , including knowledge discovery in electronic medical records, personalized predictive modeling for clinical management, case studies based on recent models and challenges for healthcare. He said that data. he said that data mining applications in healthcare has been instrumental in detecting patterns of diagnosis, decisions and treatments in healthcare. It has aided in several aspects of healthcare management, including disease diagnosis, decision-making for treatments, dedical fraud prevention and detection, fault detection of medical devices, healthcare quality improvement strategies and privacy.
6 June	First Indo-Russian summer school in Nalchik from June 10 : First Indo-Russian summer school on "High Performance Computing for Geophysical Problems" will be jointly organized by Indian Institute of Information Technology, Allahabad (IIIT-A) and Moscow Institute of Physics and Technology (MIPT) at Nalchik in Russia from June 10 to June18, 2013. Giving the Information, IIIT-A director Dr. M.D. Tiwari said that the summer school was an initiative in accordance with the Memorandum of Understanding signed on December 1, 2011 between IIIT-A and Berbekov Kabardino-Balkarain State University for cooperation in the field of supercomputer technology and education.
24-26 June	National workshop at IIIT-A, A tree day national workshop of three National Science Academies of India on "Galois theory, Finite fields and cryptography will be organized at Indian Institute of Information Technology, Allahabad from Monday. The workshop, sponsored by three National Science Academies of India supported by IIIT-Allahabad and HRI-Allahabad will be devoted to a lucid exposition of Galois theory leading to the structure theory of finited fields, solvability by radicals, algebra and geometry of constructions by machines and their applications in security systems, coding theory and information science. About 130 participants mostly the undergraduate/graduate students from the local institutions are likely to attend the proposed workshop.



9 July	IIIT-A to produce mobile software engineers too: Indian Institute of Information Technology, Allahabad (IIIT-A) will soon also produce techies specializing in the development of software systems for mobile, embedded platforms such as mobile phones, personal digital assistants and portable entertainment systems like iPods. In a first of its kind initiative, the institute is going to offer mobile software engineering as a fully fledged elective for its students pursuing M. Tech in software engineering as well as M.Tech in wireless communication and computing (WCC) from 2013-14 session itself. IIIT-A director Dr. M.D. Tiwari informed that the elective was being introduced after much deliberations and efforts to design it in a way that it provides graduating students a comprehensive base and knowledge of this fast expanding and evolving field.
11 July	IIIT-A to start 5-year dual degree IT course New BTech-M.Tech (IT) programme having 30 seats will kick-off from this session: Serious tech students determined to specialize in a particular field of information Technology (IT) with dreams to pursue cutting-edge researches now have an opportunity to gain two degrees-a bachelor's and master's - in mere five years from one of India's best technical institutions. The icing on the cake: Wannabe IT specialists not only will end up saving a year and not having to appear in any entrance exam like GATE for admission to the post graduate course but also receive a handsome monthly stipend in the final two years.
31 July	Facebook hires two IIIT-A students for Rs. 60 L per Annum. Another student selected as Google student Ambassador : Two students of Indian Institute of Information Technology, Allahabad (IIIT-A) have landed lucrative job with popular social networking site Facebook for a salary of Rs. 60 Lakh per annum. Another student has been selected as student ambassador of Google, bringing the institute on the International IT map. Sharing the development with TOI, institute director, M.D. Tiwari said "Ankit Gupta and Yogesh Sharma have been recruited by the Facebook. Both are BTech final year students. Their batch-mate Divanshu Garg has been chosen as the 'Google Student Ambassador' to represent IIIT-A for the upcoming academic year'.
04 August, 2013	IIIT-A launches 5-yr integrated stem cell engineering: the prestigious Indian Institute of Information Technology, Allahabad (IIIT-A) has launched the country's first of its kind five-year integrated M.Tech course in stemcell engineering. The first batch of the course having 15 seats will kickoff from the session 2013-2014. For the first year, the applicants who have already appeared in the entrance examination held on June 9, 2013 are being offered an opportunity for taking admission into this new course. A merit list will be prepared from among the applications received based on the aggregate marks secured in the qualifying examination for the five-year MTech bio-medical engineering. All interested applicants have been asked to send their application in the format provided on the IIIT-A website by registered post or speed post to faculty in-charge (examination), IIIT-Deoghat, Jhalwa, Allahabad so as to reach on or before August 10, 2013", said IIIT-A director Dr. M.D. Tiwari.
12 August, 2013	Foundation Day of IIIT-A: the 15 th foundation day of Indian Institute of Information Technology, Allahabad was celebrated with a number of cultural programmes and festivity in the newly inaugurated auditorium on Monday. More than a thousand students of IIIT-A and RGIT-Amethi attended the programme. The beginning of the event was marked by lighting of the lamp by director of the Institute Dr. M.D Tiwari. Speaking on the occasion, he threw light on the several milestones achieved by the institute since its inception in 1999. Several new courses like five-year M Tech stem cell. Biomedical and M Tech (IT) have become quite popular among the students. Facilities provided at labs, hostels and classrooms were of international standards, he said. E-media section offers several advantages to the students and faculty members where one can read or listen to books offline, gain instant access to new titles without having to visit a physical library location. It is also time saving and environmentally friendly.
20-21 August, 2013	Scientists gather to solve mysteries of human brain: Director of Indian Institute of Information Technology, Allahabad Dr. M.D. Tiwari on Tuesday said that all the amazing inventions that have come along in the past few years like i-pod, GPS devices, satellite TV, robots and other technological toys are the amazing wonders of the human brain. He said that considering the importance of brain, we needed to explore the ways of using the brain to the maximum. Dr. Tiwari was speaking during the inaugural function of a two day national seminar on 'Human Brain-A Mystery Organ' that began at IIIT-A's Amethi campus. -Rajiv Gandhi Institute of Information Technology (RGIIT-A) this morning. Dr. Tiwari said that the brain was the most complex organ in the human body.
16-21 Sept, 2013	IIIT-A workshop on Antenna design : A week long workshop on antenna and RF design (ward-2013) would be organized by Indian Institute of Information Technology at Jhalwa campus from Sept. 16 the event would be held in association with IEEE, UP chapter.



	IIIT-A director MD. Tiwari said that designing antenna and its feeding network had always been a challenge. Now, it has become more complicated due to increasing demand for more compact and efficient wireless devices. Reduced size, low power consumption, precision in fabrication and testing are the additional challenges in antenna and RF design.
19 Sept. 2013	IIIT-A students invention wins recognition : High speed analog to digital converter designed by 3 PG students wins 2 nd spot in all India Cadence Design contest-2013: A team of three students of masters programme in microelectronics of Indian Institute of Information , Allahabad under the supervision of their mentor, has succeeded in designing a low power, high-speed analog to digital converter (ACD). The AdC design can provide a fillip to many modern day applications such as music recording, data storage system, fast serial links for data transmission and high0-speed measurement systems among others.
4-5 October, 2013	IIIT-A to evaluate research proposals on robotics, engg: A two days meeting of the programme advisory committee (PAC) of department of Science & Technology (DST), in the area of robotics, mechanical and manufacturing engineering would be organized by IIIT-A at its Jhalwa campus. More than 45 research proposals would be evaluated and suitable ones would be recommended for funding. Principal investigators (PIs) across the country have assembled at IIIT-A to discuss the proposal. IIIT-A director MD Tiwari would inaugurate the meeting on October 4.
19 October, 2013	Free Laptops Distributed to IIIT-A students : Forty one students of Indian Institute of Information Technology, Allahabad were distributed free laptops under the state government's scheme by IIIT-A director MD Tiwari, in the institute conference hall on Saturday evening. In his address, Tiwari thanked chief minister Akhilesh Yadav for launching the programme to promote computer education in the state. This step would pave the way for attracting students towards IT education, he added. Vinay Kumar Singh District Plant production officer, on behalf of state government advised students to fully utilize the laptops, so that the objective of the chief minister could be fulfilled.
23-27 October, 2013	The five-day annual cultural-cum-technical festival of IIIT-A-Effervescence-got off to a blazing start here on Wednesday. The event aims to take both education and entertainment to new hights. The programme got underway with the puzzle competition perlexuz. Like each year, this year too participants in large numbers from across the country have come to the Indian Institute of Information Technology here. Participants were seen trying all wants to solve the puzzles in perplexuz. Kavi Samelan and the popular band 'Raeth' will be a star attraction of this year's fest. The band is known for its hit numbers like 'Bhula Do' and 'Waada' and will perform on October 27 at 8 pm at the main stage.
28 Oct. to 2 Nov. 2013	Vigilance awareness week starts at IIIT-A, a week long vigilance awareness week began at Indian Institute of Information Technology, Allahabad on Monday, A webpage has been created for instilling an environment of transparency & confidence within the system. IIIT-A director Dr. M.D. Tiwari inaugurated the vigilance link page at the institute website. Chief vigilance officer Dr. Anurika Vaish said several measures have been taken in pursuant to the instruction of the Central Vigilance commission. She said that competitive and non-competitive activities would be conducted to mark the vigilance awareness week.
08-14 Dec.	Dr Tiwari, who is also Chairman of Science Conclave-2013 further said that the Nobel Laureates who are participating in the Science Conclave of the year 2013 Sir Richard J. Roberts (USA- Physiology/Medicine), Prof. Claude Cohen Tonnoudji (France – Physics), Prof. Sir Harold W. Kroto (USA- Chemistry), Prof. Ivar Giaever (USA- Physics), Prof. Serge Haroche (France- Physics), Prof. Walter J. Kohn (USA-Chemistry), Prof. Douglas D. Osheroff (America - Physics), Prof. John C Mather (NASA) and Prof. Joseph Sifakis –from France (Computer Science) would also be coming at the Conclave some other eminent scientists from abroad have also consented to contribute their knowledge and ability to the Science Conclave by video conferencing. After the days of efforts three cultural evenings have also been arranged for the entertainment of the participants and scientists. For giving break during seven days of academic sessions of conclave, three nights of cultural events have been arranged. On December 9 th Guru Pasha's Ability Unlimited will present "Miracle on Wheels". Thus unique performance by PWDS through therapeutic education has mention in the Guinness world record and limca world record. On the night of 11 th December Sufi and Mugal Dance will be performed by 'Zenith Arts India'. Zenith has the fame of performing 10000, live shows all over the world creating waves in the international market. Towards end of Conclave sessions on 13 th December, Ms. Ranjana Sukhani, Ms. Couliwill also have a flavour of entertainment to keep spirits of participants high during seven days.



16-19 Dec.	Wireless Sensors promise distributed monitoring Major General Exhorts Researchers to be Passionate : The Ninth International Conference on Wireless Communication and Sensor Networks (WCSN-2013) organized by Indian Institute of Information Technology, Allahabad began on Monday . Speaking at the Inaugural function, Major General Vishwambhar Dayal called upon researchers and students to develop sensors for their practical application, not to be confined to research papers. He stressed for developing sensors for broader management especially for India-Pakistan Boarder. Prof. Dharma P. Agarwal, University of Cincinnati, USA said the wireless communication and sensor networks is of great interest to the research community due to its significant promised impact on the society in the last couple of decades. Prof. Anish Arora, Ohio state University, USA.
25 Dec.	Now, Science conclave Gallery at IIIT-A work underway on a special Nobel Laureate Conclave Photo Gallery : A mesmerizing visual treat is on the cards for visitors of Indian Institute of Information Technology, Allahabad soon. The Institute is in the process of preparing a treasure the photographic memories of all the six editions of Nobel Laureate Science Conclaves hosted by it since 2008 every year, thereby allowing visitors to catch a view of all Nobel Prize winning scientists and their time here with the students and budding scientists during these mega meets.
13 January, 2014	Student Gymkhana at IIIT-A , A student body ' Student Gymkhana' will be formed at Indian Institute of Information Technology, Allahabad to ensure more involvement of students and smooth functioning of academic and extracurricular activities at the Institute. As per a communiqué issued by the institute, the move had been made by Prof. G.C. Nandi, officiating director, IIIT-A on Monday. As per Prof. Nandi, the new student body would be constituted by students in a general body meeting to be held on January 14 in old auditorium of the institute at 11 am.
27 January, 2014	SERB to look into IIIT's robotics research plan : Research in the field of robotics is all set to witness a new initiative by experts and budding engineers from the Indian Institute of Information Technology as the Science and Engineering Research Board (SERB) has decided to look in to a proposal for research in robotics. SERB is a statutory body established through an Act of Parliament by the department of Science and Technology (DST), government of India.
01 Feb. 2014	IIIT-A to start integrated M. Tech in cyber law, Information Security: The prestigious Indian Institute of Information Technology, Allahabad is going to start the first of its kind dual degree integrated M. Tech programme in cyber law and information security from this year. The course will allow bright students to enroll for the course immediately after class 12 on qualifying an all-India entrance exam and first earn a B. Tech in information Technology and then bag an M. Tech in cyber law and information security. All this would be accomplished in five years instead of six that it would take otherwise. Moreover, the students, while pursuing their M. Tech , would also be receiving a monthly stipend of Rs. 8000 as per government rules.
6 Feb. 2014	In a first, IIIT-A to hold student's body elections on Feb, 11 : for the first time in the history of Indian Institute of Information Technology, Allahabad a students' body would be elected by the students themselves through voting on February 11. The student's body to be christened 'Students' Gymkhana', will start functioning from the day of elections itself. According to a notification issued by students Gymkhana on Thursday, IIIT-A's acting director Prof. G.C. Nandi has granted permission for holding the said elections.
17 Feb. 2014	Three day annual sports meet of Indian Institute of Information Technology, Allahabad (IIIT-A) began here on Monday. The first day of the sports fest witnessed a number of events including long jump, discus throw, tug of war and triple jump being organized.
10 March, 2014	563 IIIT-A scholars awarded degrees while medals were given away to two-dozen meritorious students for the academic session 2012 and 2013 at the 9 th Convocation of IIIT-A : Padma Shri Kiran Karnik, former chairman of NASSCOM, presently member of scientific advisory committee to Prime Minister graced the occasion as chief guest. Speaking on the occasion, Karnik said that IT and ICT had unlimited potential to transform the country into a knowledge economic. Padma Shri Goverdhan Mehta, former director, Indian Institute of Sciences, Bangalore and Chancellor of IIIT-A, presided over the convocation. He said apart from being a nucleating institute of excellence in teaching and research in IT and allied areas, he was very glad to see the steps it had taken for the causes of popularizing science among the young minds in the form of conducting a series of Nobel Laureate Science Conclaves.
11 March, 2014	Workshop gets under way at IIIT-A : five day workshop on advanced materials and instrumentation in bio-medical engineering (AMIBE-2014) organized by department of applied science kicked-off at Indian Institute of Information Technology (IIIT-A) on Tuesday.



8.10 EXAMINATION RESULTS

(Number of students passed/ Awarded degree in the year 2013)

Regular Mode

Level	Program	Broad Discipline Group Name	Total Number of Students Appeared		Total Number of Students Passed/ Awarded Degree	
			Total	Girls	Total	Girls
Post Graduate	MSCLIS		62	12	58	11
Post Graduate	MBA		37	08	37	08
Post Graduate	M.Tech.		124	30	119	29
Under Graduate	B.Tech.	IT	223	21	223	21
Under Graduate	B.Tech.	ECE	89	09	89	09

8.11 Patents & Copyrights

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.

3) **779 / DEL / 2009:** A method and A software Implemented Tool for Detecting Plagiarism in documents.

Granted-Singapore Grant No. 170694 dated October 11, 2013

B) Patents Filed in India and under progress:

1) **1971 / DEL / 2005:** An Encryption Method and System.

2) **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.

3) **399 / DEL / 2007 / FAB:** A fuzzy- adaptive brightness control mechanism for a computer display device.

4) **492/ DEL/ 2007:** Soft computing based microprocessor controlled Adaptive Modular Active Leg System.

5) **2215 / Del / 2007:** Cushy Mouse Kit, An Ergonomic mouse and mouse pad.



- 6) **1294/DEL/2012:** A personal Human Computer Interaction System based on Eye Gaze Tracking
- 7) **0160/DEL/2014:** A Method and Apparatus For Similarity Detection For Documents Based on Contents including Texts Tables Flowcharts and Equations.

C) 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.

D) 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.



9. Preventive and Redressal Measures by the Institute

9.1 Grievance Redressal Measures

In pursuance of implementation of Point 20 of the 20 point Program relating to responsive administration as communicated vide G.O. F.No. 28-29/2002-TS.1 dated October 11, 2002 read with G.O. F.No.C.36011/11/2005-PG Gol, MHRD dated 17.11.2005 as amended up-to-date. and in supersession of Office Order No. IIT-A/DIR/1446(2012 dated July 23, 2012. the Grievance Redressal Committee of IIT-A is reconstituted as follows with immediate effect:

1.	Prof. Sudip Sanyal	- Chairperson (Grievance Officer)
2.	Prof. Anupam	- Member
3.	Dr. Nidhi Mishra	- Member
4.	Dr. Vijaishri Tiwari	- Member
5.	Dr. Vijay Kumar Chaurasia, Chief Proctor	- Member
6.	Dr. Asheesh Kumar, Deputy Registrar (M)	- Member and Coordinator
7.	Mr. K. S. Aeron (Office Representative)	- Member
8.	Mr. Yogesh Kardarn (Representative of SC/ST)	- Member
9.	Ms. Blessy Anniesahju (Representative of Minority)	- Member
10.	Mr. Purnendu Pandey (Representative of Student)	- Member
11.	Ms. Farha Naz	- Member
12.	Ms. Manisha Tiwari (Project Staff)	- Member

Prof. Sudip Sanyal is designated as fulltime Grievance Officer of the Institute. He will be assisted by the Grievance Redressal Committee in discharge of his duties as Grievance Officer of the Institute as per orders of the Government from time to time in this regard.

The Grievance Officer is desired to amicably and promptly remove all grievances of students, employees and public at large relating to the Institute. He will, on an application/complaint filed before him and also on suo-moto. inquire into the matter and require parties to the grievances to file papers, adduce evidence and afford opportunities to the parties for examination and cross examination as per law of the land and after proper hearing, make a reasoned recommendation in all cases for action by the Director and shall maintain a record in that regard.

In discharge of his duties, he will have the right to call for any information, papers and records etc. from the office of the Institute and it will be the duty of the Institute officials concerned to promptly produce relevant records called for by the Grievance Officer for his expeditious disposal of grievances.

The Grievance Officer will have all secretarial assistance in the Institute for proper discharge of his duties.

This is an in-house mechanism for 'Redressal of Grievances', if any, by all concerned that may be availed of so that a conducive academic/administrative ambience may be maintained in the Institute.



9.2 Prevention of Harassment of women at workplace

In supersession to O.M. No. IIT-A/DIR/1447/2012 dated July 23, 2012; the Committee for prevention of Sexual Harassment of women at workplace is reconstituted as follows with immediate effect:

- | | | |
|-----|---|------------------------|
| 1. | Prof. Krishna Mishra (Faculty Representative) | - Chairperson |
| 2. | Dr. Pallavi Dixit (Staff Representative) | - Member |
| 3. | Prof. Nisha Srivastava (Allahabad University) | - External Member |
| 4. | Mr. Vaibhav Kaushik, Advocate (Legal Counsel) | - External Member |
| 5. | Dr. Asheesh Kumar (Office Representative) | - Member & Coordinator |
| 6. | Sri Yogesh Kardarn (SC/ST Representative) | - Member |
| 7. | Topper of B.Tech IVth Semester
(if the topper is a boy, then next girl in merit) | - Member |
| 8. | Topper of MBA IInd Semester
(if the topper is a girl, then next boy in merit) | - Member |
| 9. | Topper of M.Tech IInd Semester
(if the topper is a boy, then next girl in merit) | - Member |
| 10. | Ms. Blessy Anniesahju (Minority Representative) | - Member |
| 11. | Ms. Farha Naz | - Member |
| 12. | Ms. Manisha Tiwari (Project Staff) | - Member |

On the receipt of any written complaint, the Committee will promptly proceed with inquiry as per rules and submit its findings /recommendations to the Director for necessary action.

The Committee is constituted in view of Government Letter F.No. C.36011/7/2005-VIG dated 29.03.2006.

This issues under the order of competent authority.

9.3 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 notice boards, 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.

9.4 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



10. Significant Events- A Glance

Organization of Annual Science Conclaves

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.

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 five such Science Conclaves have been organized by the Institute during 2008, 2009, 2010, 2011 and 2012 and the Sixth Science Conclave has been scheduled during December 08 – 14, 2013. 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:



10.1 Hosting of 6th Science Conclaves and Inspire Programs 2013

Sl. No.	Name of Nobel Laureate	Subject of Discovery
1	Sir Richard J. Roberts Ph.D. F.R.S., USA Nobel Laureate in Physiology / Medicine, 1993	<i>"for their discoveries of split genes"</i>
2	Prof. Claude Cohen Tannoudji, France Nobel Laureate in Physics, 1997	<i>"for development of methods to cool and trap atoms with laser light"</i>
3	Prof. Sir Harold W. Kroto, USA Nobel Laureate in Chemistry, 1996	<i>"for their discovery of fullerenes"</i>
4	Prof. Ivar Giaever, USA Nobel Laureate in Physics, 1973	<i>"for their discoveries regarding tunnelling phenomena in solids"</i>
5	Prof. Serge Haroche, France Nobel Laureate in Physics, 2012	<i>"for ground-breaking experimental methods that enable measuring and manipulation of individual quantum systems"</i>
6	Prof. Walter J. Kohn, USA Nobel Laureate in Chemistry, 1998	<i>"for his development of the density-functional theory" and John A. Pople "for his development of computational methods in quantum chemistry"</i>
7	Prof. Douglas D. Osheroff, USA Nobel Laureate in Physics, 1996	<i>"for their discovery of superfluidity in helium-3"</i>
8	Prof. Joseph Sifakis - Laureate of Turing Award (Highest Award in Comp. Sc.)	

STATISTICS OF PARTICIPATION IN SIXTH SCIENCE CONCLAVE FOREIGN PARTICIPANTS

Country Name	No. of Participants
Pakistan	04
South Africa	06
Tunisia	06
Sri Lanka	17
Ghana	03
Indonesia	08
Singapore	05
Malaysia	03



Vietnam	05
Myanmar	07
Taiwan	01
Burundi	01
Mauritius	01
Kenya	08
Brunei	05
Angola	03
Russia	09
Oman	09
C.V. Raman Fellows	08
Total	109

NATIONAL PARTICIPANTS

Subject / Group	Student		Teacher		TOTAL
	Male	Female	Male	Female	
Physics	117	98	11	5	231
Chemistry	81	52	4	2	139
Maths	124	69	12	8	213
Biological Sciences	146	60	6	6	218
Engineering	128	40	11	2	181
Others	73	21	8	3	105
Total Conclave (Gender-wise)	669	340	52	26	1087
Total Conclave (Category-wise)	1009		78		1087
INSPIRE (Gender-wise)	297	165	18	5	485
INSPIRE (Category-wise)	462		23		485
GRAND TOTAL (Gender-wise)	966	505	70	31	1572
GRAND TOTAL (Category-wise)	1471		101		1572
FOREIGN PARTICIPANTS	76		33		109
OVERALL PARTICIPATION					1681



SIXTH SCIENCE CONCLAVE

FOREIGN PARTICIPANTS	=	109
NATIONAL PARTICIPANTS	=	1087
INSPIRE PARTICIPANTS	=	485
TOTAL	=	1681

NOBEL LAUREATES	=	08
SCIENTISTS	=	40

Inspire Internship Program for Secondary Level Students

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). Alongwith Science Conclaves initiated by the Gol, MHRD, 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. During the years 2008 and 2012, about 500 to 600 Secondary Level students have been participating in the INSPIRE Internship Programme. The interactions under this programme have been successfully conducted at the IIIT Allahabad.

Higher Secondary students from all over Uttar Pradesh and some other parts of the country are invited at IIIT-A and made to interact with some of the best minds in the world. State of the art facilities are made available to the enthusiastic students who were more than willing to grab this once in a life time opportunity.



10.2 Constitution of Student Gymkhana

Students' Gymkhana 2014

From the year 2014 onwards, all the students activities are undertaken by the newly structured Students' Gymkhana. The Students' Gymkhana is formed by the students representatives inculcated from all the courses elected by the students through the yearly elections. Further, under the name of Students' Gymkhana there are the councils followed by the societies.

For the Year 2014, The Students' Gymkhana representatives are as follows:

IIT-A STUDENTS' GYMKHANA 2014

<u>Designation</u>	<u>Name & Roll No.</u>
President	KSHITIJ RASTOGI (IIT2011216)
Vice President	HIMANI CHANDOLA (IIS2013010)
General Secretary	DIPANSHU SEHJAL (IEC2012087)
Speaker	MANISH RAJ (RS146)

<u>Designation</u>	<u>Name & Roll No.</u>
Member	NIKHIL HANDA (IIT2012043)
Member	NIKITA GUPTA (IMB2012001)
Member	AKASH DUBEY IIT2013141
Member	YANAMADALA JAIPRAKASH IIT2013068
Member	AKANKSHA PATHAK (IRO2012002)



Member	SANCHIT ALEKH (IIT2012108)
Member	AISHWARYA JALLI (IIT2012209)
Member	PRANEEL RATHORE IIT2013034
Member	MAYANK VIJAY IIT2013127
Member	SOUMYARKA MONDAL (IIT2012092)
Member	ARJUN SINGH BANGA IIT2012183
Member	CHAITANYA AGRAWAL IIT2012195
Member	AMIT KUMAR IIT2012081
Member	ATUL KUMAR IIT2012022
Member	KOMATIREDDY SNEHA IEC2013022
Member	SHUBHANKAR MISHRA IEC2013044
Member	ANMOL PARIKH IEC2012074
Member	PIKANSHU KUMAR IEC2011077
Member	NIKHIL ANAND IEC2011089
Member	SHASHANK SHIVAM IWC2013007
Member	SUBODH KANT IMI2013011
Member	ANIL YADAV IMB2013044
Member	PREET KUMAR SINGH IMB2012010
Member	CHANDRESH PANDEY



	IMS2013015
Member	KISHORE ABHISHEK IMS2013049
Member	SHIV PRAKASH NATH TRIPATHI IMS2012061
Member	JATIN SETHI IMS2012021
Member	HIMANSHU KUMAR IBM2013023
Member	MOHD AQUIB SAMAD IBM2012029
Member	AMAN PREET SINGH IIT2011006
Member	VIKASH KUMAR IIT2011209
Member	TARUN SHARMA IIT2011212
Member	ABHAY KUMAR ICE2012016
Member	KRISHNA KANT AGRAWAL RS92

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.



10.3 Clubs of the Institute

Sports Society

The IIITA Sports Society brings you the spirit of life, the spirit of competition, the spirit to win , the spirit to participate and ultimately prove the one within you . We have the energy, the courage and the enthusiasm to bring to you the most lively sports events of IIITA. It's events like Gully Cricket, Street Football etc. are most interesting during fest.

The Annual sports festival - ASMITA (Annual Sports Meet of IIIT-A) is organized by the Sports Society.

Literary Society

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. Literary Society is the place to take halt and unveil your talent of appreciating the beauty of expression.

Acoustics and Media Society

The institute is proud to have the services of this Society, which has been very efficient in managing lights, audio equipment, visual recording of various events staged at IIIT-A. All the audio and lights works of college events taken care by this society as a whole. Learners are also welcomed.

Technical Society

Without our amazing Technical Society we wouldn't have half of the events at our fests. Continuing with our marvel superheroes theme, the Technical Society is definitely be the Batman-the silent guardian and watchful protector looking out for all of us.

Music Society

The IIITA music society which is a showcase of the musical talent of the institute. The society apart from having a college band has been successful in putting up wonderful performances and also being helpful in letting the student bite the music bug. The club attends various concerts and musicals during the year.



Dance Society

Synergy of thought, symphony of movement, artistic expression and a sense of idyllic beauty – this symbolizes the USHMA of the dance society. It is one of the most active society of IIIT-A. Starting from freshers, it manages dance performances in Effervescence and other society events. The club has performed various dance forms.

Dramatics Society

The dramatics society at IIIT, RangTarangini is responsible for organizing workshops (acting as well as scriptwriting) and holding drama competitions where young talent can be showcased. The society has been active in staging excellent performances both in Hindi and English at various occasions.

The Fine Arts Society

The newly formed Fine Arts Society endeavors all of its members to pull of something unique, creative and out of the box each time. It is for the art lovers of the institute. All the creative work and art in and around the campus you see may very likely be a part of their work and creativity.

10.3.1 Events organized by different Clubs

JANUARY 2014

SHAURYA-THE REPUBLIC WEEK

Literary Society 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.

MANTHAN, a parliamentary debate. Manthan saw a huge participation of team from the college and was held for 3 days.



Republic Day Sports Events

To commemorate the Republic Day, Sports Club spirit organized Marathon and 100 M sprint which saw huge levels of participation.

FEBRUARY-2014

ASMITA (Annual Sports Meet Of IIIT-A)-Sports Society

The Institute witnessed a mass participation and enthusiasm during the Annual Sports meet of IIIT-A. Students and Faculties from all the spheres actively took part in the various sports events and showcased their winning spirit.

PETALS (Literary Society)

It was an open creative writing competition (in English & Hindi), bringing forth all the students to share their ideas and notions to the widest audience.

MARCH-2014

PRELIMS OF POPCORN QUIZZA(Literary Society)

It was an entertainment quiz with questions from film to music, from literature to games. It witnessed an overwhelming participation from the student fraternity.

CRICKET TOURNAMENT (Sports Society):

Students and the Faculty showcased their Cricket skills and spirit in the Cricket tournament. The Institute witnessed a huge participation in tournament. Everybody welcomed the event with their open hands.

STUNNING DUO (Dramatics Society)

Stunning Du was introduced first time in this year. This was an event to discover the most talented duo in the Institute. The objective of this event was to find the imagination,



creativity, and flexible ways of thinking among the participants. The reason of forming couples at the time was to find their adaptability among them.

10.2.2 Report of Events organized by the Societies

EFFERVESCENCE MM14

LITERARY EVENTS

Model United Nations

The Literary Club of the institute successfully conducted the IIITA Model United Nations Conference for the first time ever. The two day conference needs a special mention, as it tested the mettle of a student as a delegate and representative of another country and helped them in transforming as better citizens and leaders.

Cognoscentia

One of the most awaited events, the brain wreaking quiz contest witnessed participation from some of the best quizzers of the nation, and brought out the best of brains and most aware minds. The audience was enthralled by the vast knowledge of the participants.

Trash Talk

It was an informal event with burning topics in which the participants had to speak out their minds on a slightly different and unusual topic which was given to them by a trash master.

DANCE EVENTS

FootLoose (Group Dance)

The main stage event on 18th October was judged by eminent choreographers of the city and saw massive participation from different institutes and dance academies.

Carpediem (Solo Dance)

One cannot forget the solo dance competition of Effervescence, Carpe Diem where the participants set the stage on fire. This year the heart grooving event took place on 17th October and had participation from many top notch colleges.

La Frenze(Duet Dance)



The third and final event of the dance society took place on 16th October where more than 15 teams performed dance numbers and the ones that qualified for the second round were supposed to perform impromptu face offs.

DRAMATICS EVENTS

Innovation

The flagship event of Rangtarangini reached newer zeniths. As on stage drama event it witnessed two teams which gave mesmerizing performances. One of the teams performed a mime show which happened for the first time in the history of IIIT-A

Bindaas 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.

Tongues On Fire

A unique event which celebrated the art of leg pulling, it was a huge success. The event was full of energy and excitement with the participants engaging in healthy debates.

FINE ARTS EVENTS

Face Painting

Face painting is one of the most fun and popular activities that was organized this year by the Fine Arts Society.

Graffiti

The origins of graffiti go back to the beginnings of human, societal living and recognizing the importance of graffiti as a form of expression, the Fine Arts Society took a big step this year by organizing Graffiti in the pavilion of the college grounds. It brought a whole new concept to the fest as Graffiti has been described as the voice of the youth. The public canvas allowed for a mass audience.



Annexures

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11. Annexures**The IIT-A Society**

1.	Sri P.R. Dasgupta Hon'ble Chairman, IIT-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



Board of Management

1	Prof. Somenath Biswas Director IIIT Allahabad	Chairperson
2	Prof. Ganesh Pandey, FNA, FNASc, FASc Director Centre for Biomedical Magnetic Resonance (CBMR) Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGIMS) Lucknow	Member
3	Prof. Manindra Agarwal Dean, Resource Planning & Generation & N Rama Rao Chair Professor Dept. of CSE, IIT Kanpur	Member
4	Prof. R.K. Shyamasundar FIEEE, FACM Senior Professor & JC Bose National Fellow Faculty of Technology & Computer Science Tata Institute of Fundamental Research, Mumbai	Member
5	Prof. R.K. Sharma Director Senior Professor & Head, Dept. of Nephrology Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGIMS) Lucknow	Member
6	Prof. G.C. Nandi Dean (Academic) IIIT-Allahabad	Member
7	Prof. O.P. Vyas Dean (R&D) IIIT- Allahabad	Member
8	Prof. S. Sanyal Professor IIIT Allahabad	Member
9	Prof. U.S. Tiwary Professor IIIT Allahabad	Member
10	Prof. B.R. Singh Professor IIIT- Allahabad	Member Secretary



Academic Council

1	Prof. Somenath Biswas Director IIIT Allahabad	Chairperson
2	Prof. G.C. Nandi Dean(A) IIIT Allahabad	Member
3	Prof. P. B. Sharma Vice Chancellor Delhi Technological University	Member
4	Prof. Bharat Bhasker Professor, Information Technology & Systems Indian Institute of Management (IIM), Lucknow	Member
5	Prof. K. N. S. Yadava Vice Chancellor Rani Durgavati University, Jabalpur	Member
6	Prof. A.K. Bakshi Vice Chancellor Uttar Pradesh Rajarshi Tandon Open University, Allahabad	Member
7	Prof. Jayanta Kumar Bhattacharjee Director Harish Chandra Research Institute (HRI), Allahabad	Member
8	Prof. S.K. Kak Vice Chancellor Mahamaya Technical University, Noida	Member
9	Prof. R.C. Tripathi Professor IIIT Allahabad	Member
10	Prof. M. Radhakrishna Professor 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
15	Prof. B.R. Singh Professor IIIT Allahabad	Member
16	Prof. U.S. Tiwary Professor IIIT Allahabad	Member
17	Prof. Anupam Agarwal Professor IIIT Allahabad	Member
18	Dr. Anurika Vaish Associate Professor IIIT Allahabad	Member
19	Dr. Shekhar Verma Associate Professor IIIT Allahabad	Member
20	Dr. Shirshu Verma Associate Professor IIIT Allahabad	Member
21	Dr. T. Lahiri Associate Professor IIIT Allahabad	Member
22	Dr. Pavan Chakraborty Assistant Professor IIIT Allahabad	Member
23	Dr. Vrijendra Singh Assistant Professor IIIT Allahabad	Member
24	Dr. B.S. Sanjeev Assistant Professor IIIT Allahabad	Member
25	Prof. O. P. Vyas Dean (R&D) IIIT Allahabad	Member Secretary



Finance Committee

1	Prof. Somenath Biswas Director IIIT Allahabad	Chairperson
2	Prof. G.C. Nandi Dean(A) IIIT Allahabad	Member
3	Sri Navin Soi Director (Finance) Dept. of H.E., MHRD, New Delhi	Member
4	Sri S.N. Jha, IAS (Retd.) Former Secretary, Govt. of India Noida, U.P.	Member
5	Sri Chandra Lal Retd. AG(A&E) U.P. Allahabad	Member
6	Prof. Ramesh Chandra Founder Director Dr. B.R. Ambedkar Centre for Biomedical Research University of Delhi	Member (Co-opted)
7	Dr. Asheesh Kumar Deputy Registrar (Administration) IIIT-Allahabad	Member Secretary



Building Works Committee

1	Prof. Somenath Biswas Director IIT Allahabad	Chairperson
2	Prof. G.C. Nandi Dean(A) IIT Allahabad	Member
3	Director MHRD, New Delhi	Member
4	Sri S.K. Khanna Retd. Chief Engineer CPWD, New Delhi & Advisor (Technical), IIT-Allahabad	Member
5	Sri S.C. Singhal Superintending Engineer (UPPWD) & Advisor (Technical), IIT-Allahabad	Member
6	Prof. S.K. Srivastava Emeritus Fellow (AICTE) Member, Executive Council, West Bengal Technical University Varanasi & Faculty, IIT-Allahabad	Member
7	Prof. R.C. Tripathi Professor IIT Allahabad	Member
8	Dr. Asheesh Kumar Deputy Registrar (Administration) IIT Allahabad	Member
9	Sri H.D. Tiwari Advisor (Finance) IIT Allahabad	Member Secretary



Institute Placements 2013-14

S. No	Name of the Student	Company
1.	Deepak Agarwal	Amazon
2.	Shantanu Agarwal	Amazon
3.	Bhaskar Gautam	Amazon
4.	Ankit Sharma	Amazon
5.	Rishabh Bhardwah	Amazon
6.	Abhishek	Amazon
7.	Sagar Chauhan	Amazon
8.	Aman Mamgain	Amazon
9.	Archit Maheshwari	Amazon
10.	Piyush Mukati	Amazon
11.	Saumya Dubey	Amazon
12.	Shivani Pant	Amazon
13.	Sachin Verma	Amazon
14.	Saumya Dubey	Directi
15.	Rishabh Bhardwaj	Yahoo
16.	Piyush Mukati	Yahoo
17.	Keshav Maheshwari	Yahoo
18.	Pallavi Kela	Yahoo
19.	Rajat Gpta	Cisco
20.	Vipul Sharma	Cisco
21.	Akanksha Patel	Cisco
22.	Sudha Shrikant	Cisco
23.	Harshil Ambagade	Cisco
24.	Sir Krishna Saliparthi	Cisco
25.	Pulkit Tandon	Cisco
26.	Koganti Seshank	Cisco
27.	Apurva Sharma	American Exp
28.	Amrit Kalsi	American Exp
29.	Shashank Srivastava	American Exp
30.	Pushpa Nyalipline	American Exp
31.	Sachin Verma	Morgan Stanley
32.	Akanksha Patel	Morgan Stanley
33.	Prachi Sharma	PagalGuy
34.	Kshitij Mittal	PagalGuy
35.	Shahbaz Khan	Nagarro
36.	Amit Gupta	Nagarro
37.	Aditi Gupta	Nagarro
38.	Kunal Krishna	Nagarro
39.	Saurabh Singh	Nagarro



40.	Samarth Shinghal	Nagarro
41.	Anoop Arora	Samsung-Noida
42.	Aasma Garg	Samsung-Noida
43.	Subhra	Samsung-Noida
44.	Ankit Sharma	Samsung-Noida
45.	Chintan Kumar	Samsung-Noida
46.	Sidharth Guglani	Samsung-Noida
47.	Saurabh Agarwal	Samsung-Bangalore
48.	Deepshikha Bansal	Samsung-Bangalore
49.	Kunal Bansal	Samsung-Bangalore
50.	Pravin kumar Ramesh	Samsung-Bangalore
51.	Siddharth Maloo	Samsung-Bangalore
52.	Ravi Dutta Singh	Samsung-Bangalore
53.	Mohammed Zaffar	Samsung-Bangalore
54.	Sneha Angajala	Samsung-Bangalore
55.	Harshit Gupta	Samsung-Bangalore
56.	Tushar garg	Samsung-Bangalore
57.	Naved Ahmed	Samsung-Bangalore
58.	Kishan Gupta	Samsung-Bangalore
59.	Neha Priya	Samsung-Bangalore
60.	Shubham Singhal	Samsung-Bangalore
61.	Ahish Mishra	Samsung-Bangalore
62.	Ahish Dixit	Samsung-Bangalore
63.	Ankit paharia	Samsung-Bangalore
64.	Rohan Raj	Samsung-Bangalore
65.	Shailendra kr. Saxena	Samsung-Bangalore
66.	Avi Munjal	Samsung-Bangalore
67.	Abhishek Saraswat	Samsung-Bangalore
68.	Siddharth Bhardwaj	Samsung-Bangalore
69.	Sagar Shrivastava	Samsung-Bangalore
70.	Priyadarshi	Samsung-Bangalore
71.	Vikram Thakur	Samsung-Bangalore
72.	Priyanshu Sharma	Samsung-Bangalore
73.	Vratika Ghatiya	Samsung-Bangalore
74.	Rohit Sharma	Samsung-Bangalore
75.	Rachit Saxena	Samsung-Bangalore
76.	Deepti Gupta	Samsung-Bangalore
77.	Abhay Singh	Samsung-Bangalore
78.	Hari Shanker	Samsung-Bangalore
79.	Adarsh Srivastava	Samsung-Bangalore
80.	Shekhar Singh	Samsung-Bangalore
81.	Aastha Sharma	Samsung-Bangalore
82.	Jyoti Johri	Samsung-Bangalore
83.	Priti Singh	Samsung-Bangalore



84.	Abhishek Kumar	Naukri.com
85.	Sumit Gaud	Naukri.com
86.	Gagan Gupta	Naukri.com
87.	Anubhav Dutta	Naukri.com
88.	Kumar Harsh	Naukri.com
89.	Rajendra Beeda	Naukri.com
90.	Rahul Gupta	MAQ SOFTWARE
91.	Prateek Singh	MAQ SOFTWARE
92.	Shashank Srivastava	MAQ SOFTWARE
93.	Sumit Kumar Sahu	MAQ SOFTWARE
94.	Srishti Das	Flipkart
95.	Abhishek Jha	Flipkart
96.	Anoop Misra	Flipkart
97.	Mohit Rathi	Flipkart
98.	Jayendra Bahadur Singh	Flipkart
99.	Pallivi Kela	Walmart Labs
100.	Deeksha Garg	Walmart Labs
101.	Ayushi Jain	Walmart Labs
102.	Shivani Pant	Walmart Labs
103.	Prakul Agarwal	Hindustan Times
104.	Gaurav Bansal	Hindustan Times
105.	Divya Singhal	Hindustan Times
106.	Aman Mamgain	Hindustan Times
107.	Akshay Khare	KLA-Tencor
108.	Sagar Chauhan	Streamoid
109.	Amol Keshav Sinha	Streamoid
110.	Harshil Ambagade	Streamoid
111.	Prakhar Agarwal	Adobe
112.	Alankrita	Adobe
113.	Nayan Singhal	Microsoft
114.	Nikhil Karnwal	Microsoft
115.	Anshul Jain	Microsoft
116.	Mayank Tuteja	Amazon
117.	Anshuman Gautam	Amazon
118.	Saurabh Jain	Directi
119.	Somya Agarwal	Deshaw
120.	Sourabh Kesharwani	Qualcomm
121.	Rahul Jain	Qualcomm
122.	Shivam Kaushal	Qualcomm
123.	Srishti Kumar	Mahindra Comviva
124.	Sarthak Mall	Mahindra Comviva
125.	Amgosh Madan Naik	Mahindra Comviva
126.	Umang Agarwala	ZS Associate
127.	Rachit Rawat	ZS Associate



128.	Adwait Kumar Raguvanshi	ZS Associate
129.	Arvind Pothula	ZS Associate
130.	Aman Kumar	Amadeus Software Labs
131.	Niranjana Ojha	Amadeus Software Labs
132.	Sufiyan Ahmed	Amadeus Software Labs
133.	Sumit Tiwari	Amadeus Software Labs
134.	Mayank Chaudhary	Accolite
135.	Chandresh Bharadwaj	Accolite
136.	Mohit Mahawar	Accolite
137.	Amrit Kalsi	Verizon
138.	Majumdar	Verizon
139.	Arpita Muthiyar	Verizon
140.	Ragini Upadhyay	Verizon
141.	Nitish Kumar	Verizon
142.	Anurag Narayan	Verizon
143.	Prathak Rastogi	Verizon
144.	Akansha Rajvanshi	Verizon
145.	Shiv Ashutosh	Verizon
146.	Harsh Bharadwaj	Verizon
147.	Tushar Dhaka	Verizon
148.	Mayank	Verizon
149.	Kunal Pareek	Verizon
150.	Apoorv Bisht	Verizon
151.	Pradeep Reddy	Verizon
152.	Yogananda	Verizon
153.	Khushboo Sangal	IBM
154.	Archana Maurya	IBM
155.	Rohit Kumar	IBM
156.	Kushal Singh	IBM
157.	Arvind Mishra	IBM
158.	Subodh Pandey	IBM
159.	Nitish Kumar	IBM
160.	Aakash Gupta	IBM
161.	Ravi Kumar	IBM
162.	Viswash Pratap Singh	IBM
163.	Mragank Tolwani	IBM
164.	Ayushi Gupta	IBM
165.	Yash Chauhan	IBM
166.	Nishant Kumar	IBM
167.	Shumali Meena	IBM
168.	Deepika Bansal	IBM
169.	Mridul Puri	IBM
170.	Simarpreet Singh	IBM
171.	Hariohm Kumar	IBM



172.	Prateek Porwal	IBM
173.	Saman Majithia	IBM
174.	Rameshwar Legha	IBM
175.	Nikhil Prasad	IBM
176.	Niraj Tanwar	IBM
177.	Ashish Chandra	IBM
178.	Archit Maheshwari	IBM
179.	Ankur Jaiswal	IBM
180.	Rohit Kumar	IBM
181.	Akash Kumar	IBM
182.	Md Abu Aamir	IBM
183.	Gaurav Sahu	IBM
184.	Dheeraj Kumar Singh	IBM
185.	Gottupalli Praveen	IBM
186.	Jay Agarwal	IBM
187.	Shashi Prakash	IBM
188.	Shivendra Soni	SAP
189.	Chigurupati Ved Vyas	SAP
190.	Rohit	S&PCapital
191.	Ankur Jaiswal	S&PCapital
192.	Manju Yadav	S&PCapital
193.	Abhinav Gupta	TCS
194.	Ankit Goyal	TCS
195.	Ankit Sharma	TCS
196.	Ankitesh Kushwaha	TCS
197.	Anuj Jain	TCS
198.	Arjun Upreti	TCS
199.	Ashwini Kumar	TCS
200.	Bhavesh Vijay	TCS
201.	Chakali Sindhu	TCS
202.	Dinesh Suthar	TCS
203.	Gunjit Agarwal	TCS
204.	Jayendra Singh	TCS
205.	Kishan Khandelia	TCS
206.	Krishna Choudhary	TCS
207.	Kuldeep Panchal	TCS
208.	Kundala Rahi	TCS
209.	Kushagra Jindal	TCS
210.	Lalit Pathak	TCS
211.	Mayank Dhariwal	TCS
212.	Mohd Khan	TCS
213.	Monika Meena	TCS
214.	Munugoti Chandra	TCS
215.	Naman Kalkhuria	TCS



216.	Navneet Sinha	TCS
217.	Neelendra	TCS
218.	Nilesh Singh	TCS
219.	Nishant Singh	TCS
220.	Palash	TCS
221.	Pragya Sachan	TCS
222.	Prashant Mishra	TCS
223.	Prateek Sharma	TCS
224.	Rakesh Kumar	TCS
225.	Ravi Kumar	TCS
226.	Rritisha Singh	TCS
227.	Sandeep Srivastava	TCS
228.	Satya	TCS
229.	Saumya Srivastava	TCS
230.	Shaloo	TCS
231.	Shashi Kumar	TCS
232.	Sudhanshu Singh	TCS
233.	Suresh Arora	TCS
234.	Vaishali Agarwal	TCS
235.	Yamini Gupta	TCS
236.	Yogesh Kaushik	TCS
237.	Saadi Rauf	Infosys
238.	Kumar Shubham	Infosys
239.	Rahul Verma	Infosys
240.	Risi Kumar Jaiswal	Infosys
241.	Aishwarya Saxena	Infosys
242.	Jeetender Kumar	Infosys
243.	jagadeesh rao polsani	Infosys
244.	Vijay Shankar Gupta	Infosys
245.	Kamma Sri Siva Harish	Infosys
246.	Aeshwarya Bhati	Infosys
247.	Rahul Sharma	Infosys
248.	Prabhat Kumar	Infosys
249.	Rahul Kumar Meena	Infosys
250.	Avinash kumar	Infosys
251.	Narendra Surya Kumar Saragadam	Infosys
252.	Manish Aaswani	Infosys
253.	Syed Danish Kamal	Infosys
254.	Jayanto chowdhary	Infosys
255.	Sarath Kumar Chinthluri	Infosys
256.	Mayank Gupta	Infosys
257.	Abhishek Tiwari	Infosys
258.	Vivekkanand Soundararajan	Infosys
259.	Vijay Batham	Infosys



260.	Mirza Akbar Beg	Infosys
261.	Atik Nurmohmad Theba	Infosys
262.	Aakash Gupta Choudhary	Juniper
263.	Arvind Mishra	Juniper
264.	Ashish Chandra	Juniper
265.	Lalit Pathak	Juniper
266.	Narendra Surya Kumar Saragadam	Juniper
267.	Palash Bansal	Juniper
268.	Sudhanshu Ranjan	Juniper
269.	Anand Kumar	Amdocs
270.	Naman Kalkhuria	Amdocs
271.	Bindu Biswas	Amdocs
272.	Manish Kumar Aswani	Amdocs
273.	Sainik Chattapadhyay	Amdocs
274.	Prateek Porwal	Amdocs
275.	Shashi Kumar	Amdocs
276.	Jeetendra Kumar	Amdocs
277.	Shanth Naik Bukya	Amdocs
278.	Shumali Meena	Amdocs
279.	Praveen Kumar Bhagat	Amdocs
280.	Saumya Srivastava	Amdocs
281.	Archana Maurya	Ibibo
282.	Pushpa Nyaupane	Ibibo
283.	Dheeraj Singh	Citi
284.	Palash Bansal	Citi
285.	Navneet Sinha	Citi
286.	Bhaskar Gautam	Citi
287.	Aman Bahadur Singh	Citi
288.	Manoj Kumar	Citi
289.	Anshu Verma	Citi
290.	Dheeraj	Minch Software
291.	Sharad	Sapient
292.	Ambuj	Sapient
293.	Prashant Pal	Sapient
294.	Amit Meena	Sapient
295.	Hareshwar Kumar	AESL
296.	Shobhit Singh	AESL
297.	Prateek Katare	AESL
298.	Mragank Tolwani	Gwynniebee
299.	Ganesh Jaiswal	Drishti
300.	Garima Singh	Kritical Soln
301.	Simarjyot Singh	Kritical Soln
302.	Matrika Dixit	Thorogood
303.	Ritesh Anand	Thorogood



304.	Abdul Rais	Oracle
305.	Mayank Pal Dohare	Oracle
306.	Kartikeya Tiwari	Oracle
307.	Shahsi Prakash	Oracle
308.	Krishna Nayan Choudhary	Oracle
309.	Kushagra Jindal	Oracle
310.	Shailesh Kumar	Samsung SRI -Noida
311.	Jyoti Jaiswal	Samsung SRI -Noida
312.	Viswash Pratap Singh	Samsung SRI -Noida
313.	Raklesh Kumar	Samsung SRI -Noida
314.	Gunjit Agarwal	Samsung SRI -Noida
315.	Ankitesh	BlackRock
316.	Rohit Kumar	BlackRock
317.	Avnish	BlackRock
318.	Neelesh Simarjyot	BlackRock
319.	Deepika	BlackRock
320.	Krishna	BlackRock
321.	Prashant	BlackRock
322.	Gaurav	BlackRock
323.	Arpit	BlackRock
324.	Kuldeep	BlackRock
325.	Ambuj	BlackRock
326.	Divya Ojha	One Assist
327.	Pallavi Kushwaha	One Assist
328.	Kumar Rishabh	Nucleus Software
329.	Abu Amir	Sutra
330.	Sudhnashu Pratap Singh	Sutra
331.	KSS Harish	Sutra
332.	Abhinav Gupta Suggal	Sutra
333.	Khushbo Sangal	Freescale
334.	Ayushi Gupta	Freescale
335.	Bikkavilli VNS Harsha	Freescale
336.	Poonam Chaurasia	Freescale
337.	Risi Kumar Jaiswal	Freescale
338.	Mohammad Sadique Khan	Freescale
339.	Pragya Sachan	Freescale
340.	Ankit Goyal	Freescale
341.	Pallavi Kushwaha	Freescale
342.	Yamini Gupta	Valuefy
343.	Nikhil Prasad	Valuefy



**LIST OF HUMAN RESOURCES IN MANAGING INSTITUTE IN 2013-14
TEACHING STAFF**

S.No	Name	Designation
1.	Prof. G. C. Nandi	Professor
2.	Prof. R. C. Tripathi	Professor
3.	Prof. U.S. Tiwary	Professor
4.	Prof. Sudip Sanyal	Professor
5.	Prof. O. P. Vyas	Professor
6.	Prof. Ramji Lal	Professor
7.	Prof. Hari Prakash	Professor
8.	Prof. G. N. Pandey	Professor
9.	Prof. M. Radhakrishna	Professor
10.	Prof. Krishna Mishra	Professor
11.	Prof. B. R. Singh	Professor
12.	Prof. Anupam	Professor
13.	Dr. Shekhar Verma	Associate Professor
14.	Dr. Anurika Vaish	Associate Professor
15.	Dr. Tapobrata Lahiri	Associate Professor
16.	Dr. Shirshu Verma	Associate Professor
17.	Dr. C. V. S. Siva Prasad	Associate Professor
18.	Dr. Sanjeev B. S.	Assistant Professor
19.	Dr. Vrijendra Singh	Assistant Professor
20.	Dr. Madhvendra Mishra	Assistant Professor
21.	Dr. Pavan Chakraborty	Assistant Professor
22.	Dr. Vijayshri Tewari	Assistant Professor
23.	Dr. Vijay Kumar Chaurasiya	Assistant Professor
24.	Dr. Pritish Kumar Varadwaj	Assistant Professor
25.	Dr. Manish Kumar	Assistant Professor
26.	Dr. Ashutosh Mishra	Assistant Professor
27.	Dr. Neetesh Purohit	Assistant Professor
28.	Dr. Sanjai Singh	Assistant Professor
29.	Dr. Abhishek Vaish	Assistant Professor
30.	Dr. Rajat Kumar Singh	Assistant Professor
31.	Dr. Manish Goswami	Assistant Professor
32.	Dr. Subramanin Venkatesan	Assistant Professor
33.	Dr. Sonali Agarwal	Assistant Professor
34.	Dr. Pragya Singh	Assistant Professor
35.	Dr. Pramod Kumar	Assistant Professor
36.	Dr. Akhilesh Tiwari	Assistant Professor
37.	Dr. Amit Prabhakar	Assistant Professor
38.	Dr. Guttula Satyavani	Assistant Professor
39.	Dr. Sangeeta Singh	Assistant Professor
40.	Dr. Satish Kumar Singh	Assistant Professor
41.	Dr. Shailendra Kumar	Assistant Professor
42.	Dr. Nidhi Mishra	Assistant Professor
43.	Dr. Krishna Pratap Singh	Faculty on Contract
44.	Dr. Ranjit Singh	Faculty on Contract
45.	Dr. Pravin Kumar	Faculty on Contract
46.	Dr. Ranjana Vyas	Faculty on Contract
47.	Dr. Lokendra Kumar Tiwari	Faculty on Contract



Non-Teaching Staff (2013-14)

S.No	Name	Designation
1.	Dr. Asheesh Kumar	Deputy Registrar (Administration)
2.	Mr. Pradeep Kumar Jain	Chief Executive Secretary
3.	Dr. Seema Shah	Deputy Registrar (Establishment)
4.	Mr. Lok Nath Sharma	Security Officer
5.	Mr. Mithilesh Mishra	System Analyst
6.	Mr. K. K. Tiwari	Assistant Registrar (Finance)
7.	Mr. Ranjeet Banerjee	Assistant Registrar (Exam)
8.	Mr. Pankaj Mishra	Senior Information Assistant
9.	Mr. Prashant Srivastava	Programmer
10.	Mr. Mukesh Rawat	Personal Secretary
11.	Mr. Vivek Nagar	Personal Secretary
12.	Mr. Yogesh Kardam	Computer Operator
13.	Mr. Vivekanand Sinha	Comp/ Data Processor
14.	Mr. Durgesh Kumar	Data Processor/Data Operator
15.	Mr. Santosh	Data Processor/Data Operator
16.	Mr. Shailendra Singh	Technical Assistant/Data Processor
17.	Mr. Kaushal Kumar Singh	Technical Assistant/Data Processor
18.	Mr. Sanjiv Kumar	Technical Assistant/Data Processor
19.	Mr. Santosh Kumar Mishra	Technical Assistant/Data Processor
20.	Mr. Ashutosh Shukla	Technical Assistant/Data Processor
21.	Mr. Himanshu Pandey	Technical Assistant/Data Processor
22.	Mr. Rajit Ram Yadav	Technical Assistant/Data Processor
23.	Mr. K. S. Aeron	Accountant
24.	Mr. Rajeev Kumar Bhatia	Accountant
25.	Ms. Shweta Gupta	Accountant
26.	Mr. Sanjay Kumar	Accountant
27.	Mr. Sunil Kashyap	Accountant
28.	Mr. Brijesh Kumar Pandey	Multifunctional Assistant
29.	Mr. Rajendra Singh Bisht	Multifunctional Assistant
30.	Mr. Sandeep Kumar Kesarwani	Multifunctional Assistant
31.	Ms. Asha Shukla	Multifunctional Assistant
32.	Mohd. Saleem Ansari	Multifunctional Assistant
33.	Mr. Sumit Kumar Shukla	UDC
34.	Mr. Kapil Srivastava	Executive Assistant
35.	Mr. Abhishek Pandey	Deputy Accounts Assistant
36.	Mrs. Prabha Verma	Computer Assistant (LDC)
37.	Mr. Abhishek Kumar	Computer Assistant (LDC)
38.	Mr. Pramod N. Tripathi	Technical Assistant
39.	Mr. Santosh Kumar Yadav	Lab Assistant
40.	Mrs. Pratibha Verma	Lab Assistant
41.	Mr. Gaj Raj Singh	Junior Engineer
42.	Mr. Akhilesh Kumar	Junior Engineer
43.	Mr. Sivakant Tripathi	Junior Engineer
44.	Mr. Sarvesh Kr. Mishra	Library Information Assistant
45.	Mohd. Izhar	Compounder
46.	Mr. Vinod N. Tripathi	Compounder
47.	Mrs. Priya Pal	Nurse
48.	Mrs. Blessy Annie Shaiju	Nurse



49.	Ms. Ritu Srivastava	Computer Assistant
50.	Mr. Subhash Kumar	Caretaker
51.	Mr. Manoj Kumar Upadhyay	Caretaker-cum-manager
52.	Mr. Pankaj Srivastava	Lab. Assistant
53.	Mr. Girish Kumar Dixit	Lab. Assistant
54.	Mr. D. N. Shukla	Computer Assistant
55.	Mr. N. K. Tripathi	Computer Assistant
56.	Mr. Raj Kumar	Driver
57.	Mr. Satish Kumar	Driver



Consultants

S.No	Consultants	Designation
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)

