



# Annual Report

2012 – 2013



**INDIAN INSTITUTE OF INFORMATION TECHNOLOGY,  
ALLAHABAD**

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



## 2. THE CHANCELLOR'S MESSAGE

The meteoric rise to academic eminence by Indian Institute of Information Technology, Allahabad during its short span of life has been an enviable academic mark globally. As IT revolution swept the lives and destinies of developed nations, this Institute was established by the Govt. of India in 1999 with a lofty mission to help usher the country as a Superpower in IT and related sciences in the Twenty First Century. The Institute was established as a forerunner to expansion of IT capability and competence of the country in the comity of nations by subsequent establishment of IT Institutions throughout the country on its academic and administrative patterns. Indeed, it has been a bold signature of GoI, MHRD as a consequence 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 unforeseen academic laurels. Its most modern academic programs, cutting edge researches, collaborative academic, research, industrial, societal and other many-faceted programs highly speak of its selective and high end societal commitments to the academia. The growth and progress rate with which the Institute has been advancing indicates its bright future.

I am happy to note that IIIT-A is bringing out its Annual Report of the year 2012-2013 for submission before the Hon'ble Parliament through the Govt. The Report reflects the academic pursuits and achievements of the present as also its promise and poise through its plans for the future years.

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

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

**Prof. Goverdhan Mehta**



### 3. THE DIRECTOR'S MESSAGE

IIIT-A was founded on August 12, 1999 as a consequence of Rame Gowda Committee Report constituted for establishing Indian Institute of Information Technology at Allahabad as per 75<sup>th</sup> recommendation of the National Task Force on IT and related sciences. Starting from a student strength of 60 for B.Tech (IT), the Institute has now on its rolls 2040 students for B.Tech (IT & EC), M.Tech (Wireless Communication & Computing, Software Engineering, Bioinformatics, Intelligent Systems, Human Computer Interaction, Microelectronics, Robotics), MBA (IT), MS(CLIS) and Ph.D. Degrees. It has more than 100% employability, some students having multiple choices of employment.

The Institute has had industrial collaborations of its academics with reputed 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 organizations are Corinex Canada, TCS, ISRO, Zensar, IBM, Maple Leaf, ALIMCO etc. Further, centres of excellence at the Institute such as IRCB, Indo-US Centre for language technology, Indo-Swiss Centre of Microelectronics, Indo-Danish Centre for Wireless Sensors and Senses, Patent Referral Centre and S&T Discovery Park etc. have enlarged the horizons of its societal concerns and outreach programs. These collaborations have given excellence and international recognition to its academics.

Enlarging the ambit of its academic pursuits and updating and uplinking its course structure has been the prime concern of the Institute. To achieve this end, the Institute has had academic collaborations with a number of developed international Institutions such as CMU Pittsburgh, MIT, GIST Korea, EPFL Louisiana, ROSNOU, Moscow, California University USA, Aalborg University, Denmark etc. The exchange of scholarship with such accomplished Institutions has established its international recognition and repute. The Institute, alongwith its curricular academics, has been undertaking Projects covering a variety of subjects of national and international imports. By the year 2012-2013, the Institute had 35 R&D Projects as detailed in this Report having bearings on latest innovations and other academic concepts saturated with far reaching consequences. Alongwith the R&D Projects, the Institute has been seeking the best of the academic achievements of most advanced international Institutes and organization with concerted effort to make and enrich its own curriculae most modern and advanced. Particulars of these academic accomplishments are given in this Annual Report at relevant places.

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

Since then, the Institute has hosted successively five Science Conclaves and INSPIRE Programs during the years 2008, 2009, 2010, 2011 and 2012 with immense popularity among the young scientists being nurtured in the schools, colleges, universities and



engineering Institutes not only in India but also in the SAARC, ASEAN and African Countries. With the popularity and national and international acceptance the programs have had, the Governing Bodies of the Institute have approved to broaden its ambit to African Countries as well with the promise to make it the Lindau of India and South East Asia. During the year, a high-powered Committee constituted by the Govt. has been all praise with the efforts made by the Institute in this regard. It has recommended to perpetuate organization of Science Conclaves with IIIT-A as its Nodal Agency.

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

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

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

**Director**



## 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.





## 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.

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

#### The IIIT-A Society

- (a) To arrange for Instruction and training in such branches of learning as it may deem fit.
- (b) To arrange for research and for the advancement of and dissemination of knowledge.
- (c) To undertake extra-mural studies, extension programs and field outreach activities to contribute to the development of society.
- (d) To do all such other acts and things as may be necessary or desirable to further the objects of the Institute.

A List of Members during the period is given as **Annexure - 01**.

#### The Board of Management

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

With effect from November 26, 2011, the Institute adopted the UGC (Institutions Deemed-to-be Universities) Regulations 2010 as adopted by the IIIT-A Society. The registration of Revised MoA and Rules of the IIIT-A Society under the Registration of Societies Act, 1860 was done on 26.11.2011. Henceforth, the Board of Management replaced the erstwhile Board of Governors of the Institute. A List of Members during the period is given as **Annexure - 02**.

#### The Academic Council

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

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

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

#### The Finance Committee

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



### **The Building & Works Committee**

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

A List of Members during the period is given as **Annexure – 05**.



## 6. The Administration

**(as in March 2013)**

### **Deans / Divisional Heads / Faculty In-charges**

Prof. G.C. Nandi, Dean (Academic) & HoD (IT)  
Prof. R.C. Tripathi, Officiating Dean (Student Affairs) & Stud. Counselor  
Prof. O.P. Vyas, Dean (R&D) & Prof. In-Charge (Estate)  
Prof. M. Radhakrishna, Div. Head (Electronics)  
Prof. Anurika Vaish, Div. Head (MBA & MS)  
Dr. C.V.S. Prasad, Div. Head (Applied Science & IRCB)  
Dr. Vijai Shri Tewari, Div. Head (International Relations)  
Dr. Vrijendra Singh, Chief Proctor & Faculty In-charge (Ph.D. Cell)  
Mr. Ashutosh Kumar Singh, Assistant Proctor  
Dr. Satyavani Guttula, Assistant Proctor  
Dr. Shirshu Verma, Professor In-Charge, Placement (B.Tech, M.Tech & MBA)  
Dr. Abhishek Vaish, Faculty In-Charge, Placement (MS)  
Dr. Manish Goswami, Faculty In-Charge (Examcell)  
Dr. Sanjai Singh, Faculty In-Charge (RGIIT Amethi)

### **Wardens**

Dr. Shashikant Rai, Warden (Boys' Hostel 1)  
Dr. Pavan Chakraborty, 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)

### **Officers**

Dr. Asheesh Kumar, Deputy Registrar (M)  
Mr. R.B. Singh, Deputy Registrar (F)  
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



## 7. EMPHASIS AT IIIT-A

Welcome to Indian Institute of Information Technology, Allahabad, a centre of excellence where we nurture young talents in the different fields of Information Technology. Our major emphasis of imparting training is to encourage curiosity and innovativeness among our students and lay a foundation from where they can acquire quick learning ability and adaptivity with the fast changing world.

We welcome applications from students interested to take admission in our B.Tech program which is currently offered through AIEEE, In M.Tech program admission is offered through special admission tests and interviews conducted by the institute for the candidates having valid GATE score. A few seats are also reserved for industry sponsored candidates for whom GATE score is not mandatory.

Apart from these we encourage students having strong research interest and ability to join our Ph.D. program, applications for which will be entertained through out the year. However, Ph.D. registrations can only be offered to the deserving candidates by the Degree Research Committee which meets time to time based on the requirements. A Ph.D. candidate is considered for scholarship provided he/she is having valid GATE score.

Apart from these we also offer MBA (IT) program and Master's program in Cyber law and Information Security.

All our programs are flexible and modern. They offer superb research training along with a strong and up to date curriculum of course work. Our laboratories are equipped with state of the art equipment and software. They provide a very stimulating environment and are kept open round the clock. Our beautiful campus is superbly networked with excellent speed of internet accessibility.

As the students shape their future during the most exciting period of their lives, we would like to make sure that their stay at IIIT-Allahabad, would be both memorable and rewarding.



## 2. The Academics

### 2.1 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 a lot of 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:

	<b>Course offered by the Institute</b>
<b>UG</b>	<b>Bachelor of Technology in Information Technology (B.Tech – IT)</b>
	<b>Bachelor of Technology in Electronics &amp; Communication Engineering (B.Tech – ECE)</b>
<b>PG</b>	<b>Master of Technology (M.Tech) in Information Technology (IT) –</b>
	1) <b>Wireless Communication &amp; Computing (WCC)</b>
	2) <b>Software Engineering (SE)</b>
	3) <b>Bioinformatics (BI)</b>
	4) <b>Intelligent Systems (IS)</b>
	5) <b>Human Computer Interaction (HCI)</b>
	6) <b>Robotics (RO)</b>
	<b>Master of Technology (M.Tech) in Communication &amp; Electronics Engineering (CE)</b>
	–
	1) <b>Communication Engineering (CE)</b>
	2) <b>Microelectronics (MI)</b>
	<b>5-Years Integrated M.Tech in Bio-Medical Engineering [M.Tech (BM)]</b>
	<b>Master of Business Administration in Information Technology [MBA(IT)]</b>
	<b>Master of Science in Cyber Law &amp; Information Security (MS-CLIS)</b>
<b>Ph.D.</b>	<b>Ph.D.</b>

#### **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 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.

## 2.2 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



### 3. The Faculty Update

Prof. G.C. Nandi  
Professor



#### Research Interests:

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

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

#### MEMBERSHIP OF PROFESSIONAL ORGANISATIONS

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

#### SOME OTHER PROMINENT PROFESSIONAL ACTIVITIES

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

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

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

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

#### Research Publications of the year

1. 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.
2. 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.
3. 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.



4. A. Nandy, P. Chakraborty, G. C. Nandi.: "Speed Invariant, Human Gait Based Recognition System for Video Surveillance Security" – In 2nd International Conference on Intelligent Interactive Technologies and Multimedia (IITM-2013), IIIT-Allahabad in the proceeding of Springer CCIS Vol. 276, pp. 325-335, March 9 - 11, 2013.
5. A. Nandy, S. Bhowmick, P. Chakraborty, G. C. Nandi.: "Gait Biometrics: An Approach to Speed Invariant Human Gait Analysis for Person Identification"- In 2nd International Conference on Soft Computing for Problem Solving SocPros-2012 Jaipur in the proceeding of AISC Series of Springer.
6. 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 (ICTACT-2013).
7. 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)
8. 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.
9. 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).
10. 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)
11. 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).
12. 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).
13. 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).

## LIST OF PUBLICATIONS (during the year)

### A. Journal Publications

- Blood sugar regularization based evolutionary algorithm for data classification, International Journal Applied Soft Computing 12 (2012) 2266–2273, Elsevier, (with S C Pandey)
- A Central Pattern Generator Based Nonlinear Controller to Simulate the Biped Locomotion of a Stable Human Gait Oscillation. International Journal of Robotics and Automation, Vol-2 Issue-2, 2011. (with four co-authors)

### B. International Conference Publications

- ✓ A Nandy, S Mondal, P Chakraborty, GC Nandi ,"**Development of a Robust Microcontroller Based Intelligent Prosthetic Limb**" – In 5<sup>th</sup> International Conference on Contemporary Computing (IC3-2012), Noida, In **Springer CCIS 306**, pp. 445-455, August 2012 .
- ✓ iS. Shahid, A.Nandy, S.Mondal, P. Chakraborty and G C Nandi, "**A Study on Human Gait Analysis**" – In 2<sup>nd</sup> International Conference on Computational Science, Engineering and Information Technology (CCSEIT-2012), Coimbatore in the proceeding of **ACM Digital Library**.
- ✓ Seema Mishra, G.C. Nandi, CVDP: A Tool Based on a Social Network Analysis to Combating Virus Propagation" **IEEE**, International conference on communication, information and computing technology, 18-20, October, Sardar Patel Institute of Technology, Mumbai 2012.
- ✓ Rajesh Doriya, Pavan Chakraborty, G. C Nandi, "Robot-Cloud: A Framework to assist Hetrogeneous Low Cost Robot", **IEEE**, International conference on communication, information and computing technology, 18-20, October, Sardar Patel Institute of Technology, Mumbai 2012.
- ✓ Shashank Srivastava , Avinash Kumar Singh, G.C. Nandi, "**Inter Cipher Block Diffusion: A Novel Transformation for proposed parallel AES**", in the proceeding of Elsevier 2<sup>nd</sup> international conference on communication, computing and security to be held at NIT Rourkela from 6-8 October 2012.
- ✓ Avinash Kumar Singh, G. C. Nandi, "**Face Recognition Using Facial Symmetry**", in the proceeding of ACM 2<sup>nd</sup> International Conference on Computational Science, Engineering and Information Technology (CCSEIT-2012), to be held at Avinashilingam University Coimbatore from 26-28 October 2012.

### Current Research Activities:

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



**Research Interests:**  
Intellectual Property Right, Patents & Copyright, Enterprise Resource Planning

#### **Academic Achievements**

##### **Publications:**

###### **A: Journal and International Conference Papers**

1. Ranjeet Kumar, R.C.Tripathi and M.D. Tiwari, "Trade Secrets Protection in Digital Environment: A Global Perspective, International Journal of Economics and Management Sciences, Vol.2. No.4, pp.01-09, 2012.
2. Akriti Nigam, Ajay Indoria and R.C. Tripathi, "Fuzzy Clustering of Image Trademark Database and pre-processing using Adaptive Filters and Karhunen Loeve Transform", Intelligent Interactive Technologies and Multimedia, Volume 276, Pages pp 297-305, 9th March 2013, Print ISBN 978-3-642-37462-3, Online ISBN 978-3-642-37463-0.
3. 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 (accepted in December 2012).
4. Pankaj Badoni and R.C. Tripathi "Lesion Detection in Eye Due to Diabetic Retinopathy"-Second International Conference, IITM 2013, Allahabad, India, March 9-11, 2013. Proceedings Print ISBN 978-3-642-37462-3 Online ISBN 978-3-642-37463-0 Springer Series : Communications in Computer and Information Science

###### **Participation in Training Seminars/ Workshops/ Conferences**

- 1) Organized Workshop on Electronics System Design & Manufacturing (ESDM) held during July 18, 2012 in IIIT-A.
- 2) Organized National Workshop on Timing Analysis of Digital VLSI circuits held during Nov 3-4, 2012 at IIIT-Allahabad.
- 3) Organized 2<sup>nd</sup> International Conference on Intelligent Interactive Technologies and Multimedia (IITM) held during March 7-11, 2013 in IIIT-A. Has been 2<sup>nd</sup> member of 3 members Editorial Team of its proceedings.
- 4) Organized as 2<sup>nd</sup> member convener- a Three days Lecture Workshop on "Galois Theory, Finite Fields and Cryptography" held during June 24-26, 2013 in IIIT-A.
- 5) In-charge of the Site Seeing Committee in the 6th Science Conclave held during Dec 08- Dec 14, 2013 in IIIT-A.

###### **Work done in Projects undertaken in the Institute**

- a) Coordinated the "Technology Incubation and Development of Entrepreneurs (TIDE)" scheme of DeitY, MCIT, GoI, New Delhi for which Rs 40 lakhs was received so far as the first installment during the year out of approved outlay of Rs 155 lakhs over duration of 4 years.

###### **Research & Development (year 2012-2013)**

- a) Patents filed: A Patent was filed 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.
- b) A work for another Patent was completed for title "A method and apparatus similarity detection between any documents"- Siddharth, R.C.Tripathi and M.D.Tiwari- IIIT-Allahabad.

###### **Extra-Curricular activities**

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

###### **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

The patent was also granted in India on 29/03/2011 vide Indian Patent No. 247171

- 2) **Title : Method and Device for detecting watermark in digital data-**  
US Patent No: US 7,336,800 B2 granted dated 26.02.08  
The Patent was also filed on 16.05.2002 in India vide No: 563 / DEL / 2002. It was granted on 02.03.09 vide Indian Patent No: 231097.

###### **Patents Filed in India and under progress (during the year):**

- 3) **1294/DEL/2012:** A personal Human Computer Interaction System based on Eye Gaze Tracking.
- 4) **PAA 1791:** A method and an apparatus for similarity detection for documents based on contents including texts, tables, flow charts and equations.

###### **B) Copyrights Applied:**

**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.



### 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

### Publications during the year

#### Books

a) Natural Language Processing and Information Retrieval, Tanveer. Siddiqui and U. S. Tiwary, Oxford University Press, 2007. Third Reprint 2013.

### Publications of Articles / Research Papers in Journals / Magazines

#### 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
- (ii) Anupam Srivastava, Divij Vaidya, Malay Singh, Pranjal Singh and U. S. Tiwary, " A Cognitive Interactive Framework for Multi-Document Summarizer." 01/2013; DOI: 10.1007/978-3-642-31603-6\_22 ISBN: 978-3-642-31602-9, in 'Advances in Intelligent Systems and Computing', Vol. 179, Publisher: Springer Berlin Heidelberg, Editors: M. Kudělka, J. Pokorný, V. Snášel, A. Abraham, pp.257-268.

### Participation in Seminars / Workshops / Conferences / Symposiums etc.

#### a. International Proceedings and Conference

- (i) Mohit Kumar and Uma Shanker Tiwary. "Hybrid Chunk-based Machine Translation System for Hindi to English Trans." 11/2013; In proceeding of: MICAI, Mexico.
- (ii) Coordinator of the Interactive Session Committee (Engineering branch) in the 6th Science Conclave held during Dec 08- Dec 14, 2013 in IIIT-A.

#### b. National Conference

- (i) 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.
- (ii) 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.

#### c. Workshop

- (i) 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.

### Extra-Curricular activities

Coordinator of the Interactive Session Committee (Engineering branch) in the 6th Science Conclave held during Dec 08-Dec 14, 2013 in IIIT-A.

### Awards/Honours/Recognition received

- (i) Senior Member, IEEE
- (ii) Fellow IETE
- (iii) Member CSI

### Administrative Experience: 19 years

- (i) Expert Member of Selection Committees at various Universities
- (ii) Member, Advisory Committee, Centre of Behavioural and Cognitive Sciences (CBCS), Allahabad University. Member of IT Infrastructure Committee, University of Allahabad

### Conferences Organized

- (i) Program Co-Chair: 5th International Conference on Intelligent Human Computer Interaction, 3-5 Dec 2013, Sydney, Australia.

**Dr. Sudip Sanyal**  
Professor



**Research Interests:**

Natural Language Processing, Software Engineering

**Publications**

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

**Participation in Seminars / Workshops / Conferences / Symposiums etc.**

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

**Work done in Projects**

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

**Research & Development**

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

**Extra-Curricular activities**

- Member of the organizing committee of the 5<sup>th</sup> Science Conclave

**Awards / Honours / Recognition**

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

**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

**Publications during the year**

**List of Publications**

- 1) Jyothi Pillai, O. P. Vyas: CSHURI - Modified HURI algorithm for Customer Segmentation and Transaction Profitability. CoRR abs/1205.1609 (2012)
- 2) Akhilendra Pratap Singh, O. P. Vyas, Shirshu Varma: A Framework of Service Selection and Composition for Flexible Network Architecture. QSHINE 2013: 998-1007. (2013)
- 3) Sunitha Soni, O. P. Vyas: Building Weighted Associative Classifiers using Maximum Likelihood Estimation to Improve Prediction Accuracy in Health Care Data Mining. Journal of Information and Knowledge Management-World Scientific Volume 12(1) (2013)
- 4) S Pramod, OP Vyas: Data Stream Mining: A Review on Windowing Approach. Journal of Computer Science and Technology-12 (11-C) (2012)
- 5) J Pillai, OP Vyas: Encapsulation of Soft Computing Approaches within Itemset Mining—A Survey. Volume 12 Issue 15 Version 1.0 Year 2012
- 6) P Udayakumar, R Vyas, O P Vyas: Token Bus based MAC protocol for Wireless Sensor Networks, International Journal of Computer Applications 43 (10), 6-10, 2012
- 7) P Udayakumar, R Vyas, OP Vyas: Analysing And Designing Energy Efficiency In Wireless Sensor Networks, International Journal of Engineering 1 (9), 2012
- 8) AK Dwivedi, OP Vyas Investigation on Protocols for Wireless Sensor networks Wireless Sensor Networks: Current Status and Future Trends, 2012

- 9) P Udayakumar, Ranjana Vyas, OP Vyas: Energy Efficient Election protocol for wireless sensor networks: International Conference on Circuits, Power and Computing Technologies (ICCPCT), 2013
- 10) AP Manu, Bhawana Rudra, Vipin Kumar, OP Vyas: Broker's Communication for Service Oriented Network Architecture: International Journal of Future Generation Communication & Networking Volume 5(4) 2012

#### Work done in Projects undertaken in the Institute

- The ATB (Army Technology Board) is being coordinated as Institute Research project with MCTE- Mhow for development of "Network Simulation Testbed"

#### Extra-Curricular activities

- 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)

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



#### Research Interests:

Software Engineering, ERP

#### Publications during the year

2. Paper - Sonali Agarwal, G.N. Pandey and M.D. Tiwari, "Data mining in education: data classification and decision tree approach", International journal of e-Education, e-Business, e-Management and e-Learning (IJEEM)-2012, Singapore
3. Book – Environmental engineering, Mc-Graw Hill Education, 2012

#### Participation in Seminars / Workshops / Conferences / Symposiums during the year

3. Sonali Agarwal, G.N. Pandey, "interoperability of cloud computing based e-Governance factor for rural e-Healthcare administration", proceedings of WORLDCOMP2012, July 18-21, Las Vegas Nevada, USA
4. Devendra Gurjar, Prof. B.B. Tiwari, Prof. G.N. Pandey, "enhancement of patient monitoring in ICU and CCU through wireless sensor network", WCSN – 2012, Thailand
5. Sonali Agarwal, G.N. Pandey, "pervasive telemedicine system with data mining", national seminar cum workshop on rural empowerment, amethi, 2012
6. Sonali Agarwal, G.N. Pandey, "human computer interface design for neonatal intensive care with data mining", 4<sup>th</sup> international conference on intelligent human computer interaction, IIT-Kharagpur, 2012
7. Sonali Agarwal, G.N. Pandey, "artificial neural network based data mining approach for telemedicine in rural India", national seminar on data mining applications in healthcare, IIIT-Allahabad, 2013
8. G.N. Pandey, "ANN based data mining approach for telemedicine in rural India", national seminar on data mining applications in healthcare, IIIT-Allahabad, 2013
9. Ms. Ishna Satyarth, Prof. G.N. Pandey, "the multilayer perceptions neural network model for oral cancer prediction", national seminar on data mining applications in healthcare, IIIT-Allahabad, 2013

#### Work done in Projects

1. Discovery park funded by DST (2009-ongoing)
2. IOCL Project funded by Indian oil corporation (2011-ongoing)

#### Research & development

1. Participated in project formulation for oil industry development board. Agreement with Indian oil has been signed.
  - 1.1 "measurement of pipe wall thickness in oil refineries with the help of WSN" project in progress, IOCL
  - 1.2 "remote vibration monitoring using sensor network for self assessment of rotating equipments" project in progress, IOCL
2. "fire protection in coal mine through image processing" project in progress
3. Participated in the preparation of a collaborative program between IIITA and SGPGI is to work on the following two projects to begin with:
  - 3.1 to set up collaborative programs for advanced research in areas of mutual interest
    - 3.1.1 application of information technology in healthcare like hospital information systems, electronic health record and telemedicine for healthcare delivery in rural areas (in and around Amethi)
    - 3.1.2 assessment of disease burden using secondary or primary data in neighboring districts and application of data mining tools and GIS to determine the disease pattern which could be used for strategic planning of healthcare according to local and regional needs, which could be replicated in rest of eastern uttar Pradesh
  - 3.2 telemedicine center is established at Amethi, in progress, it is being extended to IMS of Banaras Hindu University, McGill University, Canada and University of Michigan, USA
  - 3.3 3 M.Tech students are working on data mining in healthcare
4. Discovery park project will be extended with secondary activities
5. A research work on "E-governance through data mining" is being finalized for submission to department of information technology, ministry of communication and technology, govt. of India
6. A research work on "application of wireless sensor network in healthcare" is being finalized for submission to department of science and technology, Govt. of India



7. Smart Grid – 3 M.Tech and 3 B.Tech students are working for their project work

### Training Programs organized

Organizing of national seminar on “data mining applications in healthcare”, at IIT Allahabad, June 2013

### Prof. M. Radhakrishna Professor



### Research Interests:

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

### Academic Achievements of the year 2012-2013

- i. -Supervision of *Workshop on Antenna & RF design*, WARD 2012, & 2013
- ii. Co-chairman WCSN-2013, Conducted two tutorials
- iii. Organizational support to Science Conclave

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

- i. Effect of Pre-Deposition Annealing on the Performance of MIS Capacitor Formed using Atomic Layer Deposition of Ultrathin HfO<sub>2</sub>, Recent trends in Applied Physics & Material Science 2013 (RAM 2013), Bikaner, Feb1-2, 2013, AIP Conf. Proc. 1536, pp. 1159-1160.
- ii. A Review of Energy Harvesting Techniques for WSN, 8th International Conference on Wireless Comm. & Sensor Networks (WCSN-2012), Thailand, Dec. 19-23, 2012.
- iii. Impact of Fringing Field on the C– V Characterization of HfO<sub>2</sub> High-k Dielectric MOS (p) Capacitors Fabricated Through Atomic Layer Deposition, DAE Solid State Physics Symposium 2012, Mumbai, Dec 03-07, 2012, AIP Conf. Proc. 1512, pp. 742-743.
- iv. Application of 2D Defected Ground Structures in Microstrip Lines, IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT 2013), Bangalore, Jan. 17-19, 2013.
- v. Design and Optimization of a 2x2 Directional Microstrip Patch, International Symposium on VLSI Design and Test (VDAT 2013), MNIT Jaipur, July 27-30, 2013.

### Work done in Projects undertaken in the Institute

- I. NSF - Deity project: Wireless Sensor Networks for Protecting Wildlife and Humans (See 2-10 in point 7)
- II. ATB project: Establishment of Network Simulation Testbed

### Research & Development

1. Reliability analysis of High-k dielectrics
2. Development of gunshot detection Algorithm
3. Development of digging detection Algorithm
4. Development of tree cutting Algorithm
5. Development of moving vehicle detection Algorithm
6. Development of pugmark detection Algorithm
7. Localization of Acoustic signals
8. Large area sensor network development
9. Fiber optic system development for intrusion detection
10. Development of virtual fence in forest

### Training Programmes Organized

1. Workshop on Antenna & RFdesign
2. Workshop on wireless communication & sensor networks

### Any other work done/Achievements / Distinctions

Design of CC3 network, Design of furniture for CC3



### Research Interests

Microelectronics, Optoelectronic devices & circuits

### Publications

#### Research Papers

#### Paper(s) published in Refreed Journals during the year

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
Electrical characterization of MFeOS gate stack for ferroelectric FETs	Materials Science in semiconductor Processing	Elsevier	Vol. 16, Dec	2013	1603-1607	1.4

#### Paper(s) published in Conferences during the year

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.
Design and analysis of high resonant frequency MEMs accelerometer	2013 students conference on Engineering & Systems (SCES)	MNNIT-Allahabad	12-14 April, 2013	IEEE UP Section

#### Papers communicated

Name of the Journal	Place of Publication	Date & Year of expected Publication	Impact factor of the Journal
Conduction and Field Induced degradation in Thin ZrO <sub>2</sub> films sputtered in Nitrogen containing plasma on Silicon	Springer	Under review	1.5
Electrical characterization of the MFeOS and MFeNS gate stacks for ferroelectric FETs	Applied Physics Letter	Under review	3.8

### Research & Development

A number of basic facilities like Oxidation, Diffusion, Photolithography, Sputtering, Characterization and Metallization etc. have been set up. The R&D in the following four areas are being pursued:

1. Atomic Layer Deposition & Silicon Photovoltaics
2. Deposition and Characterization of High K Dielectrics
3. Bio-MEMS and MEMS based Sensors
4. Planar Lightwave Circuits

#### 1. Atomic Layer Deposition & Silicon Photovoltaics

Recently a research proposal sent to SERI, DST for financial support to set up a atomic layer deposition system for deposition of passivation layer to enhance the efficiency of solar cells has been approved. The allocated fund is likely to be received by this financial year end. Our attempt would be to procure and set up this facility and establish ALD process and implement it on semi-processed solar cells. The passivation properties of ALD alumina films on Si-c solar cells would be investigated.

The measurement set up for life time and efficiency measurement is likely to be established under this program.

#### 2. Deposition and Characterization of High K Dielectrics

The ever increasing demand for higher speed, low power dissipation and more functionality has led to relentless scaling of MOSFETs from near micron to nano meter range in VLSI circuits. However, in addition to realizing small feature size, several new technological challenges like thin dielectric, shallow doping, isolation and interconnect technologies need to be overcome. Presently for nano MOSFETs dielectric thickness required for effective field control is of the order of 1-2 nm. The thickness of the SiO<sub>2</sub> layer presently used as the gate dielectric is becoming so thin that the gate leakage current due to direct tunneling of electrons through the SiO<sub>2</sub> will be so high, that the circuit power dissipation will increase to unacceptable values. In addition it becomes

increasingly difficult to produce and measure accurately films of such small thickness. Finally, the reliability of SiO<sub>2</sub> films against electrical breakdown declines in thin films. Thus it is desired to replace SiO<sub>2</sub> as a gate oxide. Finding a material to replace silicon dioxide is a challenge because SiO<sub>2</sub> is a nearly perfect gate dielectric. The outstanding electrical properties clearly present a significant challenge for any alternative gate dielectric candidate. Some of the high-k materials being considered for integration into future IC technologies are Al<sub>2</sub>O<sub>3</sub>, HfO<sub>2</sub>, ZrO<sub>2</sub>, Y<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub> and Ta<sub>2</sub>O<sub>5</sub> and the silicates and aluminates of some of these materials. Therefore, it is possible to manufacture a gate stack that is physically thicker, yet electrostatically shows a capacitance which is similar to an ultra thin SiO<sub>2</sub> layer. The increased physical thickness significantly reduces the probability of tunneling across the insulator, and therefore reduces the amount of off-state leakage current.

In view of the above, we have been pursuing R&D in the area of high-K dielectrics using sputtering technique. Our emphasis will continue to remain related to its electrical reliability and radiation effects in coming years.

### 3. Bio-MEMS and MEMS based Sensors

In the area of Bio-MEMS, design and fabrication of differently actuated drug delivery system is being pursued presently. The basic MEMS related processes like Bulk micromachining, Back side alignment and wafer thinning has been developed and optimized. R&D work on inertial and RF MEMS will be continued.

### 4. Planar Lightwave Circuits

Ion exchange process is being developed for the development of integrated optical devices like power splitter etc.

**Prof. Hari Prakash**  
Professor



#### Research Interests

Physics

#### Academic Achievements

One D.Phil Thesis submitted under my supervision this year – Dr. Manoj Kumar Mishra

Title of Thesis: Quantum Teleportation – use of entangled coherent states and quantum discord of related states

#### Publications during the year

Sl. No.	Title of Paper	Name of the Journal
1	Degree of polarization in quantum optics through the second generalization of intensity	Physical Review (2013)
2	On the Polarization of non-Gaussian optical quantum field: higher-order optical-polarization	Annals of Physics (2013)
3	Bipartite coherent-state quantum key distribution with strong reference pulse	Quantum Information Processing
4	Noise in swapping between two pairs of non-orthogonal entangled coherent states	Modern physics letters (2013)
5	Minimum assured fidelity and minimum average fidelity in quantum teleportation of single qubit using non-maximally entangled states	Quantum information processing (2012)
6	Non-existence of magic basis and existence of magic partial bases for 2N entangled qubit states with N>1	Journal of Physics A mathematical general (2012)
7	Teleportation of superposed coherent states using nonmaximally entangled resources	Journal of optical society of America (2012)
8	Noise in swapping between two pairs of non-orthogonal entangled coherent states	Modern physics letters (2012)

#### Participation in Seminars / Workshops / Conferences / Symposiums etc.

The first International Workshop on “entangled coherent states and its application to quantum information science – towards macroscopic quantum communications, November 26-28, 2012, Tokyo, Japan, organized by Tamagawa University, Japan

Title of invited talk: Use of entangled coherent states in quantum teleportation; Published in “proceedings of the first international workshop on entangled coherent states and its application to quantum information science, pp. 93-102.

#### Research & Development

Working in the areas of quantum information theory and quantum optics

#### Awards / Honours / Recognition

Chairman of a session, invited speaker and one of the speakers at the Banquet at the first international workshop on entangled coherent states and its application to quantum information science – towards macroscopic quantum communications – November 26-28, 2012, Tokyo, Japan, organized by Tamagawa University, Japan

#### Achievements / Distinctions

Research papers published in arXiv:

1. arXiv:1303.3952.pdf: On the Polarization of non-Gaussian optical quantum field: higher-order optical-polarization, Ravi S. Singh, Hari Prakash
2. arXiv:1301.3616.pdf: Degree of Polarization in quantum optics through second generalization of intensity, Ravi S. Singh, Hari Prakash

3. arXiv:1210.2212.pdf: Quantum discord and entanglement in Quasi-Werner states based on bipartite superposed coherent states, Ajay K. Maurya, Manoj K. Mishra, Hari Prakash
4. arXiv:1210.2201.pdf: Quantum teleportation within a quantum network, Hari Prakash, Ajay K. Maurya, Manoj K. Mishra
5. arXiv:1209.3706.pdf: Quantum discord and entanglement of Quasi-Werner states based on entangled coherent states, Manoj K. Mishra, Ajay K. Maurya, Hari Prakash
6. arXiv:1209.3683.pdf: Quantum discord dynamics for two-level atom initially in thermal equilibrium interacting with n-Photon state
7. arXiv:1209.3109.pdf: Long distance atomic teleportation using entangled coherent states and cavity assisted interaction, Manoj K. Mishra, Hari Prakash
8. arXiv: 1209.2958.pdf: Teleportation of one ququut encoded in single mode superposition of coherent states, Hari Prakash, Manoj K. Mishra

**Prof. Ramji Lal  
Professor**



**Research Interests**

Mathematics, Group Theory, Cryptography & Algebraic K-Theory

**Publications**

**International Journal**

- (i) "Topological right gyrogroups and gyrotransversals" communications in Algebra, 41: 3559-3575 (17 pages), 2013, Taylor & Francis with Akhilesh C. Yadav
- (ii) "Weak classification of finite groups" to appear in Asian-European Journal of Mathematics (word scientific) 21 pages (with Atul Singh)
- (iii) "Pseudo spectral sequences" advances in Algebra 2012 (with B.K. Sharma)
- (iv) Twisted automorphisms of right loops; 15 pages, submitted

**Extra-curricular activities**

Coordinated Mathematics interaction sessions at the Science Conclave

**Prof. Anupam Agarwal  
Professor**



**Research and Teaching Experience**

above 24 years

**Academic Achievements**

- Successfully organized (as Program Chair) the second Intl. Conference on "Intelligent Interactive Technologies & Multimedia" under the banner of Springer, Germany during March 09-11, 2013 at IITA in collaboration with two Intl. Universities
- Served as Guest Editor of special issue on IITM of the World Scientific Journal entitled "Image and Graphics", Vol. 13, No. 2, April, 2013
- Successfully organized the 7<sup>th</sup> Convocation on 21-09-2012 at IITA and Special Convocation on 18-12-2012 in New Delhi as Professor Incharge Examination
- Prepared & submitted a joint INDO-UK project proposal in collaboration with University of Strathclyde, UK (It was ranked in the top 5, of 25 applications). Final sanction of the project was received from DST, New Delhi in Jan'2013

**Publications during the year**

Names of Books published: **One**

**List of Publications in Refereed Journals (2012-2013)**

Title of Paper	Name of the Journal	Publisher/ Place of Publication	Volume & Issue No.	Year	Pages from-to
Minutiae Distances and Orientation Fields Based Thumbprint Identification of Identical Twins	Intl. Journal of Image, Graphics and Signal Processing	MECS Press, Hongkong	Vol. 2, No. 2	2013	51 - 59
Vision based Application-Adaptive Hand Gesture Recognition System	Intl. Journal of Information Acquisition	World Scientific, Singapore	Vol. 9, No. 1	2013	01 - 20
Fingerprints, Iris and DNA Features based Multimodal Systems: A Review	Intl. Journal of Information Technology and Computer Science	MECS Press, Hongkong	Vol. 5, No. 2	2013	88 - 111
A survey on activity recognition and behavior understanding in video surveillance	Visual Computer	Springer-Verlag, Berlin Heidelberg	DOI:10.1007/s00371-012-0752-6	2012	01 - 27
Real Time Gesture Recognition System for Interaction in Dynamic Environment	Procedia Technology	Elsevier, Amsterdam	Vol. 4	2012	595 - 599

**List of Publications in International Conferences (2012-2013)**

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.
Computing the Incomputable with Human Processing Units	IITM 2013 (pp. 14 – 24)	IIIT Allahabad	09-11 Mar'2013	CCIS, Springer
Adaptive Hand Gesture Recognition System for Multiple Applications	IITM 2013 (pp. 53 – 65)	IIIT Allahabad	09-11 Mar'2013	CCIS, Springer
CUDA Based Interactive Volume Rendering of 3D Medical Data	IITM 2013 (pp. 14 – 24)	IIIT Allahabad	09-11 Mar'2013	CCIS, Springer

\* The above three papers are published as Book Chapters in the Springer (Germany) periodical.

**List of Books** (give full details of publication)

Name of the Book	Name of the Publishing House (with full reference)	Date & Year of Publication	ISBN No.
Intelligent Interactive Technologies and Multimedia 2013 (Ed.)	Communications in Computer and Information Science (CCIS), Springer, Germany	March, 2013	ISBN: 978-3-642-37462-3 (Print) 978-3-642-37463-0 (Online)

**Publications of Articles / Research Papers in Journals / Magazines:**

International Journals: **Five**

**Participation in Seminars / Workshops / Conferences / Symposiums**

International: **Three**

**Work done in Projects undertaken in the Institute**

- 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.
- As PI of the INDO-UK project, carrying out project development on "Distributing Industrial Optimizations Tasks to Rural Worker" in collaboration with the UK PI at the University of Strathclyde, UK.

**Research & Development**

a. **R & D Activities / Inventions, if any**

- Development of 2D & 3D Shape alignment algorithms and 2D & 3D Geometric reasoning tests under the INDO-UK project.
- Supervising the "Interactive Technologies & Multimedia" Lab at IIITA 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 etc.
- Development of GPU-Accelerated Vision and Visualization/ Animation Algorithms.

**Extra-Curricular activities**

- Second International Conference IITM2013 during March 09-11, 2013 at IIIT Allahabad
- Chief Proctor (upto July'2012) & subsequently as Professor In-Charge Examination (July'2012 onwards)
- Contributed in organizing the Foundation Day on 12<sup>th</sup> August' 2012 and the annual function "Effervescence 12" during Oct 01-05, 2012 and the 5<sup>th</sup> Science Conclave, 2012 during Dec 08-14, 2012 at IIIT Allahabad

**International level**

- 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) and others
- Invited Reviewer of Intl. Conferences: IEEE IGARSS, ACM COMPUTE and others

**Training Programmes/ Workshops Organized**

(a). **In-Campus Training Programmes/Conferences**

- Taught "Image Processing" course during three weeks India Africa Training program between 15-10-2012 to 03-1-2012
- Organized a national Workshop on MATLAB and its applications in "Digital Image & Signal Processing" at IIITA as part of the Second Intl. Conference IITM 2013 during March 09-11, 2013

(b). **Off-Campus Training Programmes**

- Organized Students Project Contest (SPC) at part of the Second Intl. Conference IITM 2013 involving students of various Technical Institutes during March 09-11, 2013

**Any other Achievements / Distinctions**

Chief Proctor at IIIT Allahabad: Carried out several assignments related with Discipline & Anti-ragging (upto July'2012)



### Research Interests

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

### Publications during the year

#### International Journal

1. "Analysis of accounting models to detect duplicate request in Web Service", Venkatesan S., Saleem Basha M.S., Chellappan C., Anurika Vaish and Dhavachelvan (2013), Journal of King Saud University-Computer and Information Sciences, Vol. 25, No. 1, pp. 7-24.
2. "Key factors leading marketing ROI of e-commerce Business: A user's perspective", IJBGM, IASET Publication, Vol. 2. No. 2. 2013.
3. "Artificial immune system based mobile agent platform protection", S. Venkatesan, R. Baskaran, C. Chellappan, Anurika Vaish, P. Dhavachelvan, Computer Standards & Interfaces, Vol.35(2013) pp.365-373
4. "A Trust Based Approach For Secure Access Control In Information Centric Network", Sapna Singh, Archana Puri, Shiksha Smreti Singh, Anurika Vaish, S.Venkatesan (2012), International Journal of Information & Network Security (IJINS) Vol.1, No.2, June 2012, pp. 97-104.
5. "Retail Ownership Influences On Consumer Buying Preference An Empirical Study Of Indian Consumer", Shashikant Rai, Vrijendra Singh, Anurika Vaish, (2012), Kuwait Chapter of Arabian Journal of Business Management Review, Vol. 1, No.9.
6. "Gap analysis: an approach towards meaningful service delivery for improved customer satisfaction by banks in North India" International Journal of Indian Culture and Business Management (IJICBM), Inderscience Publishers, Volume 4, Number 6, 2012, Page 685-697.

#### National Journal

7. Does Loan Loss Provision Signal Income Smoothing? - An Empirical Investigation of Indian Banking Industry", the IUP Journal of Accounting Research & Audit Practices, Vol 11, No.2.
8. Sectoral Imbalance in an Economy : A Cause and Effect Based Study with Focus on Rural to Urban Migratio, Invertis Journal of Management Invertis group of Institutions, India, Volume 4, Number 1, 2012, Page 61-67

#### International Conference

1. "A Conceptual Framework for Studying Consumer Product Return Intention", Nikki Shrestha, Bhuwanesh Man Rajbhandari, Fiza Khan, Tapas Giri, Anurika Vaish, S. Venkatesan, the 5th ICMS 2012 International Conference, 2012.
2. "Implementation of ISO-27001 in Indian Scenario: Key Challenges", Abhay Singh, Samarth Sharma, Manish Pandey, Sandarbh Chaurasia, Anurika Vaish, S. Venkatesan, Proceedings of International Conference on Recent Trends of Computer Technology in Academia (ICRTCTA 2012).

#### Books/ Book chapters

1. Mobile Agent based Multimedia content discovery in **Book titled** : Ubiquitous multimedia & Mobile Agents-Models & Implementations edited by Susmit Bagchi-IGI Publishers, U.S.A 2011-978-1-61350-107-8

#### Edited Books

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

#### Copyright

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

#### Work done in Projects undertaken in the Institute

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

#### Research & Development

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

#### Particulars of Academic Work

##### Classes/Subjects taken

MBA -1<sup>st</sup> semester (2012) July – December

- ✓ Managerial Economics- (02 credits)
- B Tech-1<sup>st</sup> semester (2012) July – December
- ✓ Communication Skill- (02 credits)
- MBA -2<sup>nd</sup> semester (2012) Jan – June
- ✓ Cost & Management Accounting ( 02 credits)
- B Tech-4<sup>th</sup> semester (2012) Jan – June
- ✓ Business Systems (03 credits)

#### Extra-Curricular activities

- ✓ Organized the Annual Cultural cum Technical Fest “ Effervescence MMXI held at IIITA

#### Awards/Honors/Recognition

- Amar Ujala B-School Excellence Award in the year 2012 for B-Schools with Industry related curriculum in Information Technology Endorsed by BSA and WEC
- Received ABP NEWS National B-School Awards in Best Government Engineering College category in 2012

#### Training Programs / outreach Organized

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

### Dr. Shekhar Verma Associate Professor



#### Research Interests

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

#### Participation in Seminars / Workshops / Conferences / Symposiums

- Participated in WCSN 2012

#### List of Publications in Refereed Journals during the year

1. GMCA: A greedy multilevel clustering algorithm for data gathering in wireless sensor networks, Kumar, M., Verma, S., Agarwal, N., 2013, International Journal of Communication Networks and Distributed Systems 11 (2) , pp. 198-213.
2. Performance analysis of multivariate cryptosystem schemes for wireless sensor network, Singaravelu, P., Verma, S., 2013, Computers and Electrical Engineering 39 (6), pp. 1880-1893.
3. Cluster based RSU centric channel access for VANETs, Tomar, R.S., Verma, S., Tomar, G.S. , 2013, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) 7420 , pp. 150-171.
4. Practicability of HFE scheme for wireless sensor network, Singaravelu, P., Verma, S., 2013, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) 7420 , pp. 116-132.
5. Intersection attack on anonymity in VANET, Chaurasia, B.K., Verma, S., Tomar, G.S., 2013, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) 7420 , pp. 133-149.
6. Lane change trajectory prediction using artificial neural network, Tomar, R.S., Verma, S., 2013, International Journal of Vehicle Safety 6 (3) , pp. 213-234

#### List of Publications in peer reviewed conferences

1. Collision avoidance warning for safe lane change, Tomar, R.S., Kushwah, R.S., Verma, S., Tomar, G.S., 2013, *Proceedings - 2013 International Conference on Communication Systems and Network Technologies, CSNT 2013* , art. no. 6524424 , pp. 385-389
2. Thrust computation in VANETs , Chaurasia, B.K., Verma, S., Tomar, G.S. , 2013, *Proceedings - 2013 International Conference on Communication Systems and Network Technologies, CSNT 2013* , art. no. 6524440 , pp. 468-471

#### Work done in Projects undertaken in the Institute

- Team Member in the ATB Project “Development of Network Testbed SIMBED” Phase I completed

### Dr. Shirshu Varma Associate Professor



#### Research Interests

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

#### Publications

##### International Journals

Title of Paper	Name of the Journal	Year
A Perspective View on Cross Layer Design for Wireless Sensor Network	International Journal of Communication Systems (Communicated)	Jan. 2013
Methods for Localization in Ultra Wideband Wireless Sensor Networks	International Journal of Wireless Networks and Broadband Technologies (Communicated)	Dec. 2012
Distributed Computing Paradigms for CSIP in Wireless Sensor Networks: A Comparative Review	Journal of Computational Intelligence and Electronic Systems	Dec. 2012
Collision-Free Time Synchronization for Multi-hop Wireless Sensor Networks	Computational Intelligence and Electronic Systems	Dec. 2012
Object-oriented Design for Wireless Sensor Network assisted Global Patient Care Monitoring System	International Journal of Computer Applications	May. 2012

#### Work done in Projects undertaken in the Institute

Name of the Funding Agency	Title of Project	Duration of Project
DST	Disaster Management System for large scale deployment of sensor network using a fault tolerant mechanism	2011-14

#### Patents accepted / filed

No. of Patent Applied: 1

#### Extra-Curricular activities

- Faculty in Charge, Library, IIITA
- Faculty-Incharge Placements(B.Tech,M.Tech and MBA), IIITA

**Dr. Pavan Chakraborty**  
Associate Professor



#### Research Interests

Robotics, Electronics

#### Work done in Projects undertaken in the Institute

- 1) Human Gait Identification in Medical Implication
- 2) Humanoid Push Recovery

#### Research & Development

- 1) Development of Human Gait Laboratory at our Institute for collecting video based gait data
- 2) Development in Social Robotics
- 3) Development in Autonomous Navigation Robot
- 4) Human Robot Interaction using Gesture based communication

#### Extra-Curricular activities

Organized DST-PAC meeting at IIIT-Allahabad

#### Journal Publications during the year

- 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 (In-Press)**.
- S.Mondal, A.Nandy, P.Chakraborty, G. C. Nandi, "Gait Based Personal Recognition System using Rotation Sensor" – In the proceeding of **International Journal of Emerging Trends in Computing and Information Sciences (CIS -2012)**, March 2012, Vol. 3, No. 3, pp. 395-402.
- A. Nandy, P. Chakraborty, G. C. Nandi "Person Tracking and Segmentation for Human Gait Biometric System" – In **International Journal of Biometrics, Inderscience Publisher (Accepted with minor revision)**,.
- 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 (in Review)**,.

#### Conference Publications during the year

- Nandy, P. Chakraborty, G. C. Nandi.: "Speed Invariant, Human Gait Based Recognition System for Video Surveillance Security" – In 2nd International Conference on Intelligent Interactive Technologies and Multimedia (**IITM-2013**), IIIT-Allahabad in the proceeding of **Springer CCIS**, March 9 -11, 2013, Vol. 276, pp. 325-335,.
- S.Shahid, A. Nandy, S.Mondal, P. Chakraborty, G. C. Nandi , M. Ahmed, "A Study on Human Gait Analysis" – In 2<sup>nd</sup> International Conference on Computational Science, Engineering and Information Technology (**CCSEIT-2012**), Coimbatore, 2012 in the proceeding of **ACM Digital Library**, October, 2012, pp. 358-364.
- Nandy, S. Bhowmick, P. Chakraborty, G. C. Nandi.: "Gait Biometrics: An Approach to Speed Invariant Human Gait Analysis for Person Identification"- In 2<sup>nd</sup>



- International Conference on Soft Computing for Problem Solving SocPros-2012 Jaipur in the proceeding of **AISC Series of Springer (In press)**.
- Nandy, S. Mondal, L. Rai, **P. Chakraborty** and G. C. Nandi “**A Study on Damping Profile for Prosthetic Knee**” – In 1<sup>st</sup> International Conference on Advances in Computing, Communications and Informatics (ICACCI-2012) Chennai in the proceeding of **ACM Digital Library**, August 2012, pp. 511-517.
- Nandy, S. Mondal, **P. Chakraborty** and G. C. Nandi “**Development of a Robust Microcontroller Based Intelligent Prosthetic Limb**” – In 5th International Conference on Contemporary Computing (IC3-2012), Noida, In **Springer CCIS**, August 2012, Vol. **306**, pp. 445-455.

**Dr. C.V.S. Siva Prasad**  
Associate Professor



#### Research Interests

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

#### Academic Achievements during the year

##### Brief Particulars

Six research papers published in international journals, Two research scholars are working with me for Ph.D. program on Systems Biology and Protein–Protein interactions areas.

##### a. National Journals

##### b. International Journals.

1. **C.V.S. Siva Prasad**, Saurabh Gupta, Alex Gaponenko and M.D. Tiwari “Molecular dynamic and Docking interaction study of *Heterodera glycines* serine proteinase with *Vigna mungo* Proteinase inhibitor”. Springer journal of Applied Biochemistry and Biotechnology, 170: 1996-2008, (2013), (Impact Factor-1.89).
2. Himansu Kumar & **C.V.S. Siva Prasad**, “promises of induced pluripotent stem cells in a therapeutic context”. Indian Streams Research Journal, Volume 3, Issue. 3, ISSN:-2230-7850, (2013) (Impact Factor-1.76).
3. **C.V.S. Siva Prasad**, Saurabh Gupta, Himansu kumar and M.D. Tiwari Evolutionary and functional analysis of aldolase protein of plant parasitic nematodes. Bioinformation, 9(1): 001-008, (2013), (Impact Factor 1.15.).
4. **C.V.S Siva Prasad\***, Saurabh Gupta, Alex Gaponenko & Murlidhar Tiwari “In-silico comparative study of inhibition mechanism of plant seine Proteinase Inhibitors” Bioinformation,8(14):573-677 (2012), (Impact Factor 1.15.).
5. Vaibhav Tyagi, C.N.Arun & **C.V.S.Siva Prasad**, RAmiRNA: SVM-based viral mature miRNA prediction suite, Bioinformation 8(12): 581-585 (2012) (Impact Factor 1.15).
6. Ankur Omer, Sumit Govil, Shailesh Kumar & **C. V. S. Siva Prasad**, “Designing allosteric modulators for active conformational state of  $\gamma$ -glutamate G-protein coupled receptors”, Bioinformation, Vol. 08(4), 2012 (Impact Factor 1.15).

##### a. National

1. Himansu Kumar, Kamal K Chaudhary, Saurabh Gupta & **C.V.S.Siva Prasad**, “Role of Machine Learning Approaches in Stem Cell Research”, National Seminar on Stem Cell An emerging HealthCare Frontier, Rajiv Gandhi Institute of Information Technology (RGIIT), Amethi, 20-21 August 2012 (Poster).
2. **C.V.S.Siva Prasad**, National Seminar on Stem Cell An emerging HealthCare Frontier, Rajiv Gandhi Institute of Information Technology (RGIIT), “Role of Computational Biology in Stem cell Research” (Invited Talk), Amethi, 20-21 August 2012.

##### b. International

1. **C.V.S. Siva Prasad** “A molecular dynamics study of phenyl diketo-acids as potent inhibitors for malate synthase of *Mycobacterium tuberculosis*” International Symposium on Drug Development for Orphan/Neglected Diseases organized by CDRI (CTDDR-2013).
2. Saurabh Gupta and **C.V.S. Siva Prasad** “3-D Modeling of plant lectin Proteins and prediction of carbohydrate binding site”. International Symposium on Recent Trends in Bioinformatics, Systems Biology and Biomolecular Interactions, (2012), organized by Center of Bioinformatics, University of Allahabad, Allahabad, India.

#### Work done in Projects undertaken in the Institute

Principle Coordinator: Dr. C.V.S. Siva Prasad

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

**Benefits:** India and Russia will develop Transgenic Wheat plant against Sunnpest and Rootnot nematode. These varieties will enhance the Wheat production of the both country.

**Results:**

1. Docking studies carried out on proteases and protease inhibitors and Lectins and Manose sugars and published in journals.
2. siRNA based gene constructs developed against Sunnpest and wheat rootnot nematode. (Patent preparation).

Above said gene constructs are in process to transfer with Russia.

**Patents accepted / filed**

- i). Indian: Under process for Indian Patent "Development of multiple siRNA expression vectors for targeting Gluten Hydrolyzing Proteinase (GHP) Enzymes of Sunnpest (*Eurygaster integriceps*)".

**Extra-Curricular activities**

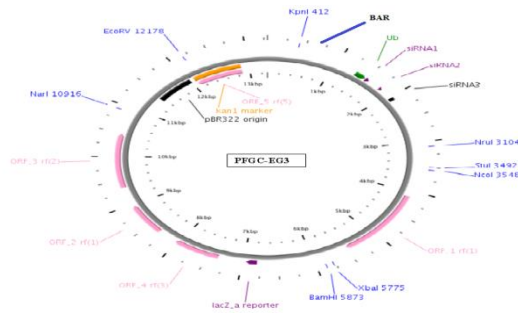
- a. Accompanied Prof.E. Neher (Nobel Laureate) as Escort in 5<sup>th</sup> Nobel Laureate Conclave, 2012
  - b. DST, Inspire program Biology program Coordinator in 5<sup>th</sup> Nobel Laureate Conclave, 2012
- Two Newspaper articles published on our research work

**Training Programmes Organized**

- (a). Conducted workshop as a Organizing Secretary, "Workshop on Systems Biology" (WSB'13), 16-17 March 2013 (Photo enclosed).

**Any other Achievements / Distinctions**

- Peer Reviewer:** 1. Oxford journal of Bioinformatics, London, UK  
2. National Funding Agency, Wilson Blvd, Arlington VA 22230, USA



**Figure 1:** PFGC-EG3, Containing siRNA genes, Ubiquitin promoter & Bar genes.



**Figure 2:** Biopac Systems for Biomedical data (EOG, EMG, heart rate variability, stress test, reaction test, etc.) acquisition and analysis.



Figure 3: Organizing committee members of Workshop on Systems Biology (WSB'13), 16-17 March 2013.

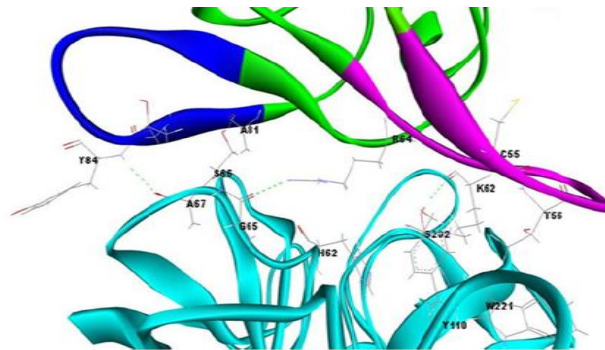


Figure 4: Microscopic docking representation of Serine protease *Heterodera glycini* and *Vigna mungo* protenase inhibitor (SPHG-VMPI) complex (left) showing both heads in magenta and blue colors with inhibition loop residues forming hydrogen bonds (in green dotted line), Published in Springer Journal.

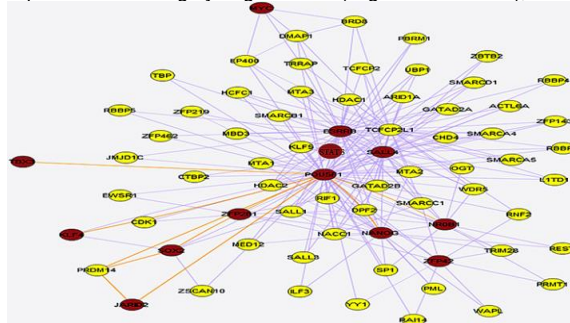


Figure 5: Protein – protein interaction network: Showing interaction among various proteins involved in stem cell differentiation and regeneration.

Dr. Vijaishri Tewari  
Associate Professor



**Research Interests**

Human Resource Management, Organisational Behavior

**Publications during the year**

**Book Chapter**

"Performance Management of Indian E-Commerce Websites" chapter in Handbook of Management and Behavioral Science, Vol- VIII Wisdom Publication, ISBN: 978-93-81505-37-3. 2012, July 2012

**Publications in Refereed Journals**

- **A Radical Approach To Develop Psychological Control In Information Security**, International conference on recent trends of computer technology in academia (ICRTCTA), Dept of computer science and Information technology of JRN Rajasthan Vidyapeeth University, Udaipur, 21-23 April, 2012.
- **Performance Measurement of Indian E-commerce Websites**, 5th International Conference of Management and Behavioural Sciences, Society of Management and Behavioral Sciences, Haridwar, Uttarakhand (India), 23 – 24 June, 2012.

- **Vulnerabilities in Face book Third Party Application and their Compelling Solutions**, International conference on recent trends of computer technology in academia (ICRTCTA), Dept of computer science and Information technology of JRN Rajasthan Vidyapeeth University, Udaipur, 21-23 April, 2012.
- **Challenges faced by the Indian Organization for Human Resource Development**. Abhishek Singhal, Vijaishri Tiwari, In International Journal of Marketing and Human Resource Management (IJMHRM) Journal Impact Factor: 1.532, Volume 3, Issue 1, January – December 2012, Pg. No. 1-8.
- **Key Issues Facing Human Resource Development**. Abhishek Singhal, Vijaishri Tiwari, In International Journal of Human Resource Management (IJHRM) Journal Impact Factor: 0.4382, Volume 1, Issue 2, November 2012, Pg. No. 21-29.

#### Extra-Curricular activities

- 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
- Was faculty in-charge of the Dramatics Club at IIIT-A (since 2010-June 2013)

#### Training Programmes Organized

- Workshop on women security sensitization 13<sup>th</sup> -14<sup>th</sup> April'13

**Dr. Manish Goswami**  
Associate Professor



#### Research Interests

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

#### Publications of Articles / Research Papers in Journals / Magazines during the year

##### International Journals & Conferences

1. Electrical characterization of MFeOS gate stacks for ferroelectric FETs”, Elsevier Materials Sciences in Semiconductor Processings, Vol 16, pp 1603-1607, 2013
2. Reduced Comparator High Speed Low Power Flash ADC using 90nm CMOS Technology”, Springer’s Analog Integrated circuits and Signal Processing, Vol 74, No 1, pp. 267-268, 2013
3. 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
4. High Performance Hardware Implementation of AES using minimal resources” IEEE-ISSP 2013
5. Comparator-Multiplexer based 6 bit 1.4 GS/s low power ADC” IEEE-DTIS (design and technology of integrated systems in nanoscale era) 2013
6. A 5-bit 1.5 GS/s ADC using reduced comparator architecture” IEEE-IDT (international design and test symposium) 2012

#### Research & Development during the year

Successfully designed variable resolution ADC chip using 500nm CMOS technology. Project submitted to DeitY for further work

#### Extra Curricular activities

- Participated in Science Conclave 2012
- Presented an expert talk on VLSI design during the national workshop on “Electronics System Design and Manufacturing” held on July 18, 2012 at IIIT-A sponsored by Deptt. of IT, MCIT, Gol, New Delhi
- Presented an expert lecture during the workshop on advanced VLSI design automation at Sam Higginbottom Institute of Agriculture, Technology & Sciences (Allahabad agriculture university) held on 8<sup>th</sup> Sept, 2012
- Presented an expert talk on crosstalk and noise in digital systems during the national workshop on “timing analysis of digital VLSI circuits” held on Nov 3-4, 2012 at IIIT-A sponsored by Deptt. of IT, MCIT, Gol, New Delhi

#### Awards / Honours / Recognition

Reached the final stage of Cadence All India Design contest 2012

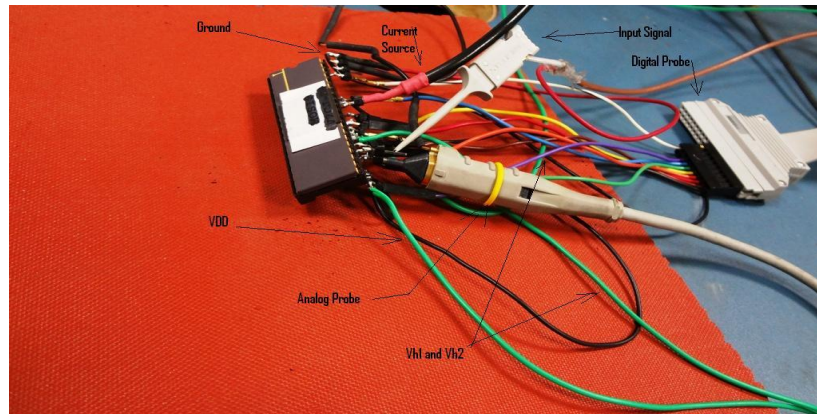
#### Design, Fabrication and Testing of First CHIP from IIIT-A

A chip whose complete design is done at our Institute (microelectronics division lab using **500nm CMOS Technology**) and fabricated with the support of Prof. Ashok Srivastava, Louisiana State University- LA, USA has been successfully tested in a leading semiconductor industry.

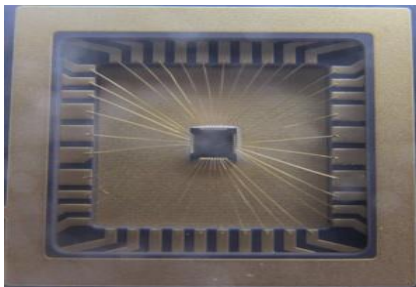
The chip is a variable resolution Analog-to-digital converter (ADC) IC and has been designed keeping wireless applications into consideration. Some application like mobile phones, camcorders etc require small power dissipation which subsequently depends on the resolution of the ADC IC used in such systems. The designed chip is a solution to reduce the wasted power for such applications where the resolution of the ADC dynamically changes with the strength of the received signal.

This work will definitely accelerate the growth and development in the scope of IC design. This work is done under the supervision of Prof B. R. Singh and helped by research scholar Ms. Saloni. The snapshots for designed chip, Testing set up and waveforms are enclosed herewith.

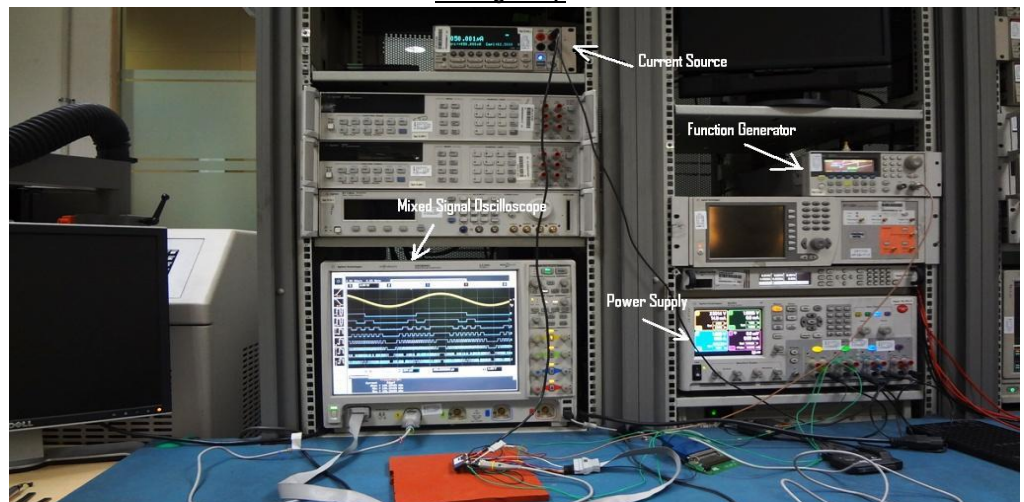
### Designed IC



### Chip Microphotograph



### Testing Setup



**Dr. Vrijendra Singh**  
Associate Professor



### Research Interests

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

### Publications during the year

1. 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.
2. 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.
3. S. K. Rai, 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. A. Sethiya, T. Srivastava, R. Srivastava, V. Singh, "A novel method for dynamic sampling plan and inspection policies for quality assurance", Asian Research Journal of Business Management, India, Vol.1. Issue 1, 2013.
5. S.Singh, S. Bharti, M. Kumar, V. Singh, "Strategic Framework For Reverse Logistics In Pharmaceutical Industry", Asian Research Journal of Business Management, India, Vol.1. Issue 1, 2013.
6. 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 and Management Research, USA, Vol. 3 No. 5, 181 -190, 2013.
7. M. M. Swarup, A. Dwivedi, C. Sonkar, R. Prasad, M. Bag, V. Singh, "A QR Code Based Processing For Dynamic and Transparent Seat Allocation in Indian Railway", IJCSI International Journal of Computer Science Issues(IJCSI) Vol. 9, No. 1,pp.- 338 – 344,IF=242, 2012.

8. N Adhikary, R Shrivastava, A Kumar, SK Verma, M Bag, V Singh, "Battering Keyloggers and Screen Recording Software by Fabricating Passwords", International Journal of Computer Network and Information Security (IJCNIS), 2012.
9. A Chitrey, D Singh, V Singh, "A Comprehensive Study of Social Engineering Based Attacks in India to Develop a Conceptual Model", International Journal of Information and Network Security (IJINS) 1 (2), 45-53, 2012.
10. O Prakash, V Singh, PK Kalra, "Signature extraction from acoustic signals and its application for ANN based engine fault diagnosis", International Journal of Signal and Imaging Systems Engineering 5 (3), 220-226, 2012.
11. AS Jalal, V Singh, "A multi-resolution framework for multi-object tracking in Daubechies complex wavelet domain", International Journal of Computational Vision and Robotics 3 (1), 52-74, 2012.
12. Nairit Adhikary, Rohit Shrivastava, Ashwani Kumar, Sunil Verma, Monark Bag, Vrijendra Singh, "Battering Keyloggers and Screen Recording Software by Fabricating Passwords", International Journal of Computer Network and Information, Vol. 5, 13 – 21, 2012.
13. Devki Gaurav Pal, Ravi Krishna, Prashant Srivastava, Sushil Kumar, Monark Bag, Vrijendra Singh, "A Novel Open Security Framework for Cloud Computing", International Journal of Cloud Computing and Services Science (IJ-CLOSER) ISSN: 2089-3337, Vol.1, No.2, 45 - 52, June 2012.
14. S. K. Rai, V. Singh and A. Vaish, "Retail ownership influences on consumer buying preference an empirical study of Indian Consumer", Arabian Journals of Business & Management Review ISSN: 2224-8358, Vol. 9, 106 – 115, 2012.
15. G Srivastava, A Kr Ransom, M Lal, S Rai, M Bag, V Singh, Kannan Govindan, "Demand Function for Perishable Items based on Deterioration, Seasonal Variability and Shelf Space", International Journal of Business Performance and Supply Chain Modelling (ISSN-1558-9401), Vol.4, No.2, 2012.
16. V Mishra, V Singh, "IBAAM: A Model for Bridging the Gap between Bank Managers' and Customers' Views on Adoption and Acceptance of Internet Banking", International Conference- World Congress on "Business, Finance, Marketing and Industrial Management for Sustainable Development", JNU, 2013
17. AS Jalal, V Singh, "A framework for background modeling and shadow suppression for moving object detection in complex wavelet domain", Multimedia Tools and Applications, 1-23, 2012.

#### Participation in Seminars / Workshops / Conferences / Symposiums etc.

Fifth Science Conclave

#### Work done in Projects undertaken in the Institute

- a. Research & Development- Guided CV Raman International Senior Fellow
- b. Doctoral Thesis Supervised: 01
- c. M. Tech. Thesis Supervised: 07
- d. MBA / MSCLIS Projects Supervised: 04
- e. B. Tech. Project Supervised: 01

#### Training Programmes Organized

- Indo Africa Training Programme on Technological Innovation for Capacity Building in Data Analysis, IIITA
- Fifth Science Conclave
- IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions (Under Process for Organizing)

**Dr. Abhishek Vaish**  
Associate Professor



#### Research Interests

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

#### Academic Achievements during the year

- Abhishek Vaish, Akshay Saxena, Dharmprakash M, Rajiv Krishna, Utkarsh Goel, qualifying virality of information in online social networks, international journal of virtual communities and social networking, USA, Volume 4, issue 1, 2012
- Ishan Rastogi, Adesh Chandra, Vivek Kumar Gupta, Dr. Abhishek Vaish, privacy issues and measurement in cloud computing: a review, international journal of advanced research in computer science, India, volume 4, no. 4, march-april 2013
- Abhishek vaish, abhishek kushwaha, rahul das, chandan Sharma, data locatin verification in cloud computing, international journal of computer applications, usa, volume 68, no. 12, 2013
- Governance model and advanced information sharing framework for global computer emergency response teams, information systems security associatin ISSA Journal, USA, 2013
- 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
- Dr. abhishek vaish, a novel approach to achieve optimized obfuscation technique for mobile agent, 11<sup>th</sup> international conference on computer applications 2013, university of computer studies, yangon, February 26<sup>th</sup> – 27<sup>th</sup>, 2013

#### Participation in seminars / workshops / conferences / symposiums etc. during the year

- Summer school, "high performance computing for geophysical problems" jointly organized by berbekov kabardino-balkarian state university, Moscow, institute of physics and technology (MIPT) & IIIT-Allahabad at NALCHIK, Russia, 2013
- Kuwait, invited by MH Alshaya ltd. for consultation on information security governance, 2012
- Germany, invited speaker on the "partnership of state authorities, civil society and the business community in ensuring information security and combating terrorism", 2012

- Dr. abhishek vaish, a novel approach to achieve optimized obfuscation technique for mobile agent, 11<sup>th</sup> international conference on computer applications 2013, university of computer studies, yangon, February 26-27, 2013

#### Work done in Projects

Establishment of digitization center at High Court, Allahabad

#### Research & Development

One project entitled "Development of logic programming approach to intelligent monitoring of anomalous human activities" has been accepted by DST, Govt. of India under Indo-RFBR project scheme

#### Particulars of academic work

Teaching – computer forensics, technical risk assessment

#### Dr. Sanjai Singh Associate Professor



#### Research Interests

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

#### Participation in Seminars / Workshops / Conferences / Symposiums etc.

- National Seminar -cum workshop on Rural Empowerment
- National Seminar on STEM CELL - an emerging Healthcare frontier

#### Work done in Projects undertaken in the Institute

Discovery Park Project

#### Training Programmes Organized

Organized different training / awareness programs for the local farmers under discovery park project

#### Any other Achievements / Distinctions

Working as Faculty In-Charge of Rajiv Gandhi Institute of Information Technology, Amethi (an Extension Campus of IIIT-Allahabad)

#### Dr. Ranjit Singh Associate Professor



#### Research Interests

Accounting and Finance, Behavioural Finance

#### Publications during the year

Names of books published

1. Bezborah, P. and Singh, R. (2012), business environment, kalyani publisher, Ludhiana, ISBN 978-93-272-2537-2
2. Bezborah, P. and Singh, R. (2012), financial statement analysis, kalyani publisher, Ludhiana, ISBN 978-93-272-2068-1
3. Singh, R. and Bhowal, A. (2012), great financial crises of the world, deep and deep publications, ISBN 978-81-8450-390-6

#### Publications of Articles / Research Papers in Journals / Magazines

1. Singh, R. and Agarwal, S. (2012), returns and assessment perceptions of assesses for VAT, Iranian Journal of management studies, ISSN: 2008-7055
2. Paul, C., bhattacharjee, D. and Singh, R. (2012), "movement of share prices and sectoral analysis: a reflection through interactive and dynamic graphs", international journal of scientific and statistical computing, ISSN: 2180-1339

#### Participation in seminars / workshops / conferences / symposiums etc.

##### National

1. Determinants of mutual fund investment among small town and sub-urban investors: a psychometric study, national seminar on financial inclusion, organized by dept. of commerce, assam university, diphu campus on November 23-24, 2012
2. Employees' perception about employer as investment education provider: an empirical study, 65<sup>th</sup> all India commerce conference, organized by hinduja college and university of Mumbai, Mumbai on 9-11<sup>th</sup> november, 2012

#### Work done in projects undertaken in Institute

1. Project title: assessment of new pension scheme by the central govt. employees, funded by ICSSR amount Rs. 3,66,597  
Objective of Project
  - i. To study the perception of the central government employees in Assam regarding NPS, from the perspective of marketing.
  - ii. To find out the altitude of the central govt. employees in assam with respect to NPS

#### Project progress

Data collection based on structured questionnaire completed. The project is carried on in assam university, silchar and necessary documents have been submitted for getting it transferred to IIIT, Allahabad



### Expected benefit of the project

NPS is made compulsory for the employees of central govt. joining in the services after 1.4.2004. Therefore, the findings of the study will be of great use for formulating the suitable policy as well as product with respect to the NPS

### Investigator

Dr. ranjit singh, associate professor, Indian institute of information technology, Allahabad

### Co-Investigator

Dr. D. Bhattacharjee, associate professor, dept. of business administration, assam university, silchar

### Awards / honours / recognition received

Certified financial education resource person (FERP) of SEBI

### Any other achievements / distinctions

1. Life member of Indian commerce association
2. Life member of assam productivity council

### Dr. Pravin Kumar Associate Professor



### Research Interests

Supply Chain Management, Quality Management, Operations Management, Decision Modeling, Operations Research, Quantitative Techniques, and Optimization Methods

### Publications during the year

#### Books

Fundamentals of engineering economics, 2012, wiley India, Delhi

#### Publications of articles / research papers in journals / magazines

1. A study of interaction among supply chain variables in electronics appliance industry in India, international journal of business information systems, accepted, 2013
2. An analysis of supplier development issues in global context: an approach of fuzzy based modeling. International journal of logistics systems and management, 2012
3. A fuzzy AHP and TOPSIS methodology to evaluate 3PL in a supply chain, journal of modeling in management, 2012
4. 3PL selection using hybrid model of AHP-PROMETHEE, International journal of services and operations management, 2013

#### Participation in Seminars / Workshops / Conferences / Symposiums etc.

1. 16<sup>th</sup> international conference on advances in operations and supply chain management, 21<sup>st</sup> – 23<sup>rd</sup> Dec, 2012, organized by society of operations management, IIT Delhi, global issues in Indian automotive supply chain: a statistical analysis
2. International conference on best practices in supply chain management (BPSCM-2012) on 22-23 Nov 2012, S "O" a university Bhubaneswar. An analysis of supply chain practices in electrical and electronics sector in India

### Dr. Manish Kumar Assistant Professor



### Research Interests

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

### Publications during the year

1. "GMCA: a greedy multilevel clustering algorithm for data gathering in wireless sensor networks", International Journal of Communication Networks and Distributed Systems (Inderscience), Vol. 11
2. "XQuery based Query Processing Architecture in Wireless Sensor Networks", International Journal of Computer Applications, Vol. 43, No. 23, pp. 5-10, 2012
3. Published book chapter titled "Applications of data mining in social network analysis" for the upcoming book "Data Mining in Dynamic Social Networks and Fuzzy Systems" under the IGI-Global publishers, USA, 2012

#### Participation in Seminars / Workshops / Conferences / Symposiums etc.

1. Delivered lecture on "Data management in mobile computing" at MNNIT, Allahabad, 2013
2. Coordinator (Registration Committee) of Science Conclave for Nobel Laureates held at IIT-Allahabad in December 2012

### B.Tech

Projects related to Data mining, distributed database, Social networks and financial predictions etc.

## Research & Development

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

## Extra-Curricular activities

Participated in Institute various sports activities like marathon, cricket etc.

**Dr. Neetesh Purohit**  
Assistant Professor



## 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

## Publications

### 1.1 Research Papers during the year

#### 1. Paper(s) Published in Refereed Journals

- 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](http://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](http://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijcsyse)
- Ashutosh Kumar Singh, Neetesh Purohit, etal. "An Optimized Fuzzy Clustering for Wireless Sensor Networks" International Journal of Electronics, Taylor & Francis U.K., pp. 1-14, 2013, DOI: <http://www.tandfonline.com/doi/full/10.1080/00207217.2013.805387>
- 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.

## Paper(s) published in Conferences

- 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.**
- 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.

## Books

Name of the Book	Name of the Publishing House (with full reference)	Date & Year of Publication	ISBN No.
• <b>Contributed</b> 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	IGI, USA	Feb 2012	978-1-4666-0203-8

## Participation in Seminars/Workshops/Conferences/ Symposiums etc.

### Invited Talks

- '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.

### 2. Papers Communicated

- Kaushalendra Pandey, Neetesh Purohit "Efficient Clustering in Cooperative Wireless Sensor Network", International Journal of Electronics, Taylor & Francis, UK, under review.
- Harsh Bansal, Akshansh Jain, Neetesh Purohit, "Efficient Pipelined Computation of FFT for OFDM Application", International Journal of Circuits and Architecture Design, Inderscience, UK, Under review.

- Nitin Goel, Neetesh Purohit, B. R. Singh, "A New Scheme for Enhancing the Mobility in 4G Wireless Networks", International Journal of Electronics, Taylor & Francis, UK, under review.

#### Workshops/Conferences/summer schools organized

- Coordinator, workshop on Antenna and RF Design for Low Power Applications, Sept 27-30, 2012, IITA
- Co-chair, organizing committee, WCSN 2012, Dec 19-23, 2012, Naresuan University, Phitsanulok, Thailand

#### Academic Achievements

##### 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
Just Joined (Under <b>Sole supervision</b> )	Development and analysis of Multimedia Broadcast and Multicast Techniques over Wireless Networks	IIIT-A	Shri Purnendu Pandey
Ongoing. (Under <b>co-supervision</b> , 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

#### Membership / Fellowship, if any

- IEEE
- ACM

**Dr. Pragya Singh**  
Assistant Professor



#### Publications during the year

National Journals: 01  
International Journals: 01

Publication of Master Project of MBA students respectively, Akshat Jain (IMB 2011031), Ankit Singh Thatola (IMB 2011034) & Rahul Kumar (IMB 2011012) of MBA-IVth Semester

Topic of research "Identifying the factors affecting the success of energy drinks in uttar Pradesh (east) region, India".

Type of research: Research Project

Status: To be published in ANUSILANA – A Research Journal of Department of Philosophy & Religion, (ISSN 0973 8962) Banaras Hindu University – 221005 (Upcoming Issue)

This is regarding publication of Master Project of MSCLIS – IVth Semester students respectively

Satish Kumar Sonker IMS2011028, Amit Kumar IMS 2011036 Sanjeev Kumar IMS2011042

Topic of Research: Image Based Authentication using Steganography technique

Type of research: research project

Status: Accepted for publication in volume 4 issue May-June 2013 of IJARCS International Journal of Advanced Research in computer science (www.ijarcs.info)

**Dr. B. Srinivas Sanjeev**  
Assistant Professor



#### Research Interests

Structural Biology, Parallel Computing

#### Participation in Seminars / Workshops / Conferences / Symposiums etc.

1. Coordinator of *National Workshop on Systems Biology*
2. Organizing Secretary of National Seminar on 'Human Brain - A Mystery Organ

#### Research & Development

1. OpenCL for Bioinformatics applications
2. Biological Sequence Search and Alignment
3. Detection of Biological Intermolecular Networks from Large Simulated Data

**Dr. Rajat Kumar Singh**  
Assistant Professor



**Research Interests**

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

**Extra-Curricular activities**

Faculty-Incharge (Music Club)

**Training programs**

Organized an on-campus workshop on antenna and RF design WARD-2012 during Sept. 27-30, 2012

**Dr. Madhvendra Misra**  
Assistant Professor



**Research Interests**

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

**Publications during the year**

**a. National Journals**

- Shagun Srivastava 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.

**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." Int. J. of Business Continuity and Risk Management 4.2 (2013): pp-155.
- Tewari, S.K. and Misra, M. "Marketing efficiency: a construct to evaluate strategic ICT adoption'." Int. J. Business Excellence 6.6 (2013): pp-735.
- Sumant Kumar Tewari and Madhvendra Misra, "Evaluating and Designing Research Methodology for Investigating Research Problem Having Interdisciplinary Applications." Journal of Supply Chain Management Systems 2.2 (2013): 24-36.
- Tewari, Sumant Kumar, and Madhvendra Misra. "Developing supply chain evaluation framework through performance assessment approach." Int. J. of Business Performance and Supply Chain Modelling 5.No.1 (2013): pp-28.

**Participation in Seminars/Workshops/Conferences/ Symposiums etc.**

**National**

- "E-Governance in India: A Comparative Study with US & Australia." International Conference on Recent Trends of Computer Technology in Academia ICRTCTA 2012
- "A Fitness Analysis towards Technology Forecasting Method Choice for Telecom Sector in India". "5<sup>th</sup> International Conference on Excellence in Research and Education" IIM, Indore 9th-12th May 2013

**Dr. V. K. Chaurasiya**  
Assistant Professor



**Research Interests**

Wireless and Mobile Networks

**Publications during the year**

**b. International Journals**

1. V.K. Chaurasiya, S. B. Govil, Karthik T, Karthikeyan S., S. Das, An approach to identify the optimal cloud in cloud, Published in: International Journal of Cloud Computing and Services Science (IJ-CLOSER). Vol.1, No.1 pp. 35 ~ 44.
2. V.K. Chaurasiya, J. Thomas, K. Raman, S. Das, Resource Leasing Cloud Computing Model: AWin-Win Strategy for Resource Owners and Cloud Service Providers, Published in: Journal of Computing. Volume 4, Issue 5, May 2012.
3. V.K. Chaurasiya, A. Sinha, A. Jaiswal, R. Gupta, SAS 70 TO SSAE 16 / ISAE 3402: AN INSIGHT INTO OUTSOURCING SECURITY AND PROCESS CONTROLS, AND SIGNIFICANCE OF NEW SERVICE AUDIT STANDARDS, Published in: Global Journal of Business Research San Jose , Costa Rica, Volume 6, Number 2, pp 315-324

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

**International**

1. V.K. Chaurasiya, A. Saxena, A. Luthra, R. Singh, S. Das, Celebrity Endorsements and Cognitive Dissonance among Consumers?, Published in: International Conference on Management and Behavioral Sciences, June 2012, Society of Technical and Management Professionals (STMP)

2. V.K. Chaurasiya, A. Kumar, A. Srivastava, M. Raheja, S. Bansal, Basel III and the Requirement for Capital Inclusion: A Case of India, Published in: 5th International Conference on Management and Behavioral Sciences, "An Interdisciplinary Conference" June, 2012, Society of Management and Behavioral Sciences
3. V.K. Chaurasiya, M. Chandra, N. Kumar, R. Gupta, S. Kumar, V. Srivastava, Protection from Paging and Signaling Attack in 3G CDMA networks, Published in: International Conference on Networks and Computer Communications (ETNCC2011), The Institute of Engineers (India), Udaipur Local Center, Under the aegis of Computer Engineering Division.
4. V.K. Chaurasiya, P. Srivastava, S. Singh, A.A. Pinto, S. Verma, R. Gupta, An architecture based on proactive model for security in cloud computing, Published in: International Conference on Recent trends in Information Technology (ICRTIT), IEEE Madras Section.

#### Work done in Projects undertaken in the Institute

1. Working Member of the Technical Team under National Mission on Education Project funded by MHRD, Govt. of India.
2. Working member of the ongoing project of IT/ITES, funded by MCIT, Govt. of India.
3. Working member of the ongoing project of education through ICT funded by AICTE, Govt. of India.

#### Dr. Sonali Agarwal Assistant Professor



#### Research Interests

Database, Datamining & Warehousing, E-Governance

#### Publications during the year

##### Books

E-governance data center, data warehousing and data mining: vision to realities

Authors: dr. sonali agarwal, dr. m.d. tiwari, dr. lti tiwari

Publication details: River publishers series information science and technology

#### Paper(s) published in refereed journals

Title of paper	Name of the journal	Place of publication	Volume & issue no.	Year	Co-authors name
"Inspection of wall thickness of pipes in petrochemical plants through WSN"	Journal of current engineering research (JCER)	INDIA	Volume 2, Issue 1	2012	Vimal Upadhyay, Suchi Sharma

#### Paper(s) published in international conferences

Title of paper presented	Name of the conference	Name of the organizing Institution / University	Duration of the conference	Name of supporting professional organization such as IEEE, ACM, AIMA etc.	Co-Authors name	Paper based on student major project
Human computer interface design for neonatal intensive care with data mining	4 <sup>th</sup> international conference on intelligent human computer interaction 2012 (IHCI 2012)	Indian institute of technology, kharagpur	Dec 27-29, 2012	IEEE	Prof. g.n. pandey	NO
Aml based WSN application for monitoring of cardiac condition in ICU	Eighth international conference on wireless communication and sensor networks	IIIT-Allahabad, India, naresuan university, phitsanulok, Thailand	Dec 19-23, 2012	-----	Prof. g.n. pandey, dr. m.d. tiwari	NO
Object oriented model for bank account number portability	2 <sup>nd</sup> international conference on engineering, technology and management	World academic-industry research collaboration organization	September 7-8, 2012	WAIRCO	Mr. ankur agarwal	NO
Interoperability of cloud computing based E-governance factor for rural E healthcare administration	International conference on e-learning, e-business, enterprise information system, and e-governance	World congress of computer science, computer engineering and applied computing	July 16-19, 2012	WORLDCOMP' 12	Prof. g.n. pandey	NO
Graph database model for querying	2012 international conference on	Singapore institute of electronics &	June 9-10, 2012	ISI proceeding and JEST	Prashish raj bhandari, rabi	YES

searching and updating	software and computer application (ICSCA), Singapore	kindgs college, London			Chandra shah	
Hill climbing based histogram clustering for coal fire monitoring	2012 4 <sup>th</sup> international conference on electronics computer technology (ICECT 2012)	VI institute of technology, Chennai	April 6-8, 2012	IEEE	Sayantan nath, qasima abbas kazmi	YES

#### Papers published in national workshops

Title of paper presented	Name of the conference	Name of the organizing institution / university	Duration of the conference	Name of supporting professional organization such as IEEE, ACM, AIMA etc.	Co-authors name	Paper based on student major project
Pervasive telemedicine system with data mining	National seminar cum workshop on rural empowerment, amethi	IIIT, Allahabad & RGIIT-Amethi	April 15-16, 2012	IIIT-A	-----	NO

#### Extra curricular activities

- Working as a member of cultural and sports committee of IIIT-Allahabad
- Working as a faculty incharge of Program Management and Publicity Club (PMP) of IIIT-A
- Received CSIR Seminar Grant and organized a national seminar on data mining applications in healthcare
- Organized various national and international seminars in IIIT Allahabad and RGIIT Amethi especially in the area of Data Mining, Solar Energy and Green ICT
- Worked as a member of proctorial board from August 2012 to May 2013
- Worked as member, stage and cultural committee, sound and light committee, sight seeing committee and media committee during science conclave 2013 and 2012 for supervising the work
- Supervised and conducted Effervescence 2013 and 2012
- 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 curricular activities or any other work assigned to me

**Dr. Satish Kumar Singh**  
Assistant Professor



#### Research Interests

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

#### Research & Development

One Ph.D. scholar (Mr. Shiv Ram Dubey) has been assigned to me in joint supervision with dr. rajat singh. The scholar is working in the area of image descriptors and content based image retrieval problems (CBIR). He has communicated few papers in refereed journals and review report is awaited.

#### Particulars of academic work

Assigned two subjects during the semester falling from above mentioned period. The first course was hardware design methodology (HDM) for M.Tech-MI, 2nd semester students whereas the second course was computer organization and architecture for B.Tech (IT) 2nd semester students from IIIT Allahabad as well as RGIIT Amethi Campuses. Also taken to the laboratory classes for M. Tech-MI students.

#### Extra-Curricular activities

He took the Initiative for starting the IEEE Students branch in IIIT Allahabad. IEEE has approved the formation of IEEE Student Branch IIIT Allahabad. Formal inauguration will be accomplished soon.

**Dr. Shailendra Kumar**  
Assistant Professor



#### Research Interests

Corporate Finance, Capital Market related issues, Investment Management

#### Participation in Seminars / Workshops / Conferences / Symposiums

Gupta, P. Kumar (2012) "value relevance research – a review, national conference on "changing perspectives and paradigms in business and behavioral sciences (CPPBBS-2012), 27-28 April 2012, organized by school of behavioral sciences & business studies and LMT school of management (LMTSOM), at Thapar University, Patiala, Punjab

#### Extra-Curricular activities

1. Organized (co-coordinator) a National Conference on "changing perspectives and paradigms in business and behavioral sciences (CPPBBS-2012)", held on 27-28 April, 2012 organized by school of behavioral sciences & business studies and LMT school of management (LMTSOM) at Thapar University, Patiala, Punjab
2. Editor-in-chief, B-Cognizance – an E-magazine published at MBA (IT) – MSCLIS division, at Indian Institute of Information Technology (IIIT-A)

#### Dr. S. Venkatesan Assistant Professor



#### Research Interests

Mobile Agent Security, IPV 6 Security, Intrusion Detection System

#### Publications

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.
2. Venkatesan S., Baskaran R., Chellappan C., Anurika Vaish and Dhavachelvan P.(2013), "Artificial Immune System based Mobile Agent Platform Protection", International Journal on Computer Standard and Interfaces, Elsevier Standards, Vol.35, No.4, pp.365-373.
3. Venkatesan S., Saleem Basha M.S., Chellappan C., Anurika Vaish and Dhavachelvan.P (2013), " Analysis of accounting models to detect duplicate request in Web Service", Journal of King Saud University - Computer and Information Sciences, Elsevier Standards, Vol.25, No.1, pp.7-24.
4. Sapna Singh, Archana Puri, Shiksha Smreti, Anurika Vaish and S.Venkatesan (2012), "A Trust Based Approach for Secure Access Control in Information Centric Network", published in the International Journal of Information and Network Security. Vol 1, No 2.
5. Manisha Khemka, Saket Agarwal, Anurika Vaish and S.Venkatesan (2012), "Sectoral Imbalance in an Economy: A cause and effect based study with focus on Rural to Urban Migration", Invertis Journal of Management, Vol.4, No.1, pp: 61-67.
6. Venkatesan S., and Vladimir Oleschuk, "An efficient Security framework for Preserving Data Privacy and Integrity in Cloud Computing and Social Network", Journal of King Saud University - Computer and Information Sciences, Elsevier Standards (Under Review)

#### Extra-Curricular Activities

Member of Science Conclave committee during 5<sup>th</sup> Science Conclave 2012.

#### Any Other Achievements / Distinctions

- Membership of ACM
- Membership of ISCA

#### Papers reviewed in

- International Journal of Information and Communication Technology (IJICT), Inderscience
- IEEE Design & Test

#### Dr. Krishna Pratap Singh Assistant Professor



#### Research Interests

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

#### Publications

GA-NR for Optimal Design of Water Distribution Networks, *Krishna Singh, Mitthan Kansal, Kusum Deep*, International Journal of Operational Research, *Accepted, 2013*.

Fuzzy Based Interactive Method for Solution of Bi and Multi-level Programming Problems by *Krishna Pratap Singh, Kusum Deep, M. L. Kansal*, International Journal of Information and Decision Sciences, *Accepted, 2013*.

#### Participation in Seminars / Workshops / Conferences / Symposiums etc.

1. Organizing Member of Science Conclave – 2012
2. Organizing member of WSB -13.

#### Research & Development

Thesis Supervisor for 5 M.Tech Students and 10 B.Tech Students

**Dr. Akhilesh Tiwari**  
Assistant Professor



**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)

**Publications during the year**

**Research Papers**

Title of Paper	Name of the Journal	Place of Publication	Volume & Issue No.	Year	Pages from-to
Characterization of simultaneous heat and mass transfer phenomena for water vapour condensation on a solid surface in an abiotic environment - application to bioprocesses	Journal of Applied Biochemistry and Biotechnology	Springer International	167 (5)	2012	1132-1143

**Participation in Seminars / Workshops / Conferences / Symposiums etc.**

Title of Paper Presented	Name of the Conference	Name of the organizing Institution / University	Dates on which the Conference was held
Investigation of interfacial phenomena during condensation of humid air on horizontal substrate	International Conference on Colloids and Complex Fluids: Challenges and Opportunities - COLLOIDS 2012	IFPEN/Rueil-Malmaison, Paris, France.	17-19 October 2012
Study of mass transfer by condensation in humid air for life support systems	42 <sup>th</sup> International Conference Environmental Systems (ICES 2012)	Hilton San Diego, California, USA	15 - 19 Jul 2012
Characterization of condensation from humid air to study the mass transfer in biological life support systems	39 <sup>th</sup> COSPAR Scientific assembly 2012	Mysore, India.	14-21 uly, 2012

**Research & Development**

- An International Indo-Russian RFBR Project entitled "Heat and mass transfer on a surface of mini and microsystems with phase transitions" submitted to DST, Newdelhi

**Extra – Curricular activities**

Contributed actively as a Member of Nobel Laureate Escort Committee during 5<sup>th</sup> Science Conclave

**Training Programmes Organized**

Proposal submitted to organize a workshop on "Advance Material and Instrumentation in Biomedical Engineering (AMIBE - 14)" at IIIT Allahabad to CSIR and it is accepted





### 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

### Academic Achievements

- Worked as Post Doctoral Fellow, Microfluidics Lab, Department of Mechanical Engineering, IIT Bombay, India during January to October 2012
- Joined as Assistant Professor in IIIT Allahabad in October 2012

### Publications during the year

#### International Journals

1. Amit Prabhakar and Soumyo Mukherji, "Investigation of the Effect of Curvature on Sensitivity of Bio/Chemical Sensors Based on Embedded Polymer Semicircular Waveguides", *Sensors and Actuators B: Chemical*, 171– 172 (2012) 1303–1311, (Link :- <http://dx.doi.org/10.1016/j.snb.2012.05.013>). (Impact Factor: 3.9)
2. Sidhartha Tripathi, Amit Prabhakar, Nishant Kumar & Shiv Govind Singh and Amit Agrawal, An Investigation of Blood Plasma Separation in Elevated Dimension T-shaped Microchannels, (*Biomed Microdevices*, 2013, DOI 10.1007/s10544-013-9738-z).

### Participation in Seminars / Workshops / Conferences / Symposiums etc.

#### National

1. Amit Prabhakar, YV Balavarun Kumar, Sidhartha Tripathi, Shiv Govind Singh and Amit Agrawal, An novel, compact and efficient microfluidic device for blood plasma separation, (*Paper number 167, FMFP 2012*) The 39<sup>th</sup> National conference on **Fluid Mechanics and Fluid Power** organised at Sardar Vallabhbhai National Institute of Technology, Surat during December 13-15, 2012)

#### International

1. Amit Prabhakar and Soumyo Mukherji, "A Gold Nanoparticle coated embedded polymer waveguide biosensor", *Biodevices 2012, International Conference on Biomedical Electronics and Devices*, Rome (Submitted as full paper and accepted)
2. Bharadwaj, R., Tripathi, R., Prabhakar, A., Mukherji, S., S-shaped SU-8 optical waveguide immobilized with gold nanoparticles for trace detection of explosives, *Proceedings of SPIE - The International Society for Optical Engineering, 4th Asia-Pacific Optical Sensors Conference 2013, APOS 2013*; Wuhan; China; Volume 8924, 2013, Article number 892424

### Work done in Projects Undertaken in the Institute

**Title of the Project:** Design and development of MEMS devices for separating Blood plasma from whole human blood

### Research & Development

#### Indian Patents:

- A method and system for velocity measurement of a fluid in a channel, Sonali Tripathy, Nishant Kumar Amit Prabhakar, and Soumyo Mukherji, *Indian Patent Application No: 2891/MUM/2012*, Filed on: 1-Oct-2012

### Extra – Curricular activities

- Acted as one of the organizing member for organizing 5th and 6th *Science Conclave* in 2012 and 2013 at IIIT Allahabad
- Acted as one of the leading organizing member for organizing *Workshop on System Biology (WSB'13)* in 2013 at IIIT Allahabad
- Acting as Faculty In charge of Music Club IIIT Allahabad and helped in organizing various cultural events like "*Effervescence*"

## Awards / Honours / Recognition received, if any

### a. National level

- Achieved Institute's Award for Excellence in Ph.D Thesis for the year 2012, at 50th convocation of IIT Bombay, held at 18th August 2012 [Year-2012]
- Achieved the first prize worth INR 5 lakhs in BEST-India (Biotechnology Entrepreneurship Student Teams)-2010, competition for delivering the best technical idea of CANSENS (Cancer sensing lab on chip device) as a commercial product. The event was sponsored by the Department of Biotechnology, Ministry of Science and Technology, and Government of India and was administered by ABLE – India [Year-2010]

### 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

### Publications during the year

1. Upper critical fields, critical current density and thermally activated flux in  $\text{CaFe}_{0.9}\text{Co}_{0.1}\text{As}$  superconductor, C. Shekhar, A. Srivastava, **Pramod Kumar**, P. Srivastava and O. N. Srivastava, **Super. Sci. and Tech.** 25 (2012)045004
2. Ferromagnetism in  $\text{CuFeSb}$ : Evidence of competing magnetic interactions in iron-based superconductors, B. Qian, J. Lee, J. Hu, G.C. Wang, **Pramod Kumar**, M.H Fang, T.J Liu, H. Pham, L. Spinu, X.S. Wu, M. Green, S. H. Lee and Z. Q. Mao, **Phy. Rev. B** 85 (2012) 144427
3. Stable graphite exfoliation by fullerene intercalation via aqueous route, Rachana Kumar and **Pramod Kumar**, Synthetic metals (**Submitted**), 2013
4. Crystal structure and negative magnetization in  $\text{Sm}_2\text{Al}$  and  $\text{Sm}_{1.988}\text{Gd}_{0.012}\text{Al}$  compounds, **Pramod Kumar**, K.G.Suresh and A.K. Nigam, **IEEE Transactions on Magnetism (Accepted)**, 2013
5. Complex magnetic behavior of the sawtooth Fe chains in  $\text{Rb}_2\text{Fe}_2\text{O}(\text{AsO}_4)_2$ , V. Ovidiu Garlea, Liurukara D. Sanjeewa, Michael A. McGuire, **Pramod Kumar**, D. Sulejmanovic, J. He, S.-J Hwu, **Phy. Rev. B (Accepted)**, 2013

### National

- National Seminar on IT Applications in Energy Management, 2013, RGIT Amethi, April 15-16

### International

- Indo-German workshop on organic and inorganic advanced materials for future energy requirements (WAMFER), 2012, Delhi University Nov. 29- Dec.1
- International conference on Magnetic materials and applications (MagMA-2013) 2013, IIT Guwahati, December 5-7, 2013

### Research & Development during the year

1. DST Project: (Under FAST track Young Scientists) 2013, **23.7lakh, (Accepted)** "Topological materials and Applications: Majorana fermions in topological insulator"
2. UGC project: (Start Up Grant) 2013, **6 lakh, (Accepted)**, "New Topological materials"
3. DST Project (**accepted**) **40 lakh**, "Spintronic material and its applications"
4. DRDO project (Submitted) **40 lakh**, "Development of Magnetic Refrigerating materials"

### Extra-Curricular activities

1. 5<sup>th</sup> Science Conclave, Coordinated Inspire Physics Lab, 2012, December 8-14

### Dr. Ashutosh Mishra Assistant Professor



### Research Interests

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

### Publications

#### Names of Books published

1. "Foot pressure distribution variation in pre-obese and nonobese adult subject while standing", R.Periyasamy, Ashutosh Mishra, Sneha Anand, A.C. Ammini; *The Foot* (Int. J. Clinical Foot Sc.), Vol.22, No. 4, pp-276-282, Dec. 2012
2. A naïve Gaussian Bayes classifier for detection of mental activity in gait signature; Deepak Joshi, A. Mishra & Sneha Anand; *Computer Methods in Biomechanics and Biomedical Engineering*; Volume 15, Issue 4, 2012

### Extra-Curricular activities

- 5th Science Conclave (Incharge – Help Desk)

### Training Programmes Organized

- Organizing member - WSB (Workshop on System Biology) 2013, IIIT-Allahabad

**Dr. Nidhi Mishra**  
**Assistant Professor**



**Research Interests**

Synthetic Medicinal Chemistry and Natural Product Chemistry

**Publications during the year**

Books published "Chalcones: A Scaffold with multifarious activity, Lambert Academic Press, Germany"

**Training Programmes Organized**

Member Organizing Committee of Workshop on Systems Biology'13 (16- 17 March, 2013)

**Dr. Shashi Kant Rai**  
**Assistant Professor**



**Research Interests**

Service marketing, Customer relationship management, Service quality

**Publications during the year**

1. Governance Through Cloud in India (GCI) International Journal of Advanced Research in Computer March-April 2013

**Participation in Seminars / Workshops / Conferences / Symposiums etc.**

A Model to Calculate Knowledge from Knowledge Base Intelligent Interactive Technologies and Multimedia Communications in Computer and Information Science, Springer 2013

**Particulars of Academic Work**

Courses taught Principles of management, CCDPA, COBIT, PMC, ISEA

**Any other Achievements / Distinctions**

- 5<sup>th</sup> science conclave member food committee, accommodation
- Warden BH1

**Dr. Saurabh Mishra**  
**Assistant Professor**



**Research Interests**

Sales Promotion, Branding & Advertising, Consumer behavior

**Publications during the year**

1. An Assessment of ROI in Online Perspective Leading to A Critical Review and Framework Development Towards Standardization Of ROI Practices. Journal of Internet banking and Commerce. April 2012, vol. 17, no. 1
2. Performance Measurement Of Indian Ecommerce Websites. Handbook of Management and Behavioral Science. Vol 7, 2012, Wisdom Publication, New Delhi.
3. Key Factors Leading ROI Of E-Commerce Websites – An User's Perspective. (JBGGM), Vol. 2, Issue 2, May 2013 11-20.
4. A User-Side Framework of Security Auditing and Monitoring. International Journal of Advanced Information Science and Technology (JJAIST). Vol. 13, No. 13, May 2013.

**Extra-Curricular activities**

5th science conclave member of stage show and cultural committee, Accommodation In charge for VH1

**Dr. Triloki Pant**  
**Assistant Professor**



**Research Interests**

Satellite Image Analysis and Fractal Geometry for Imaging

**Participation in Seminars/Workshops/Conferences/ Symposiums etc.**

- 1) International Conference on Intelligent Interactive Technologies and Multimedia (IITM-2013): "Implementation of Fractal Dimension for finding 3D Objects: A Texture Segmentation and Evaluation Approach"

- 2) Delivered keynote talk on First ICT workshop on Myanmar-India Information Communication Technology (ICTRD-2012) in "Myanmar Scientific and Technological Research Department, Yangon, Myanmar" from Oct. 18-19, 2012.

### Any other Achievements / Distinctions

Working as Warden of BH-4 from August 2012

1. Overall In-Charge of Audio & Light Committee and Member of Fooding & Hospitality Committee, Wrap up Committee and Accommodation Committee during 5<sup>th</sup> Science Conclave (8-14 Dec. 2012)

### Ashutosh Kumar Singh Assistant Professor



### Research Interests

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

### Publications in Refereed Journals/Book Chapters

1. Ashutosh Kumar Singh et al., "Fuzzy Logic Based Clustering in Wireless Sensor Networks: A Survey" International Journal of Electronics, Taylor & Francis U.K., Vol. 100, Issue. 1, pp. 126-141.
2. Ashutosh Kumar Singh et al., "Analysis of Lifetime of Wireless Sensor Network with Base station Moving on Different Paths" International Journal of Electronics, Taylor & Francis, U.K., pp. 1-12, 2013, DOI: [www.tandfonline.com/doi/full/10.1080/00207217.2013.794480](http://www.tandfonline.com/doi/full/10.1080/00207217.2013.794480)
3. Ashutosh Kumar Singh et al., "Performance Evaluation of Fuzzy based congestion optimization approach for sensor networks" International Journal of Computational Systems Engineering, Vol. 1, No. 4, pp. 257-264, 2013 (Inderscience)
4. "Connected Dominating Set for Wireless Ad Hoc Networks: A Survey", International Journal of Engineering Systems Modelling and Simulation, In Press (Inderscience)
5. 'Efficient topology control scheme for wireless ad-hoc networks', Int. Journal of Computational Intelligence Studies, Vol. 3, No. 1, pp. 94-109, 2014 (Inderscience)
6. Ashutosh Kumar Singh et al., "An Optimized Fuzzy Clustering for Wireless Sensor Networks" International Journal of Electronics, Taylor & Francis U.K., pp. 1-14, 2013, DOI: <http://www.tandfonline.com/doi/full/10.1080/00207217.2013.805387>
7. Devendra, Ajay Bharadwaz, Ashutosh Kumar Singh "Performance Estimation of Fuzzy Logic Based Mobile Relay Nodes in Dense Multihop Cellular Networks", *Advances in Intelligent Systems and Computing*, Volume 243, 2014, pp. 531-540 (Springer)
8. "Underwater Communication with IDMA" *Advances in Intelligent Systems and Computing*, Vol. 243, pp 1171-1177, 2014, (Springer)

### Papers Published in International Conferences

1. Ashutosh Kumar Singh et al., "An Efficient Approach for Congestion Detection in WSN through Fuzzy Logic" in the proceedings of IEEE International Conference on Wireless Communication and sensor Networks WCSN-2013 held at Naresuan University Phistanulok, Thailand (Travel Grant by CSIR)
2. "Performance Analysis of Compact Koch Fractal Antennas at Varying Iterations" IEEE Conference on Engineering and Systems, SCES-2013, MNNIT Allahabad
3. "Development of FUS Algorithm to Improve HSDPA Performance in MIMO Supported Cellular Network" in the proceedings of 2nd IEEE Conference on Engineering and Systems, MNNIT Allahabad
4. "Duo Triangle Shaped Microstrip Patch Antenna Analysis for WiMAX Lower Band Application" International Conference on Computational Intelligence: Modeling Techniques and Applications (CIMTA) 2013, Kalyani University, Kolkata, Volume 10, 2013, Pages 554-563, Procedia Technology (Elsevier)

### Training Programmes Organized

- (a). Worked as Co-Chair, Publicity, WCSN 2013
- (b). Worked for WCSN-2012

### Any other Achievements / Distinctions

- Assistant Proctor, IIIT-A

### Dr. Lokendra Tiwari Assistant Professor



### Research Interests

Information Security, Cyber Law, Digital Forensics, Intellectual Property Rights

### Academic Achievements

D.Phil from University of Allahabad

### Publications during the year

#### National journals

- Tiwari Lokendra Kumar, "Reliability measurement of digital forensic open source tools using fuzzy logic", national science academy letters (NASL), Springer, impact factor 0.067, 2012

**Dr. Sangeeta Singh**  
**Assistant Professor**

**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

**Training Programmes Organized**

- Member Organizing Committee of Workshop on Systems Biology'13 (16- 17 March, 2013)

## 4. RESEARCH AND DEVELOPMENT

### 4.1 RESEARCH PROJECTS OF THE INSTITUTE

(Amount in Rs.)

Sr. No.	Name of Project	Funding Agency	Project Cost	Period of Project
1	Allahabad Michigan Collaborative Fund	Michigan University, USA	3088984	2007-12
2	Setting up of an ASEAN-India Science & Technology Library	ASEAN	\$7,29,753	2009-12
3	Allahabad High Court Digitilization Project	Hon'ble Allahabad High Court	51100000	2012-14

(Amount in Rs.)

Sr. No.	Name of Project	Funding Agency	Total amount Sanctioned	Period of Project
1	Department of Bio-Technology (Indo Russian Centre for Bio-informatics )	Department of Science & Technology	1,87,00,000	2003-14
2	Universal Digital Library- Content creation in Tibetan, Sanskrit and English	MIT	1,05,00,000	2009-13
3	Information Security Education & Awareness (ISEA)	MCIT	82,51,500	2005-14
4	TDIL -( English-Indian Language machine Translation System )-Phase 2nd	MCIT	12809000	2011-13
5	TDIL-( Indian Language-Indian Language Machine Translation System ) 2 <sup>nd</sup> Phase	MCIT	2956000	2011-14
6	TDIL-Development of Robust document analysis and recognition system for printed Indian Scripts-( OCR ) -2 <sup>nd</sup> Phase	MCIT	7170500	2011-14
7	Fund for Improvement of Science & Technology infrastructure in Universities and higher educational Institutions (Fist program-2007)	Department of Science & Technology	1,40,00,000	2008-13
8	Technology incubation and Development of Entrepreneurs(Tide) Scheme	DIT	1,65,00,000	2008-12
9	Indigenization of broadband over Power line technology (BPL) from Corinex Canada by Connecting Adjoining villages around IIIT, Allahabad And RGIIT using Existing power Lines.	Department of Science & Technology	1,65,50,000	2008-11
10	Development of transgenic wheat plant against cereal Cyst Nematode (Heterodera Avenue and sunnpest (Eurygaster intergriceps puton ) by using Bioinformatics and Genetic engineering Approaches Sanction NO-( INT/ILTP/A 1.28 ) dated 23.11.09	Department of Science & Technology	53,97,620	2009-13
11	Development of a computer aided microscopic pool for structural derivation of pathologically significant proteins (No.52/8/2005-BMS)ICMR ,Ansari Nagar–New Delhi	I.C.M.R	2683391	2009-12
12	Development of New method and algorithms to identify exon-intron boundary and finding signatory signal pattern for genetic engineering like autism	Department of Science & Technology	20,70,860	2011-13
13	Disaster management system for large scale deployment of sensor network using a fault tollerant mechanism	Department of Science & Technology	1,58,47,800	2011-14
14	ATB Netwok simulation Tastbed at MCTE,MHOW (MP)	CDA Jabalpur	1,44,40,000	2011-13
15	Indo -US project Wireless Sensor Network (WSN) for protecting Wildlife and Humans	DEITY	8100000	2012-13
16	Distributing Industrial Optimization tasks to Rural Worker- INDO UK BURD Project	Department of Science & Technology	6088130	2012-13

### 4.2 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 prenyphenolic 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 revolutionalized 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 intergricus* 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 pGC5941 vector (Figure 2 d), having Bar and Kanamycine reporter genes. Wheat callus generation, regeneration of callus and formation of shoots were obtained (Figure 2 a, b & c) by using plant tissue culture techniques. Agrobacterium mediated transformations of each gene constructs have been performed into callus of DBW-17, PBW-550 and DPW-621-50 Wheat varieties and putative transgenic plants development is in progress.

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

**Figure 2:** Plant regeneration from callus of Wheat DBW-17. (a) One month old wheat callus induction on MS medium supplemented with 2.0 mg/L 2, 4-D; (b) two moth old wheat callus with leaf like green spots; (c) Shots regeneration on MS basal Medium from callus; (d) Vector map of pGC5941with 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 Uris 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

## 4.3 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. Insilico 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

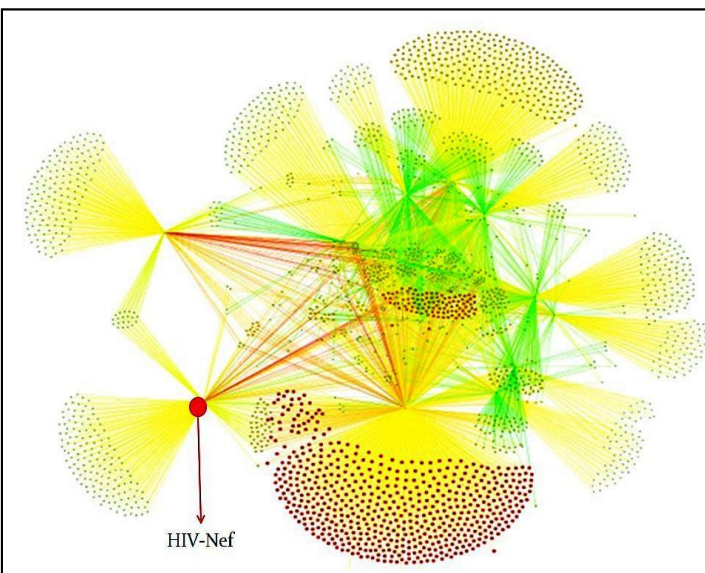


Fig.1: Showing HIV-Nef in HIV-1 & Human PPI Network drawn on Cytoscape

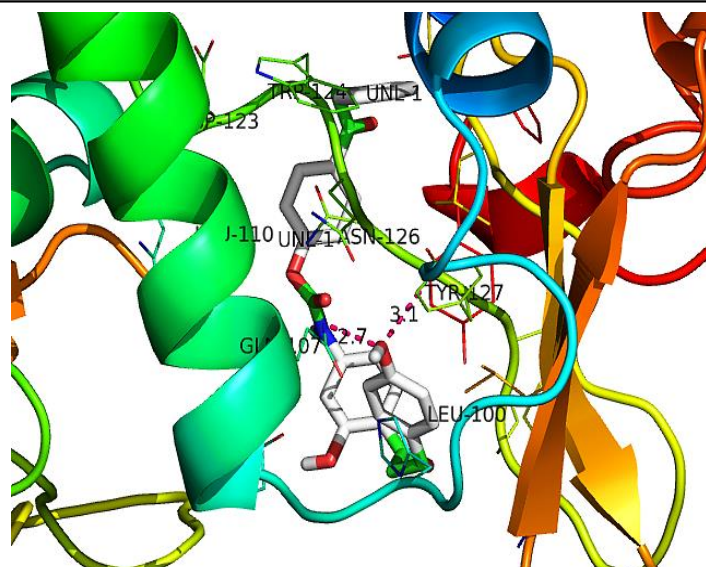


Fig.2: Docked Structure of top Ligand and target protein

# 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.:

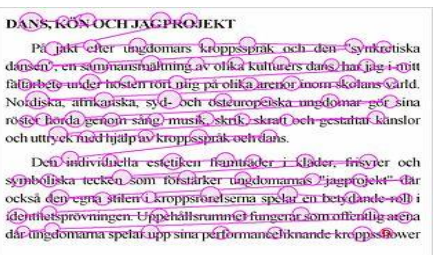
RS128 (session 2012-13)

## Name of Division where working:

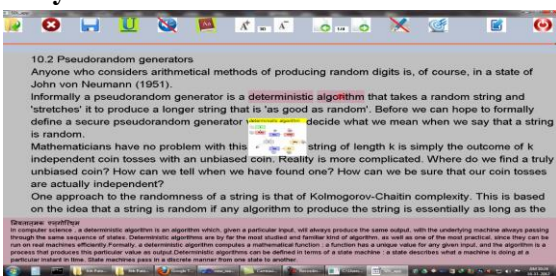
IT DIVISION



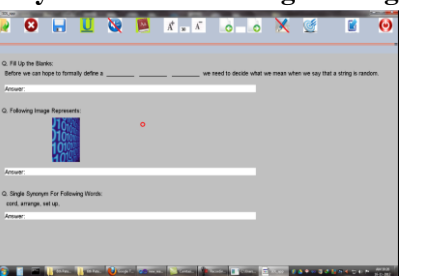
**EyeLink 1000 at SILP Lab in IIIT-A**



**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.

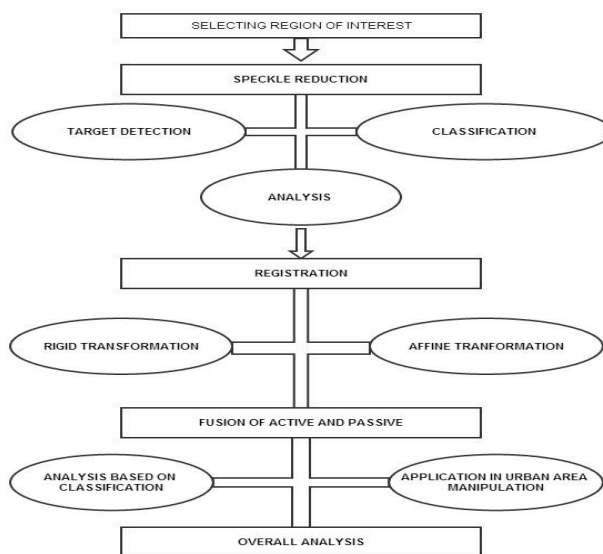
**Name of Supervisor:** Prof. Anupam Agrawal

**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

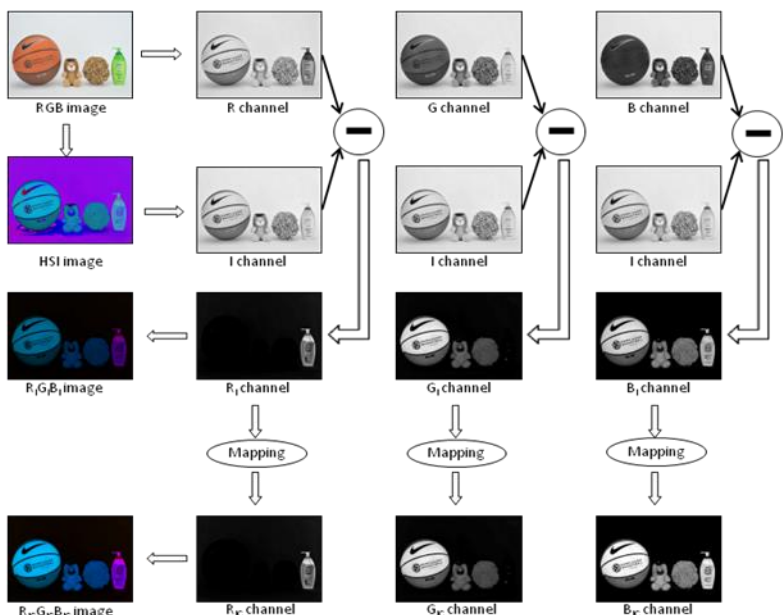
**Name of Research Scholar:** Shiv Ram Dubey

**Roll No.:** RS136

**Name of Division where working:** ECE

### Images of active Research being done / Labs etc.

#### Work flow of illumination compensation in $R_cG_cB_c$ 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

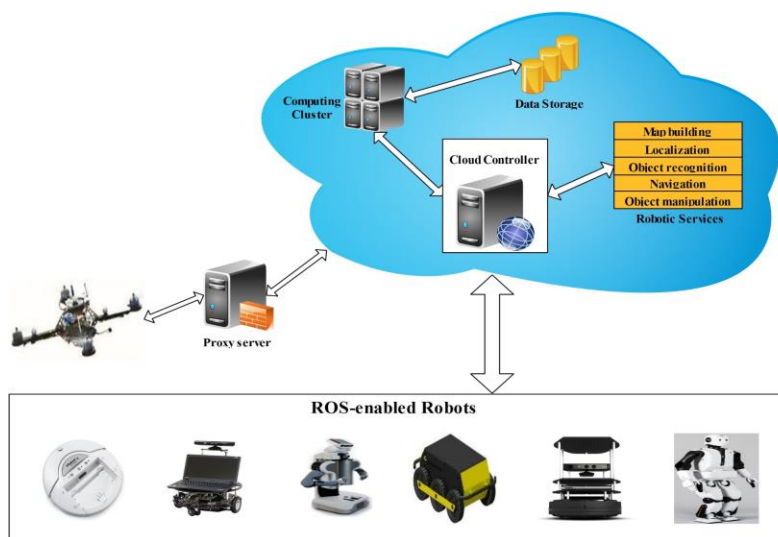
**Roll No.:** RS69

**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)**



Notes: Data ending 30 September 2012  
Source: Bloomberg, World Gold Council





# 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**

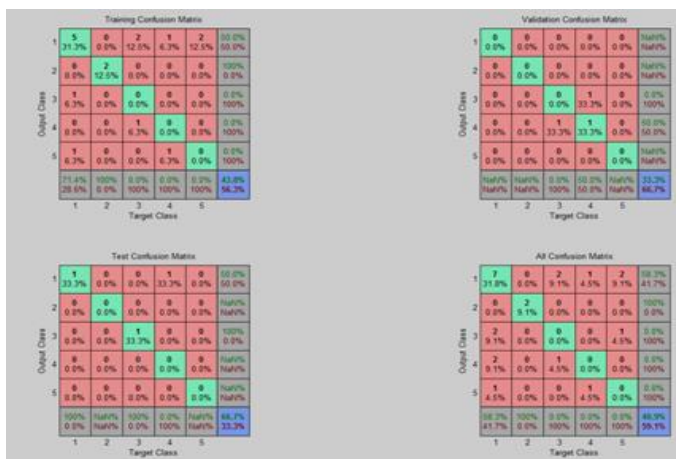
**Name of Research Scholar: Satya Prakash**

**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 addiction 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

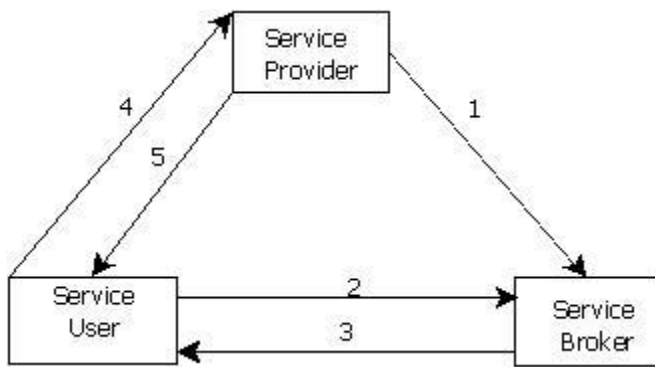
**Name of Co Supervisor:** Dr. Shirshu Varma

**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:**

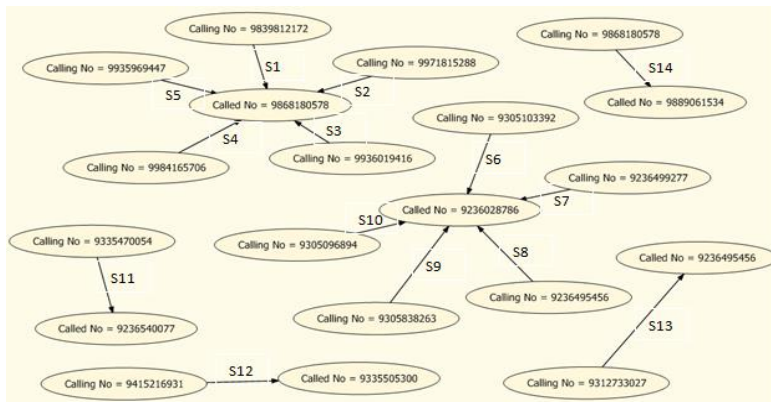
Preetish Ranjan

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.

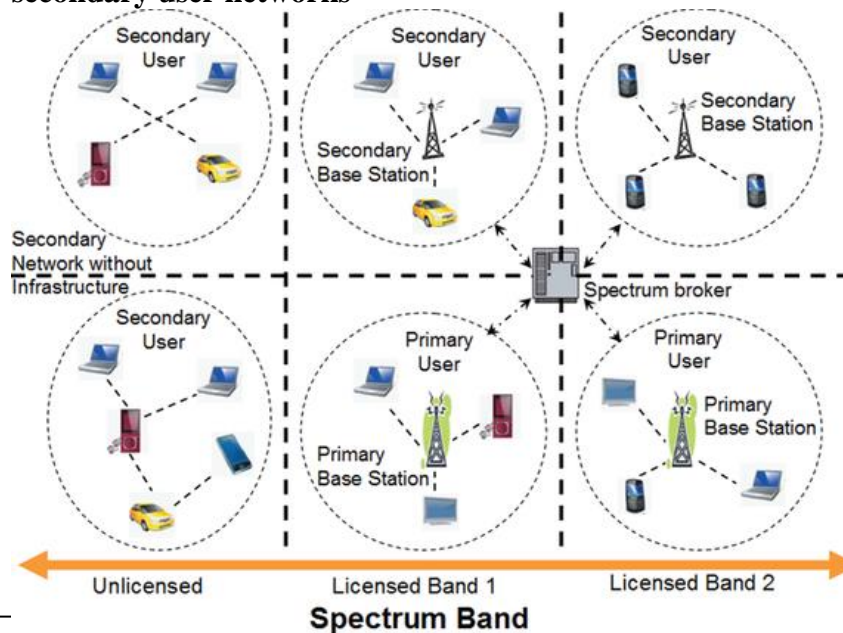
**Name of Supervisor:** Prof. U. S. Tiwari

**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 [20]** - THIS IMAGE SHOWS DATASETS THAT HAVE BEEN PUBLISHED IN LINKED DATA FORMAT, BY CONTRIBUTORS TO THE LINKED 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 ΔPT” [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 syntactic analysis (based on keywords) but to reach appropriate answer semantic analysis (based on meaning) is required for question answering. The Ontology play 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 shows 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 than syntactic based for

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

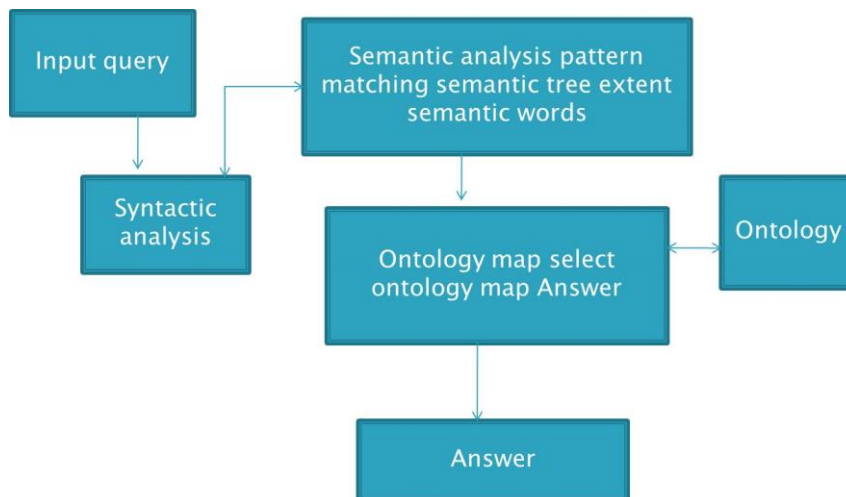
**Name of Research Scholar:** Monika Rani

**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. On this aspect, resolution through modification 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, demethoxycurcumin (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:

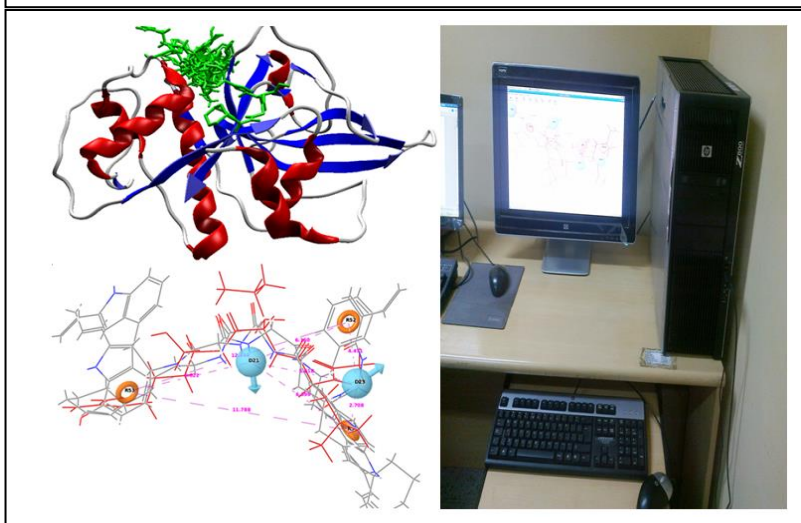
**Prof. (Mrs.) Krishna Misra**

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

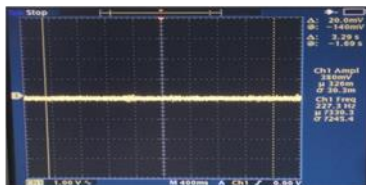


Fig 1:Signal shows without intrusion

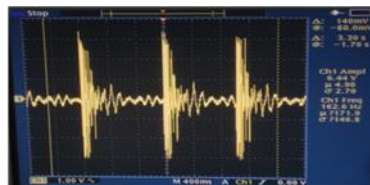


Fig 2:Signal shows intrusion while running



Fig 3:Signal shows intrusion while jaggling

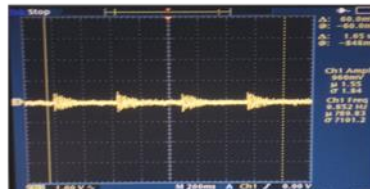


Fig 4:Signal shows intrusion while walking



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**



## 5. The Infrastructure

### 5.1 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 RGIIIT-Amethi Campus of IIIT-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
- IIT-Allahabad is the first academic campus in the country to implement
- BPL (Broadband over Power Line)

**Sports:** IIT-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 IIT-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 infrasture 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 IIITA's 35 labs the computer labs provided to the MBA/MS division comprises of Latest PCs having Core 2 Duo, Quad Core, i5 ,i7 with a 24 hours Internet access through 1 GBPS Leased line. Scanners, CD-DVD writers, Laser printers are also available in the Labs.

### INFRASTRUCTURE DURING XIth PLAN

Item of Expenditure	Particulars		
Hostels (no. of seats created) (1280 – Ann-01)	<b>Sl. No</b>	<b>Detail</b>	<b>Occupancy</b>
	IIIT-A Jhalwa & RGIIT-A Campus		
	1.	Girls' Hostel – II	88
	2.	Girls' Hostel – III	248
	3.	Boys' Hostel – III	264
	4.	Boys' Hostel – IV	352
	5.	Married Scholar Apartments	50
	6.	Boys' Hostel (Amethi)	218
	7.	Girls' Hostel (Amethi)	60
8.	TOTAL	<b>1280</b>	
Faculty housing (no. of units by type created)	<b>Type</b>	<b>Sqm.</b>	<b>Quantity</b>
	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 (Top Floor)		02
	Computer Centre – 2 (Top Floor)		02
	Lecture Theatre (Top Floor)		02
Library facilities	CD-ROMs, Online databases, audio-video cassettes, books, e-journals, patents, e-standards, theses, project reports and Newspapers etc.		
Technology infrastructure and facilities	Swimming Pool		
	Auditorium		
	1) Pavilion		
	2) Volleyball Court		
	3) Lawn Tennis Court		
	4) Athletic Track		
	Squash Court		
	Cafeteria		
Others	1) Health Centre		
	2) Bank & Post Office		
	3) Telephone Exchange		
	4) Shops, Dormitory		
	5) Student Activity Centre		
	(RGIT-Amethi)		
	1) Auditorium		
	2) Canteen		
	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 <sup>th</sup> 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
<b>SUBTOTAL (ii)(c)</b>	<b>42838.15</b>

### 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
	<b>TOTAL</b>			<b>2325</b>

### 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 (All double beds, refrigeration in 17 suites, TV with computer in all 30)	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
	Type – I	55 Sqm.	12 (2 blocks)	06
	Type – II	85 Sqm.	32 (2 blocks)	16
	Type – III	100 Sqm.	40 (2 blocks)	20
	Type – IV	120 Sqm.	24 (2 blocks)	12
			108	54

### Classroom Infrastructure

1	<b>Campus area in acres</b>	100 Acres
2	<b>Total number of class rooms - 32</b> 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	<b>Number of Faculty cabins - 108</b> 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	<b>Number of laboratories - 72</b> 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

## 5.2 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 Govt. 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

#### **FORENSIC LAB**

Advance Mobile Forensic Workstation has been set up with various sophisticated equipments.

#### **DATA CENTER LAB**

Besides the Information Security Lab a full-fledged Data Centre Lab is being set up.

#### **PROJECT LABORATORIES**

- ❖ North Zone Research Development Centre in IT / ITES Lab
- ❖ National Mission on Education through ICT

### 5.3 LIBRARY FACILITIES

The IIT-A central library has a repository of more than 50000 books concerning myriad disciplines of study such as pure and applied sciences, computer science, information technology, electronics and communication technology, information security and management. It can accommodate up to 150 students at a time.

The e-media section of the library has 50 computer systems and is largely meant for facilitating e-reading amongst the students. A collection of more than 2000 CDs equipped with drivers, tools and recorded lectures aim at enhancing the conceptual understanding of the students on various subjects and topics. It also proves handy for students who prepare for placements.

The institute has subscribed to a large number of online resources such as journals and other publications such as IEEE, Emerald Insight, ACM, Springer, Science Direct, Scopus, JCCC (Bibliographical database) and Sage Publications which deals with Criminology and Criminal Justice and Management organization and Studies wherein the publishers provide IP authenticated access to multiple user accessibility with unlimited download facility.

The in-house developed automated library management system with its web portal provide the facility of accessing the information related to the availability and non availability of books for issuing and reserving them beforehand. The library also has subscribed to more than 50 daily newspapers, magazines and newsletters. A dedicated team of librarian and staff ensure timely upkeep and smooth management of the resources. The library opens 7 days a week and encourages the reading and academic endeavors of the students.

#### Functioning of Library

- Before the beginning of each semester a mail is floated to Faculty members and students for procurement of books, journals, magazines, database based on current Industry trends and practices.
- The various requisitions are processed and finally the order is placed in consultation with the competent authority.
- The library has optimum blend titles, covering reference interests and also text books.
- If required special orders are also placed during the mid semester

#### Peripheral Activities in the Library

- Tracking of Usage Rate and Renewing the Subscription of Journals, Magazines, Databases accordingly.
- E-Books repository is being created
- Database Subscription- Capital line, India stat.
- Archiving of Thumb impression Library
- Subscription for Plagiarism Checking Website

#### a). The Conventional Library

The mission of the IIT-A Library is to provide information services and access to bibliographic and full text digital and printed resources to support the scholarly and information needs of the Institute Community. The Library is well equipped with modern facilities and resources in the form of CD-ROMs, Online databases, audio-video cassettes, books, e-journals, patents, e-standards, theses, project reports and Newspapers etc. The library homepage provides electronic access to various full text & bibliographical databases & e-journals. Links from the library homepage provide the information on library policies, hours, collections, services, sections and the location of materials. The library hosts all its catalogues online through web interfaces for search and status of documents and readers. It is also equipped with auto generated mailing services to the members for reservation of documents, issue / return notification, loan status, overdue status and new arrivals in the library. Students can locate the books of their choice from their desktop on a few clicks. The web-enabled MIS used in the library is a software product and copyright of IIT-A itself.

The IIT-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:

Sl. No.	Details of Books	Details of Journals			Magazines	CDs / Softwares	Lectures / Video Courses	Cost (Rs. In Crores)	
		National	International	Online				Books	Journals
1.	44617	55	80	12654	45	2060	1005	6,16,89,365.00	1,13,44,914.00

Following online full databases are being subscribed by the Institute based on IP authenticated (Username and Password is not required) multiple user accessibility, full text of current and archival issues with unlimited download facilities –

1. ACM Digital Library
2. IEEE / IEE Electronic Library (Journals)
3. IEEE / IEE Conference Proceedings
4. IEEE / IEE Standards
5. Springer Link
6. Emerald Management
7. Elsevier – SD (Computer Science)
8. Elsevier – SD (Business, Management & Accounting)
9. Sage Publication (Management and Organization Studies)
10. Sage Publication (Criminology and Criminal Justice)
11. D-Line Journals
12. ISACA Journals
13. JCCC (J-Gate Custom Content for Consortia – Bibliographic Database)
14. HEDBIB (International Bibliographic Database)

#### b). Universal Digital Library (UDL) Mega Center

The Universal Digital Library has the vision "A Million Books to The Web Assembling – The World's Biggest Library on Everybody's Desktop". The basic motive of the Universal Digital Library (UDL) project is to provide access to the rich repository of knowledge to everybody. The initiative was taken by a group of institutions spread across different parts of the country together with the Carnegie Mellon University (USA). The IIIT-A was designated as a mega-center in the project. The major objective is to capture and store more than a million books in the digital format and to develop the required language technologies.

The UDL project also involves a significant amount of research and development work in all areas related to Digital Libraries. These include development of optical character recognition systems for Indian scripts, development of machine translation systems, document summarization, information retrieval, development of workflow for digital libraries etc. on the basis of achievement of this Lab Institute has been given responsibility of developing S&T digital library of all member states of ASEAN (10 countries).

## 6. The Statistics

### 6.1 Degrees Awarded

#### EIGHTH SPECIAL CONVOCATION (18 December 2012)

#### Dignitaries Awarded D.Sc. (Honoris Causa) Degree

#### Awarded to:

Prof. Roger D. Kornberg, Nobel Laureate in Chemistry (2006), USA  
 Padma Bhushan Prof. S. Ramadorai, Advisor to PM, National Skill Development Council & Vice-Chairman, TCS; and  
 Padma Bhushan Prof. S.K. Joshi, Former Director, NPL

#### SEVENTH CONVOCATION (21 September 2012)

#### Number of Graduate Passed out Students

Academic Batch	Name of Courses	No. of Students Passed				Total
		Boy(s)		Girl(s)		
		With Honours	Without Honours	With Honours	Without Honours	
Jul 2007 - Jun 2011	B.Tech. IT	08	13	00	00	21
Jul 2008 - Jun 2012	B.Tech. IT	45	107	10	08	170
Jul 2007 - Jun 2011	B.Tech. ECE	02	02	00	00	04
Jul 2008 - Jun 2012	B.Tech. ECE	13	42	04	04	63

#### Number of Postgraduate Passed out Students

Academic Batch	Name of Courses	No. of Students Passed			
		Splsn.	Boy(s)	Girl(s)	Total
Jul 2009- Jun 2011	M.Tech. (IT)	BI	01	00	01
		IS	01	01	02
		WCC	03	00	03
		SE	01	00	01
		HCI	00	00	00
		RO	01	00	01
		MI	03	00	03
Jul 2010- Jun 2012	M.Tech. (IT)	BI	07	08	15
		IS	05	02	07

		WCC	14	04	18
		SE	15	03	18
		HCI	07	00	07
		RO	06	03	09
		MI	08	03	11
Jul 2009 - Jun 2011	MBA	IT	02	00	02
Jul 2010 - Jun 2012	MBA	IT	29	08	37
Jul 2009 - Jun 2011	MSCLIS		01	00	01
Jul 2010 - Jun 2012	MSCLIS		55	10	65
<b>Based on results declared till 05/09/2012</b>					
<b>Number of Doctor of Philosophy passed out Students</b>					
Name of Courses	No. of Students Passed		Total		
Ph.D.	Boys (s)	Girl(s)	07		
	05	02			

## 6.2 Patents & Copyrights

### AN OUTLINE OF IPR PROFILE OF IIIT-A

#### A) Patents Granted:

5) **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

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

US Patent No: US 7,336,800 B2 granted dated 26.02.08

The Patent was also filed on 16.05.2002 in India vide No: 563 / DEL / 2002. It was granted on 02.03.09 vide Indian Patent No: 231097.

#### Patents Filed in India and under progress:

7) **1971 / DEL / 2005:** An Encryption Method and System.

8) **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.

9) **399 / DEL / 2007 / FAB:** A fuzzy- adaptive brightness control mechanism for a computer display device.

10) **492/ DEL/ 2007:** Soft computing based microprocessor controlled Adaptive Modular Active Leg System.

11) **2215 / Del / 2007:** Cushy Mouse Kit, An Ergonomic mouse and mouse pad.

12) **779 / DEL / 2009:** A method and A software Implemented Tool for Detecting Plagiarism in documents.

13) **1294/DEL/2012:** A personal Human Computer Interaction System based on Eye Gaze Tracking

14) **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.

### 6.3 Academic Exchange Programs

The Institute has continued to maintain and enhance the academic excellence it has had since its inception that has enabled it to have collaborative academic exchanges with the following International / National Universities / Institutions of academic eminence. MoUs have already been signed with most of these institutions and with the rest they are in process.

1. Carnegie Mellon University, Pittsburgh
2. California University, Riverside, USA
3. State University of New York, Buffalo
4. Massachusetts Institute of Technology, USA
5. Gwangju Institute of Science & Technology (GIST), Korea
6. Canberra University, Australia
7. EPFL Louisiana and ETZ Zurich, Switzerland
8. Aalborg University, Denmark
9. Russian New University (ROSNOU), Moscow, Russia
10. University of Michigan, USA
11. Caledonian College of Engineering, Muscat, Oman
12. IIT-Kanpur, IIT-Mumbai and IIT-New Delhi
13. Information Security Research Consortium jointly signed by USA, China, Japan, Russia, Germany, Israel, India, ROSNOU-Russia
14. University of Dundee, Nethergate, Scotland, UK
15. Moscow Institute of Physics and Technology (State University), Moscow, Russia
16. Center for Teleinfrastructure (CTIF), Aalborg University, Denmark
17. Asian Institute of Technology, Bangkok, Thailand
18. The Southern Taiwan University, Taiwan
19. The University of Lincoln, U.K.
20. Erasmus MC: University Medical Centre, Rotterdam, Netherland
21. The Erasmus University, Rotterdam, Netherland
22. University of Abertay Dundee, Scotland
23. The Queensland University of Technology, Brisbane, Australia
24. Putera Sampoerna Foundation (PSF), Jakarta
25. M.H Alsya Co. W.L.L., Kuwait
26. Ohio State University & Cornell University
27. Biolink Institute, Link Campus University, Rome, Italy
28. Shenyang University, China
29. The Swiss Federal Institute of Technology, Lausanne, Switzerland
30. Allahabad High Court, Allahabad, India

## 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.

### 6.4 PLACEMENT DETAILS

#### Passed Out B.Tech Stream (2013)

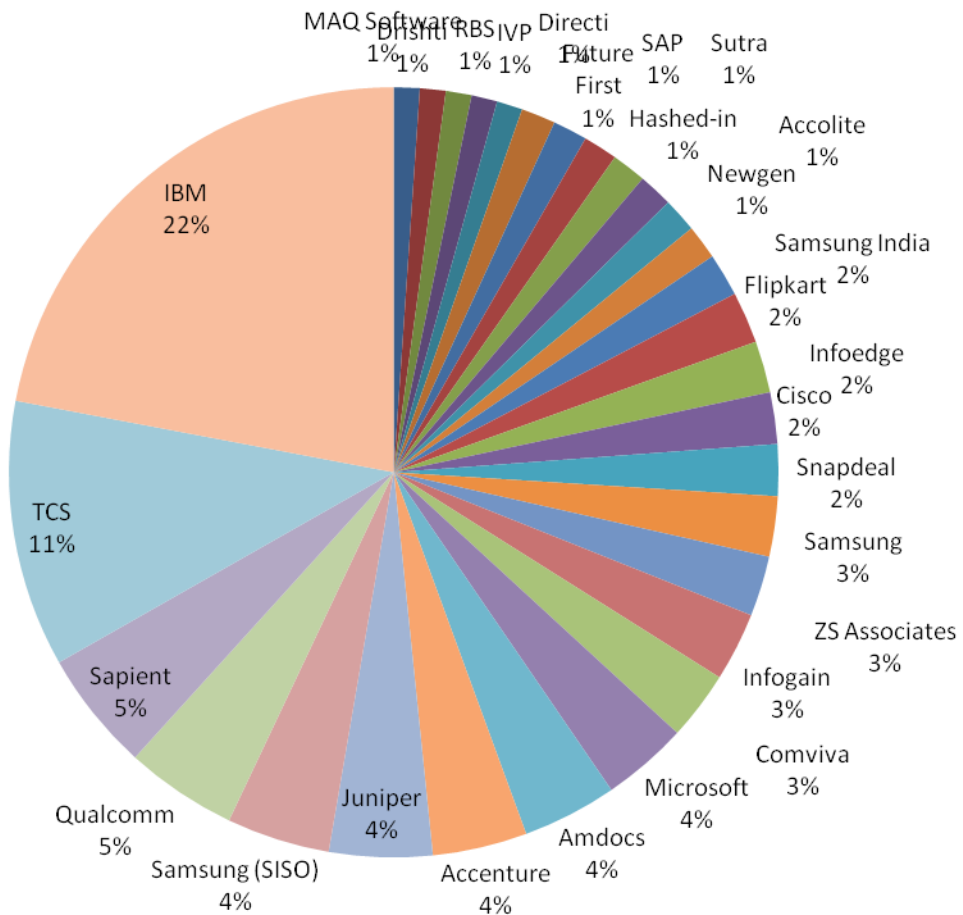
- Total Number of B.Tech Students: 310  
Total Number of B.Tech (EC) Students Passed: 075  
Total Number of B.Tech (IT) Students Passed: 220
- Number of Companies that visited the campus: 49  
Number of companies recruited B.Tech (EC): 29  
Number of Companies recruited B.Tech (IT): 49  
**(LIST OF STUDENTS ATTACHED AS ANNEXURE)**

#### Companies Visiting the Campus for recruitment in 2012-2013

S.No	Companies	Number of Students Place
1	Microsoft	10
2	Directi	04
3	Flipkart	06
4	Adobe	02
5	Qualcomm	13
6	Future First	04
7	Infoedge	06
8	Cisco	06
9	MAQ Software	03
10	Samsung	07
11	Infogain	08
12	Facebook	02
13	Informatica	02
14	DE Shaw	02
15	Yahoo	02
16	IBM	61
17	TCS	31
18	Amdocs	11
19	Snapdeal	06
20	Juniper	12
21	Verizon	02
22	Kritical Securescan	02
23	McCafe	02

24	Comviva	08
25	Samsung (SISO)	12
26	Samsung India	05
27	SAP	04
28	Accenture	11
29	Drishti	03
30	RBS	03
31	ZS Associates	07
32	Hashed- in	04
33	Sutra	04
34	Amazon	03
35	Accolite	04
36	Morgasn Stanley	01
37	PWC	02
38	Walmart	02
39	Newgen	04
40	Sapient	14
41	CAT Technology	01
42	IVP	03
43	MINCH- SOFT	02
44	AESL	01
45	NEC-HCL	01
46	Red Pines	Recruited through Online Test
47	Dolat Capital	Recruited through Online Test
48	Nvidia	Recruited through Online Test
49	Freescale	Recruited through Online Test

### Number of Students Placed



## 6.5 SCHOLARSHIPS ETC.

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,
<b>1.</b>	<b>POST MATRIC SCHOLARSHIPS (ALL INDIA)</b>				
	B.Tech / MBA / MSCLIS	Govt. of India, Ministry of Social Justice & Empowerment	<p>Annual Income Limit (for Post Matric Scholarships):</p> <p>For SC/ST Category – Rs. 2.0 Lakhs</p> <p>For General Category – Rs. 2.0 Lakhs (applicable only for students of U.P. origin)</p> <p>For OBC Category – Rs. 2.0 Lakhs (only U.P., Bihar States are sanctioning as at present. Students of other States may enquire from their Native States)</p> <p>For Minority Category (U.P. State Scheme) – Rs. 2.0 Lakhs</p> <p>For Minority Category (Central Scheme) – Rs. 2.0 Lakhs</p>	<p>For SC/ST Category – Full Fee + Maintenance Charges = 1200/- p.m. x 10 months</p> <p>For OBC / General / Minority Category U.P. Govt. Rates Plus Maintenance Charges = 1200/- p.m. x 10 months</p> <p>For Other States (OBC/Minority) – Reimbursement on respective State Govt. Rates</p>	
<b>2.</b>	<b>INSTITUTE MERIT SCHOLARSHIP (Performance Award)</b>				
	B.TECH / MBA / MSCLIS	Paid by Institute (IIIT-Allahabad)	<p>A. IIIT-A</p> <p>1. B.Tech (IT) - <b>10</b></p> <p>2. B.Tech (EC) - <b>06</b></p> <p>3. MBA (IT) - <b>04</b></p> <p>4. MS(CLIS) - <b>04</b></p> <p><b>TOTAL - 24</b></p> <p>B. RGIIIT-Amethi</p> <p>1. B.Tech (IT) - <b>06</b></p> <p><b>GRAND TOTAL - 30</b></p> <p><b>Eligibility: Merit of 1<sup>st</sup> Year</b></p> <p><b>Renewal: Based on Merit</b></p>	Rs. 3,000/- p.m. for 12 months of the year (Rs. 36,000/- per year)	
<b>3.</b>	<b>INSTITUTE MERIT-INCENTIVE AWARD (MERIT-BASED)</b>				
	B.Tech	Paid by Institute (IIIT-Allahabad)	<p>1. Merit of qualifying exam</p> <p>2. 10% from each State Board</p> <p>3. Minimum 80% attendance in a Semester</p> <p>4. Continuation in successive Semesters subject to obtaining at least</p>	Rs. 3,000/- p.m. for 12 months of the year (Rs. 36,000/- per year) (Six monthly RENEWAL)	

			'B' Grade marks in previous Sem		
<b>4.</b>	<b>INSTITUTE MERIT-CUM-MEANS AWARD (INCOME-BASED)</b>				
	B.Tech	Paid by Institute (IIT-Allahabad)	1. Annual Parental Income below Rs. 2.0 Lakh per annum 2. Minimum 80% attendance in a Semester 3. Continuation in successive Semesters subject to obtaining at least 'B' Grade marks in previous Sem	Rs. 3,000/- p.m. for 12 months of the year (Rs. 36,000/- per year)  (Six monthly RENEWAL)	
<b>5.</b>	<b>MERIT-CUM-MEANS MINORITY SCHOLARSHIP</b>				
	Undergraduate & Postgraduate Students	Ministry of Minority Affairs, Govt	Eligible UG Students  (Annual Income of Parents should be below Rs. 2.5 Lakhs)	Rs. 30,000/- for Hostellers Rs. 25,000/- for Day Scholars  FULL FEE REIMBURSEMENT FOR GOVT. INSTITUTIONS	1. Muslims, Christians, Sikhs, Buddhists, Jains 2. 50% Marks 3. 30% for Girls 4. Parent's Income below Rs. 2.5 Lakhs
<b>6.</b>	<b>INDIAN OIL SCHOLARSHIPS</b>				
	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  <b>ELIGIBILITY</b> 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.	
<b>7.</b>	<b>PRATIBHA SCHOLARSHIPS</b>				
	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 <sup>th</sup> Class or CGPA of 06 per semester 3. Native of Andhra Pradesh 4. Non-recipient of any other Scholarship 5. Parents Income Rs. 1.00 Lakh p.a.	Rs. 20,000/- per year	
<b>8.</b>	<b>BIRSA MUNDA TECHNICAL SCHOLARSHIPS</b>				
	ST Category B.Tech	Govt. of Jharkhand State	Eligible ST Category B.Tech students of	12 months' tuition fees, admission fees, examination fees and other University	



			Jharkhand 1). Parents Income Rs. 1.00 Lakh p.a. 2). ST Certificate	fees (Caution Money not included)	
<b>9.</b>	<b>NCERT SCHOLARSHIPS</b>				
	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)	
<b>10.</b>	<b>CENTRAL SECTOR TOP CLASS EDUCATION SCHOLARSHIP (FOR SC / ST)</b>				
	B.Tech	Ministry of Social Justice & Empowerment (for SC) & Ministry of Tribal Affairs (for ST), Gol	B.TECH Top 10 SC Top 05 ST (AIEEE Merit Ranking)  <u>ELIGIBILITY</u> 1. AIEEE Merit Ranking 2. Non-recipient of other Scholarship 3. Successful performance in Annual Exam 4. Parents Annual Income Rs. 4.5 Lakh p.a.	1. Full Refundable/Non-refundable Fee for year 2. Lodging 3. Boarding 4. Contingency/Book Exp. =3,000/- 5. Cost of Computer =45,000/-	
<b>11.</b>	<b>SCHOLARSHIPS FOR PHYSICALLY HANDICAPPED</b>				
	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)	
<b>12.</b>	<b>EARN-WHILE-YOU-LEARN</b>				
	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	
<b>13.</b>	<b>STIPEND/ASSISTANTSHIP</b>				
	M.Tech Students	Paid by the Institute	Eligible M.Tech students of SC/ST/OBC/General Category  <u>Eligibility</u> 1. For GATE Scorers only 2. Teaching Assistantship under a Faculty is necessary	8,000 per month + Contingency @ 10,000 per annum	

			3. Not for sponsored/MBBS candidates 4. Teaching for 8 hours per month, if reqd.		
<b>14.</b>	<b>SINGLE GIRL CHILD SCHOLARSHIP</b>				
	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	
<b>15.</b>	<b>POST GRADUATE SCHOLARSHIP FOR PROFESSIONAL COURSES, UGC</b>				
	M.Tech Students	UGC, Gol	Based on eligibility  i) The candidate must have obtained Graduate degree in the relevant subject and obtained admission at Postgraduate level for regular full time course in any of the Professional subject in a recognized University/Institution/College. ii) Candidates pursuing post graduate course in professional subjects by correspondence or by Distance Education mode are not eligible to receive financial assistance under this scheme. iii) The upper age limit for male applicants is 45 years as on 1st July on the year of application, and 50 years in the case of female candidates. In exceptional cases, the age may be relaxed.	5,000 per month  No. of slots available = 1000 per year Tenure of award = two/three years depending upon tenure of the PG Course  Scholarship: @ Rs.5,000/- p.m. for M.Tech @Rs.3,000/- p.m. for other courses.  Contingency: @Rs.15,000/- p.a. for M.Tech @Rs.10,000/- p.a. for other courses	
<b>16.</b>	<b>DLF SCHOLARSHIPS</b>				
		DLF Foundation, Gurgaon	Eligibility: parental annual income upto Rs. 1,80,000/-  No. of scholarships = 4 selected by Selection	Reimbursement Rs. 40,000/- per year covering tuition fees and allied expenses on books, instruments and equipments	

			Committee of the Institute  Scheme for students belonging to States of Haryana, Uttar Pradesh and Union Territory of Delhi		
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## 6.6 Uniqueness of the Institute

The Institute, during its span of existence have had special features that are pride of the Institute for attraction of the students. Some of them are - Round the clock 200 mbps leased line facility for Internet on each PC, 47 Laboratories. 3000 High End PCs spread over the entire Institute. Other equipment includes Multimedia Projectors, Webcams, Video Camera, etc. Rich repository of Specialized Software including Matlab, Statistics, OpenGL, AutoCAD, Rational Rose, Catia, several IPR related CD ROM's etc. Equipped with facilities for Video Conferencing, Wi-Fi Connectivity, Call Centre Implementation, Infra Red Communication, Robotics, etc. Lush green surroundings exist on the Campus which is being developed tastefully by horticulture experts.

Upcoming State-of-the-art facilities include 5-storied C.V. Raman Bhawan and 1500+ capacity Auditorium, Girls' Hostel & 7-Storey Boys' Hostel.

Some of the features that make IIIT-A unique in its area are:

- IIIT-A is a unique Institute different from other present Institutes in INDIA as students at IIIT are given diverse opportunities for development of their personalities and allowed to work in teams.
- Maintenance and running of Servers, Personal Computers, Networks, Institute Websites, etc. Students fabricate/assemble PCs for their use in the Institute and in various other activities. This enables partial hardware training to students. Cost is thereby reduced significantly and systems are far better than in market. There is practically no maintenance cost.
- Teaching Methodologies where Senior students not only guide their juniors but also teach them in Classes and guide them in Lab work is being successfully carried on.
- Each and every student is provided with a computer system in his hostel room where he/she may be able to work on the computer system all the 24 hours and develop his skills in Information Technology.
- **'Earn while you Learn'** is a unique and novel proposition where by engaging the poor and meritorious students in the projects, research, teaching and lab works and other aspects of Institute's functioning wherever possible, they are helped to Financial assistance to sustain their education here.
- Student-Industry Interaction is a pre-grooming stage where students are asked to work on Live Projects from Industry and Provide necessary Solutions.
- Emphasis on research and development in the areas of Wireless Computing, Intelligent System, Biotechnology, Robotics & other areas of National & International interest.
- **Societal Programs** like establishment of VRC's with the help of ISRO, Medico-diagnostic programs, awareness and training programs for farmers, programs for differently-abled persons, ICT-related help line to the rural people etc. are unique in their own ways to reach the benefits of IT revolution to the doorsteps of 'Real India' living in villages.
- **Development of AMAL** (Adaptive Modular Leg) at the Robotic Lab of the Institute is a unique contribution of the Institute towards healthy locomotion of disabled persons using prosthetic legs with the help of IT sensitized active leg to function like normal human beings.
- **"PRAYAS"** is novel societal effort by our teachers, students and other members of the IIIT-A family to impart informal school level education to the poor rural children in our Central School in the evenings after formal school hours.
- **SCIENCE CONCLAVE**  
In order to propagate and reorient studies of general sciences in India, the Institute organized, on the pattern of Nobel Laureates Conference in Lindau, Germany, the Fourth Science Conclave during December 08 – 14, 2012 in which Nobel Laureates and other world famed scientists / academicians interacted with about 1200 UG, PG and Research students and teachers selected from across the Universities of the country.
- **INSPIRE INTERNSHIP PROGRAM**  
The INSPIRE (Innovations in Scientific Pursuits for Inspired Research) Internship Program of the DST, Gol, 2012 was organized by the Institute during December 08 – 14, 2012 alongwith the Science Conclave 2012 in which about 500 top students of Class XI selected from the merit list of the High School Exam 2012 of the U.P. Board participated. They also were afforded opportunities to interact with Nobel Laureates and national/international scientists to have concerted reorientation towards general sciences.

# RGII-AMETHI CAMPUS OF IIIT-ALLAHABAD

The Rajiv Gandhi Institute of Information Technology, Allahabad is a campus situated in the Tikarafi Ashram, Amethi. It has been established to encourage the study of information technology. The aim is to prepare a knowledge workforce comparable to the best in the world through instruction in the cutting edge technology. RGII-Amethi lays emphasis on group projects, so that our students learn to be cooperative and productive members. Industry exposure provides these budding professionals the opportunity to work on current industry problems and to learn thrive in the conducive work environment. The students have access to the highest levels of industrial training, project experience and expert instruction.

The Ashram premises in the occupation of the Institute have been re-done, refurbished, modernized and fully air-conditioned to make them IT-savvy, where lecture halls, laboratories and library and others academic activities are carried out. Administrative blocks have been similarly redesigned to meet the requirement of an efficient and elegant administration. RGII-Amethi intends to focus its human and material resources on research and innovation. The faculty and students are already on the leading edge of research.

Boys' Hostels, Girls' Hostel and Guest House, well-furnished Auditorium and Mess with all facilities and paraphernalia have been newly built and tastefully formatted and provided. Besides, Academic/Administration Blocks and other buildings have been planned to be constructed on priority, work on which is in progress. RGII-Amethi's permanent campus is under construction on approximately 60 acres of land donated by the Tikarafi Ashram and the Village Gram Sabha around. The academic, administrative, residential and hostel buildings and elegant facilities have been designed with maximum advantage of Vaastu to avail the benefit of the five elements (Panchbhutas) of the nature. For the short run, the campus building of Phase-I has been designed for the strength of 1000 students, with the lookout for the long run in Phase-2 to accommodate 1000 more students making the ultimate student strength 2000.

## 7.1 Administration & Administrative Concepts

The Institute was conceived to be a center of excellence in the field of Information Technology and related areas. The institute was conferred the Deemed to be University status by the Gol placing it at par with the Indian Institutes of Technology guided by a sound administrative structure.

The administrative structure is regulated by a Board of Governors which is the principal authority responsible for formulating major policy decisions on academic, financial and administrative matters. Chaired by Sri F.C. Kohli, Former Deputy Chairman of Tata Consultancy Services, the Board includes representatives of MHRD, MCIT, AICTE, State Government, academia, industry, IIIT-A faculty and other experts involved with the Institute.

The Board is assisted by a Senate and a Finance Committee. The Senate comprises the faculty of the Institute and reputed academicians of a number of reputed Institutes. It is responsible for the maintenance of standards of instruction, education and examination and all other allied academic matters.

The Finance Committee looks after resource mobilization and control of expenditure. It also stimulates resource generation from sources other than Government support, such as sponsored projects, research and consultancy. The committee is also responsible for promoting interaction with Industry.

## 7.2 Academic Structure

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

Each academic year consists of two semesters and summer term. While the education system is broadly organized on the pattern of other IIT's, a Relative Grading System pattern with credits allotted for each course is followed for End Semester Examinations. This, while enabling continuous evaluation of student's performance, also provides students the desired flexibility to choose courses as per their own interests. Each course is assigned specified credits, depending upon its relative importance in the field of Information Technology. Class contact hours per week are also decided based on that. To boost creativity in students, mini and major projects, in their chosen fields of interest, form an integrated part of the course curriculum at the Institute.

At present RGIIT-Amethi offers a B.Tech Degree in Information Technology. The admission to the course from the year 2005 is done through the prestigious All-India Engineering Entrance Examination (AIEEE) conducted by the CBSE. This national level examination body conducts the entrance for all the Deemed to be Universities declared u/s 3 of UGC Act.

Based upon the merit in the written examination Central Counseling Board of AIEEE invites candidates for counseling at selected centers, and seats for various participating institutions are allotted, based upon individual merit and choice. Normally top students give their choice for IIIT-A and RGIIT-Amethi. A total of 240 (60 for RGIIT and 180 for IIIT-A) students are selected for the B.Tech Program each year.

#### **Socio-Economic Impact of Establishing RGIIT in Amethi**

- ◆ Employment generation in the region.
- ◆ Increased educational knowledge & awareness.
- ◆ Setting up of infrastructure projects like road, electricity, water etc.
- ◆ Financial support through setting up of various projects.
- ◆ Generation of feeder businesses like catering, transport, entertainment, markets, etc.
- ◆ Increasing the standard of living in the region

#### **S&T Discovery Park**

This is a DST and Purdue University, USA Collaborative Project. A Detailed Project Report for establishing S&T Discovery Park by the Institute at its RGIIT-Amethi Campus was sent to DST with an estimated budget of about 300 Crores which was approved in principle in July 2007. Science & Technology Discovery Park was established with three segments E-agriculture and traditional agriculture, Bio Informatics and Bio Fuels. S&T Discovery Park Project has been initiated at RGIIT-Amethi, CSM Nagar with the end of object of rural empowerment in this most backward region of Eastern UP with major focus on Agriculture, Irrigation, seeds, fertilizers, dairy technology, fisheries, soil testing, education and various information regarding health, hygiene, crops, fuels, manures etc.

## 8.1 Redressal Mechanism for Grievances

The Institute has an effective and efficient Grievance Redressal System that promptly deals with the in-house grievances of students, employees and administrative/academic setups as well as grievances of the public at large that may come up during the normal functioning of the Institute. Periodical reports are submitted to the Government. A Grievance Redressal Forum has been established vide O.M. No. IIIT-A/DIR/4325/2010 dated February 07, 2010. The Grievance Redressal System of the Institute keeps itself informed of the latest Govt. instructions in this regard based on legal rulings of Courts and other authorities. The Committee is as follows:

### Grievance Redressal Committee

1. Prof. R.C. Tripathi (Student Counselor)	-	Chairman
2. Prof. G.C. Nandi (Dean – Academic)	-	Member
3. Dr. Anurika Vaish (Divisional Head – MBA & MSCLIS)	-	Member
4. Dr. Vrijendra Singh (Chief Proctor & Faculty In-charge, Ph.D. Cell)	-	Member
5. Sri R.B. Singh (Deputy Registrar (Finance))	-	Member
6. Sri Govind Saran (Advocate)	-	Member
7. Sri H.D. Tiwari (Advisor Finance)	-	Coordinator
8. Sri Yogesh Kardam (Representative of SC/ST)	-	Member
9. Ms. Farha Naz (Representative – Minority Communities)	-	Member

## 8.2 Prevention of Harassment of Women at Workplace

The Government vide notification F.No. C.36011/7/2005-ug DATED March 29, 2006 have required strict action in cases of harassment to women at work place are required to be dealt with sternly. Periodical progress reports have to be sent to the Govt. to show that the malady has been treated as desired.

IIIT-A vide its OM No. IIIT-A/DIR/4326/2010 dated February 7, 2010 has reconstituted the Committee for prevention of sexual Harassment of women at workplace as follows:

1. Dr. Anurika Vaish (Faculty Representative)	-	Chairperson
2. Sri Ravi Singhal (Advocate – High Court)	-	External Member
3. Dr. Seema Shah (Deputy Registrar (Office representative))	-	Member
4. Dr. Asheesh Kumaar (Deputy Registrar)	-	Coordinator
5. Sri H.D. Tiwari (Advisor Finance)	-	Member
6. Sri Yogesh Kardam (SC / ST representative)	-	Member
7. Ms. Seema Mishra (Student representative)	-	Member
8. Topper of B.Tech IVth Semester (if the topper is a girl, then next boy in merit)	-	Member
9. Ms. Farha Naz (Minority representative)	-	Member

## 8.3 Prevention of Ragging in the Institute

Ragging in the educational institutions has been yet another social evil that has been taking its toll every year over the country so much so that many a youthful prodigies have lost their careers and even their lives solely on account of this evil. All preventive measures have often failed and the malady has been evading cure unabatedly.

The Supreme Court, of late, has taken a very serious view of this social evil and has issued stern directions in asking the Government and all organs under the Government to stop the menace of Ragging altogether with immediate effect. It has also issued stern action against non-observance of the Appellate Court instructions through the Government and the UGC.

IIIT-A, therefore, has undertaken positive measures to implement the Apex Court directions in this regard through an Office Memorandum No. IIIT-A/DIR/1358/2009 dated 10.07.2009 and multi-structured Committees have been constituted as under for its implementation:

### 1. Institute level Anti-ragging Committee

• Dean, Students' Affairs	-	Chairman
• Head of the Division	-	Member
• Warden/Counselor of the concerned Hostel	-	Member
• Registrar/Dy. Registrar/Assistant Registrar of Institute	-	Member

- Legal Counsel - Member
  - Nominated person - Member
- 2. Institute level Anti-ragging Squads**
- Dean, Students' Affairs - Chairman
  - Assistant Proctor (two by rotation) - Member
  - Security Officer - Member
  - One M.Tech/Ph.D. Student nominated - Member
  - Warden (nominated) - Member
- 3. Hostel Level Anti-ragging Squads**
- Warden of the Hostel
  - Two Prefects
  - One representative of Freshers

Wide publicity of these preventive measures have been made through noticeboards, handouts and website of the Institute at all possible places on the Campus, hostels and other vulnerable points. The structured Committees are on the prowl all the times to deal with any inkling of the malady.

#### **8.4 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



## 9. A GLANCE AT SIGNIFICANT EVENTS

### 9.1 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:

(Year)	Nobel Laureates attended	Eminent scientists who attended		No. of students who participated		
		Foreign	Indian	INSPIRE	Science Conclave	Total
1 (2008)	Nobel Laureates 1) Dr. Anthony J. Leggett, Nobel Laureate in Physics, 2003, USA 2) Prof. Sir Harold W. Kroto, Nobel Laureate in Chemistry, 1996, U.K. 3) Dr. Martin L. Perl, Nobel Laureate in Physics, 1995, USA 4) Dr. Claude Cohen-Tannoudji, Nobel Laureate in Physics, 1997, France 5) Dr. Jerome I. Friedman, Nobel Laureate in Physics, 1990, USA  Academician 6) ACADEMICIAN Prof. Slavnov Andrei Alekseevich	11	13	345	824	1169

(Year)	Nobel Laureates attended	Eminent scientists who attended		No. of students who participated		
		Foreign	Indian	INSPIRE	Science Conclave	Total
2 (2009)	Nobel Laureates 1) Prof. Douglas D. Osheroff, Nobel Laureate in Physics, USA 2) Prof. Robert C. Richardson, Nobel Laureate in Physics, USA 3) Prof. Joseph H. Taylor, Nobel Laureate in Physics, USA	29	32	395	800	1195
3 (2010)	Nobel Laureates 1) Prof. Richard R. Ernst, Nobel Laureate in Chemistry 1991, Switzerland 2) Prof. Roald Hoffmann, Nobel Laureate in Chemistry 1981, USA	20	39	372	796	1168
4 (2011)	Nobel Laureates 1) Prof. Robert C. Richardson, Nobel Laureate in Physics, USA 2) Prof. Hartmut Michel, Nobel Laureate in Biology, Germany  ACADEMICIAN 3) Academician Alexei Removich Khokhlov, Russia  TURING AWARDEE 4) Prof. Joseph Sifakis, France	20	27	433	972	1405
5 (2012)	Nobel Laureates 1) Prof. Robert Floyd Curl, The Nobel Prize in Chemistry 1996, USA 2) Prof. Klaus Olaf von Klitzing, Nobel Prize in Physics 1985, Germany 3) Prof. Dr. h.c. Erwin Neher, The Nobel Prize in Physiology or Medicine 1991, Germany 4) Prof. Johann Deisenhofer, The Nobel Laureate in Chemistry 1988, USA 5) Prof. Roger Kornberg, The Nobel Laureate in Chemistry 2006, USA ACADEMICIAN 6) Prof. Joseph Sifakis, Laureate of The Turing Award in 2007, France	19	37	425	1148	1573
6 (2013)	1) Sir Richard J. Roberts, Nobel Laureate in Physiology / Medicine, 1993, USA 2) Prof. Claude Cohen Tannoudji, Nobel Laureate in Physics, 1997, France 3) Prof. Sir Harold W. Kroto, Nobel Laureate in Chemistry, 1996, USA 4) Prof. Ivar Giaever, Nobel Laureate in Physics, 1973, USA 5) Prof. Serge Haroche, Nobel Laureate in Physics, 2012, France 6) Prof. Walter J. Kohn, Nobel Laureate in Chemistry, 1998, USA 7) Prof. Douglas D. Osheroff, Nobel Laureate in Physics, 1996, USA 8) Prof. Joseph Sifakis, Laureate of The Turing Award in 2007, France	17	25	485	1196 (including 109 Foreign Participants)	1681

## 9.2 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 IIT Allahabad.

Higher Secondary students from all over Uttar Pradesh and some other parts of the country are invited at IIT-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.

## 9.3 The Impact and Benefits

Although, the entire benefits as a consequence of holding of this highly professional academic program cannot be quantified and summarized in few words, however, some of them are listed below:

- These Science promotional programs largely attended by youthful prodigies of country
- Enthusiastic Feedback received from participants every year
- Appreciation of efforts of Govt. for Science Rejuvenation by Nobel Laureates & Scientists
- The students had personal contacts with Nobel Laureates, were enthused to take to studies & researches in science & technology
- Participation increased from International Arena - SAARC, ASEAN & AFRICAN Countries
- Discussions about many aspects of higher researches in sciences with Nobel Laureates
- Invitation by Nobel Laureates to visit & join their labs
- A Scientific Platform providing opportunities for collaborations between Institution-to-Institution and Student-Student relation
- Inspection of various labs by Nobel Laureates – valuable suggestions for improving & upgrading Institute labs
- Institution of Medals –
  - Prof. Claude-Cohen Tannaudji Gold Medal (Nobel Laureate) for student prodigy of the Institute (Physics)
  - Prof. Joelle-Cohen Tannaudji Gold Medal, (daughter of Prof. Claude Tannaudji) for a youth prodigy of the Institute (Bioinformatics)
  - Dr. T.C.M. Pillay Memorial Gold Medal instituted by Dr. Sasi K. Pillay, Chief Technology Officer, NASA, USA in Memory of his eminent father
  - Prof. Dr. Ing Matthias Kleiner Gold Medal instituted in the name of Prof. Ing Matthias Kleiner, President, DFG, Germany
- Increase of general awareness & inquisitiveness among students across the country to participate in Conclave
- Opportunity for face-to-face interaction with Laureates & scientists outside the classroom at tea breaks & luncheons / dinners
- Participants emulate their simple living & high thinking ideals and inculcate them in their lives and career
- Occasion to maintain intimate terms / associations with Nobel Laureates – increases one's own intrinsic academic values
- Increase in quality of human capital stock of the country
- Conclaves enhance the dignity of the country in the comity of nations - propagating its heritage & culture
- At the end of the Conclaves, the Nobel Laureates & Eminent Scientists, appreciate the efforts of the Govt. & the Institute, providing suggestions that may help promote decision / policy making at the highest echelons of education and at the levels of the Government.
- They put on record their deep appreciation of efforts and recommend that Science Conclaves by Nobel Laureates be made a regular activity at par with the Nobel Laureate gathering at Lindau, Germany.

## 9.4 Events of the Year

The Institute has had the commendable occasion to organize and participate in large Conferences / Seminars with some eminent visitors and participants during the period April 2012 – March 2013. Some of them are:

Date	Subject
15-16 April 2012	On the foundation day of Rajiv Gandhi Institute of Information Technology, Amethi Campus of IIIT-A, several experts from diverse fields shared views on the rural empowerment tools such as telemedicine, agriculture, horticulture, herbal and medicinal plants, renewable energy and post harvest processing for rural empowerment.
15 April 2012	High Court documents in digital format in five years: Allahabad high Court holding the distinction of being the biggest court of India, is finally ready to fully embrace the e-age. The court is set to convert its voluminous case records, judgments and all other documents (numbering in lakhs and some as old as 100 years) into digital format with cooperation of IIIT- Allahabad.
21 April 2012	Under the ambitious National Mission on Education through ICT (NMEICT) scheme of the Ministry of Human Resource Development, efforts have finally begun for developing e-content for postgraduate level students in 35 subjects in the first phase. Once selected, these experts will coordinate all the activities of e-content development in their subject according to prescribed guidelines and endure timely completion and submission of e-content, said IIIT-A and member of NMEICT's Empowered Committee of Experts (Project Approval Board) Dr. MD Tiwari.
08 May, 2012	After succeeding in its mission the second phase of the Discovery Park is set to start soon . The work started in four Blocks Bhadar, Bhetua, Amethi and Sangrampur under an ambitious project launched by Ministry of Human Resource Development through IIIT-A would be extended to adjoining villages also.
10 May, 2012	IIIT-A takes summarization software a step further. Experts at the Indian Institute of Information Technology, Allahabad (IIIT-A) have taken the technology of extracting summaries from a range of documents on the same topic a step further. Now, extracting the relevant tables and charts have also become possible, thereby helping the user in getting more varied and precise information.
19 June, 2012	uhylu&bafM;k VqMs losZ{k.k esa fv <sup>a</sup> iyvkbZVh dks feyh 18 oha jSad] fv <sup>a</sup> iyvkbZVh us jSafdx esa yxkbZ lcls Åaph Nykax % csgrj 'kSf{kd fjdkMZ vksj Nk=ksa dks gky ds o"kkZsa esa feys csgrj lyslesaV ds cy ij Hkkjrh; lwpuk izkS ksfxdh laLFkku] bykgkckn ¼vkbZvkbZvkbZVh&,½ dks uhylu&bafM;k VqMs dh vksj ls fd, x, losZ esa 18 oka LFkku feyk gSA
6 July, 2012	nkf[kys ds lkFk 10 yk[k dk vkWQj ysVj % lkykuk iSdst ds lkFk i<+kbZ dk [kpZ Hkh ogu djsxk viksyksA ck;ksesfMdy bathfu;fjax esa nkf[kyk ysus okys 45 Nk=ksa dh rks ykVVjh gh fudy iM+hA laLFkku esa izos'k ds lkFk gh bu Nk=ksa dks viksyks gkWfLiVy ls u flQZ nl yk[k :lk;s lkykuk iSdst dk vkWQj feyk gS] cfYd mudh i<+kbZ dk [kpZ Hkh vLirky izca/ku mBk,xkA
08 July, 2012	LVse lsy fo"k; ij 'kq: gksxk ,eVsd % Hkkjrh; lwpuk izkS ksfxdh laLFkku]

	bykgkckn esa vxys 'kSf{kd l= ls LVse lsy ij ,eVsd dkslZ 'kq: gksxkA bldh rS;kjh yxHkx iwjh gks xbZ gSA laLFkku dh dkmafly ls eatwjh feyus ds ckn vc bldk ikB~;dze rS;kj fd;k tk jgk gSA bl dkslZ dks 'kq: djus okyk fV <sup>a</sup> iyvkbZVh Hkkjr esa igyk laLFkku gksxkA fV <sup>a</sup> iyvkbZVh us orZeku 'kSf{kd l= ls ck;ksefMdy bathfu;fjax esa ,eVsd dkslZ 'kq: fd;k gSA bl dkslZ dks 'kq: djus okyk fV <sup>a</sup> iyvkbZVh ns'k dk igyk ljdkh rduhdh laLFkku gsA
11 July, 2012	fV <sup>a</sup> iy vkbZVh esa Nk=ksa dks 5 yk[k dk chek Dyse % Hkkjrh; lwpuk izkS ksfxdh laLFkku] bykgkckn ds Nk=ksa dks u, 'kSf{kd l= ls ikap yk[k :lk, nq?kZVuk chek ds Hkqxrku dk QSlyk fd;k gSA laLFkku us vius Nk=ksa dks csgrj lqfo/kk miyC/k djkus ds fy, ;g QSlyk fd;k gSA Nk=ksa dks vLirky esa HkrhZ gksus ij lky Hkj esa 1-20 yk[k dh bykt dh lqfo/kk fey ldsxhA laLFkku ds funs'kd MkW0 eqjyh/kj frokjh us crk;k fd Nk=ksa ds csgrj pfdRlk lqfo/kk ds fy, igys ls ifjlj esa csgrj lqfo/kkvksa ls ;qDr vLirky dh O;oLFkk gSA Nk=ksa dh lqfo/kk ds fy, ,acqysal lqfo/kk ds lkFk MkWDVjksa dh lqfo/kk Hkh ifjlj esa miyC/k gSA
18 July, 2012	One day workshop on Electronics System Design & Manufacturing (ESDM) was organized by Indian Institute of Information Technology, Allahabad with the support of Department of IT (DIT), Ministry of communications and IT, New Delhi, Government of India at Jhalwa campus.
24 July, 2012	IIIT-A students encouraged to study in the US: A team of US Embassy, New Delhi visited the IIITA campus. The Vice consul at US Embassy Monica L. Shie encouraged the students to study in the US and said that with more than one lakh Indians studying in the US, education provided one of the most crucial people-to-people exchanges between India and the United States.
24 July, 2012	Scientists at the IIIT- Allahabad have developed a biosensor device which is capable of monitoring the health of a person 24x7 and would send a distress 'SOS' to relatives and hospital/doctor in a crisis such as stroke or heart attack. The biosensor device has been developed as part of the Institute's "Hospital at your Home" Project under which a range of gadgets using information technology-based techniques are being developed to provide medical assistance at the home itself. The aim of the biosensor device is to use Information Technology for timely detection of medical problems said Dr. M.D. Tiwari, IIIT-A Director.
5 August, 2012	fV <sup>a</sup> iyvkbZVh vkSj :l ds oSKkfudksa }kjk rS;kj dh xbZ e'khu] :l ls vDVwcj rd vk,xh fV <sup>a</sup> iyvkbZVh esa flQZ nks feuV esa gks tk,xh lokZbdy dSalj dh tkapA Hkkjrh; lwpuk izkS ksfxdh laLFkku] bykgkckn vkSj ds oSKkfudksa us feydj xHkkZ'k; ds dSalj ¼lokZbdy½ dh igpku djus okyh LekVZ e'khu rS;kj dj yH gSA bl le; :l dh ySc esa bl e'khu ds izksVksVkbi dk ijh{k.k py jgk gSA vDVwcj ds var rd bldk izksVksVkbi fV <sup>a</sup> iyvkbZVh vk tk,xkA ;gka ds ySc esa Hkh bldk ijh{k.k gksxkA ifj.kke larks"ktud gksus ij e'khu dks cktkj esa mrkjk tk,xkA
8/8/2012	High-end sensors to guard wildlife now : Smart high-end sensors are all set to

	enter the battlefield of wildlife conservation to protect endangered animals soon. These sensitive and sophisticated tools will function as 24x7 guardians of the under threat species. A range of these sound, movements and light based sensors are being developed under an international collaborative mission by scientists of Indian Institute of Information Technology, Allahabad and Indian Institute of Science (IISc), Bangalore, along with their counterparts from tree US varsities – Ohio State University, Cornell University and University of California, Los Angeles (UCLA).
12/8/212	Fanfare at IIIT-A Foundation Day : The institute celebrated its 14 <sup>th</sup> foundation Day with several colourful programmes. The celebrations commenced with a Shiv stuti, a welcome song, and then a kavi sammelan by the Institute’s literary club. Students of the dramatics club presented plays and skits, including ‘Truth of Seniors’, ‘Paani Re Paani’, and ‘Babby or Baba’. A website, Effervescence-2012 and trailer video prepared by the Technical club was also unveiled.
20-21/8/2012	<b>New Dimensions of Stem Cell therapy discussed:</b> Scientists are working to create stem cell therapies that might help tackle a variety of disorders, and will help in the regeneration of a new organ .Stem cell therapy involves the rebuilding or replacing of cells damaged due to genetic and degenerative disorders including age-related functional disorders, autoimmune diseases, cardiovascular disorders, Parkinson’s and Alzheimer’s diseases, different cancers etc. These views were expressed by Dr M D Tiwari, Director , IIIT-Allahabad while inaugurating the two day national seminar on “Stem Cell- an emerging Health Care Frontier” at Rajiv Gandhi Institute Information Technology, Amethi to mark the 68th birth anniversary of late Prime Minister Rajiv Gandhi.
10-12 Sept.	IIIT-A and GISFI organized Standardisation meet at India International Centre, New Delhi. IIIT-A Director Dr. M.D. Tiwari said that GISFI develops standards to meet the Indian requirements as well as contributes towards the evolution of global standards.
1-14 Sept.	Hkkjrh; lwpuk izkS ksfxdh laLFkku] bykgkckn esa fgUnh i[kokM+k&2012 dk vk;kstu fd;k x;kA bl nkSjku Ng izfr;ksfxrk,a vk;ksftr dh xbZA buesa 60 izfrHkkfx;ksa us fgLlk fy;kA okn&fookn izfr;ksfxrk] vk’kqHkk" k.k izfr;ksfxrk] Lojfr dkO; izfr;ksfxrk] fucU/k izfr;ksfxrk] fVli.kh@izk:lk ys[ku izfr;ksfxrk ,oa Vad.k izfr;ksfxrk dk vk;kstu fd;k x;kA
21 Sept.	At the Seventh convocation of the institute, 25 meritorious IIIT-A pass-outs bag medals; 466 get degrees. Noted Scientist and Chancellor of IIIT-A, Prof. Goverdhan Mehta called upon youngsters to be multi-skilled and strive for expertise in diverse fields’ while ‘dreaming big and challenging the impossible’ but also ‘never letting failures act as a deterrent’ and ‘turning every obstacle into an opportunity so that they may be agents of change for the better’ and take the nation to greater heights.
27-30 Sept.	A three-day International Workshop on “Antenna and Radio Frequency (RF) design for low power application” began at Jhalwa Campus. The workshop focused on designing of low power ratio frequency circuits.
1-5 October 2012	The five-day annual cultural-cum-technical festival of IIIT-A-Effervescence-got off to a blazing start. Dozens of events were organized aiming to take both education and entertainment to new heights. Winning hearts with his melody Pop Singer Daler Mehndi remained the star attraction at Effervescence-2012.
15 Oct. to 3 Nov.	To fulfill the commitment of the Government of India to African Countries to provide technical support for established pan African Institutes, the IIIT-A organized a three-

	week training programme for representatives of 14 African countries on its Jhalwa campus from October 15. Over 32 delegates from Nigeria, Benin, Ghana, Burundi, Kenya, Sierra Leone, Madagascar, Sudan, Congo, Togo, Tunisia, Eritrea, Tanzania and Burundi took part in the programme on “Technological Innovation for Capacity Building in Data Analysis’.
3-4 Nov., 2012	To enhance awareness about digital very large scale Integrated (VLSI) circuits, the IIIT-A hosted a two-day national workshop on “Timing Analysis of Digital VLSI Circuits’ on its campus.
1 Nov. 2012	Yoga sessions increase concentration levels: Apart from usual IT training, the 15 days of special yoga session for over 24 African delegates who gathered at Indian Institute of Technology, Allahabad was conducted by Pankaj Mishra. The Africans described it as an enriching and memorable experience of their lives. The yoga session was coupled with the IT training programme at the joint initiative of Ministry of science and technology and external affairs, Government of India.
8-14 Dec. 2012	Four Nobel Prize winners, a Turing Award Laureate and 50 other renowned scientists from all over the world, besides 1500 other participants, including 500 school students from different states of India attended the Science Conclave 2012. Nobel Laureates participated in the conclave included Prof. Dr. Klaus Olaf von Klitzing from Germany (Physics, 1985), Prof. Johann Deisenhofer from Germany (Chemistry, 1988), Prof. Robert Floyd Curl from USA (Chemistry, 1996), Prof. Dr. H.C. Erwin Neher from Germany (Medicine 1991) and Prof. Joseph Sifakis from France (Computer Science) shared their research experience.  Lagaan fame actresses Gracy Singh, Prince Dance group from Orissa, Sandeep Acharya, Nritarutya directed by Mayuri Upadhyay were the main attraction of the cultural evenings.
19-23 Dec. 2012	The eight Annual International Conference on Wireless Communication and Sensor Networks (WCSN) held in collaboration with Naresuan University, located in Phitsanulok province of Thailand.
1 Jan, 2013	vc gkbZos okbczs’ku ls cusxh fctyh % Hkkjrh; lwpuk izkS ksfxdh laLFkku] bykgkckn us gkbZos ds daiu ls mRiUu gksus okyh ÅtkZ ls fctyh cukus ds izkstsDV ij dke 'kq: dj fn;k gSA bldh lgk;rk ls gkbZos ij py jgh dkjksa] clksa V <sup>a</sup> dksa o jsy dh iVjh ij V <sup>a</sup> uksa ds pyus ls lrg ij gksus okys ?k" kZ.k ds dkj.k mRiUu daiu dks fctyh esa dUoVZ fd;k tk,xkA ihtksbysfDV <sup>a</sup> d ifjorZd ds ek;/e ls dkWjuSy fo’ofok ky; ds 'kks/kdÜkkvksa us gok ds daiu ls fctyh iSnk djus dh fn’kk esa igys gh dke 'kq: dj fn;k gSA gok ds daiu ls fctyh iSnk djus okys ,d NksVs o lLrs midj.k dk vkfo"dkj fd;k x;k gSA
4 March, 2013	Mr. S. Ramadorai, Advisor to the Prime Minister in the National Skill Development Council in the rank of Cabinet Minister, Government of India and Vice-President of TATA Consultancy Services, spoke on Access, Affordability of Technology will be the game changers.
7-8 March, 2013	National Workshop on MATLAB and Its Application in Digital Image & Signal Processing was organized at Indian Institute of Information Technology Allahabad. Mahesh Anand, founder of Scientific Computing Solutions (SCS), said modern day medical diagnosis certainly bank on reliable biomedical instruments, intelligent processing of biomedical signal and images.

9-11 March, 2013	Second International Conference on Intelligent Interactive Technologies and Multimedia (IITM-2013) commenced at IIIT-Allahabad. Prof. Ellen Yi-Luen Do, director of Creativity Machine Environment Lab, Georgia Institute of Technology, Atlanta, USA delivered the keynote address on “Designing Interactive Computing for Happy Healthy Life. Dr. Sitaram Ramachandru, Hewlett-Packard Lab India, Bangalore and Prof. Prem C. Pandey, Department of Electrical Engineering, IIT-Mumbai spoke on different topics.
16-17 March, 2013	Two day workshop on Systems biology set to revolutionize healthcare kicks off at IIIT-A.

## 9.5 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.

The Institute has eight official clubs and they all have their separate working rooms situated at the SAC, right next to the Old Canteen and the tennis court.

### **VIRTUOSI (Music Club )**

The IIITA music club which is a showcase of the musical talent of the institute. The club 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.

### **USHMA (Dance Club)**

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

### **RANGTARANGINI (Dramatics Club)**

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

### **SPIRIT (Sports Club)**

The IIITA Sports club brings to 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.



**SARASVA (Literary Club)**

Organizes debates, extempores and other literary competitions. It is also responsible for publishing IMHO (in english) and Swacchanda (in hindi), two magazines for in-campus circulation. SARASVA is the place to take halt and unveil your talent of appreciating the beauty of expression

**THUNDERBOLT (Audio and Lights Club)**

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

**STAMBH (Program Management and Publicity Club)**

Stambh, as it is called is the Pillar of all the extra curricular activities of Indian Institute of Information Technology, Allahabad. The club has been doing its best every year to bring out the best potential out of the student fraternity. It manages all the college events including the college fest Effervescence.

**GEEKHAVEN (Technical Club)**

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

## Club Organs

Patron – Dr. M.D. Tiwari, Director, IIIT-A  
 Chairperson – Dr. R.C. Tripathi, Professor  
 & Dean Student Affairs, IIIT-A

### **New Club Office Bearers for the session January to December,2013**

<b>S.No.</b>	<b>Names</b>	<b>Enroll. No.</b>	<b>Designation</b>
1.	Akshay Chaturvedi	IIT2011030	President
2.	Rishabh Bindal	IIT2011066	Secretary
3.	Abhishek Divakar	IMS2012048	Treasurer
4.	Shubham Mehrotra	IIT2012156	Member
5.	Ashar Ali	IEC2012065	Member
6.	Shivangi Srivastava	IMB2012009	Member
7.	Keerti Srivastava	IBM2012028	Member
8.	Shivam Dixit	RIT2011044	Member-RGIIT
9.	Shreya Singh	RIT2011062	Member-RGIIT
<b>S.No.</b>	<b>Names</b>	<b>Enroll. No.</b>	<b>Designation</b>
1.	Gopal Shivhare	IMS2012043	President
2.	Rakesh Roshan	ICE2012008	Secretary
3.	Aniket Kumar	IIT2012011	Treasurer
4.	Ankur Mishra	IIT2012019	Member
5.	Shiva Bhalla	IIT2012077	Member
6.	Anirban Indranath Ghosh	IIT2012060	Member
7.	Mansi Awasthi	IIT2012027	Member
8.	Suyash Agarwal	Rit2011025	Member-RGIIT
9.	Anjali Sharma	RIT2011041	Member-RGIIT
<b>S.No.</b>	<b>Names</b>	<b>Enroll. No.</b>	<b>Designation</b>
1.	Ankur Shukla	IEC2011054	President
2.	Monika	IIT2011105	Secretary
3.	Akarshan Arora	IEC2011057	Treasurer
4.	Chhaya Chaudhary	Iec2011018	Member
5.	Ekansh Kanodia	IIT2012045	Member
6.	Rudraksh Singh Bhati	IEC2012001	Member
7.	Divya Porwal	IEC2011067	Member
8.	Sunita Kumari	Rit2011085	Member-RGIIT
9.	Gaurav	RIT2012006	Member-RGIIT
<b>S.No.</b>	<b>Names</b>	<b>Enroll. No.</b>	<b>Designation</b>
1.	Divyanshu Ojha	IMB2012022	President
2.	Senjuti Kundu	Iit2011132	Secretary
3.	Darshnik Swamy	IIT2012103	Treasurer
4.	Kiranjot Kaur Gujral	IIT2012176	Member
5.	Karnika Singh	IBM2012040	Member

6.	Vatsal Mishra	IEC2012068	Member
7.	Byri Shravya	IEC2012059	Member
8.	Abhimanyu Singh	RIT2011001	Member-RGIIT
9.	Priyansh Goel	RIT2011048	Member-RGIIT
<b>Sl. No.</b>	<b>Names</b>	<b>Roll No.</b>	<b>Position</b>
1.	Nayan Chauhan	IIT2011214	President
2.	Vikash Kumar Gautam	IIT2011052	Secretary
3.	Sumit Bana	IIT2011180	Treasurer
4.	Nikhil Handa	IIT2012043	Member
5.	Nikhil Raj Singh	IIT2012001	Member
6.	Komal Singh	IEC2012039	Member
7.	Vivek Agarwal	IEC2012016	Member
8.	Manoj Singh Adhikari	RIT2011066	Member-RGIIT
9.	Navaz Mannan	RIT2011059	Member-RGIIT
<b>Sl. No.</b>	<b>Names</b>	<b>Roll No.</b>	<b>Position</b>
1.	Saurabh Chaturvedi	IMB2012066	President
2.	Vaibhav Dixit	IIT2011215	Secretary
3.	Rahul Srivastava	IEC2011047	Treasurer
4.	Aviral Johri	IIT2012104	Member
5.	Shishir Dwivedi	IIT2012087	Member
6.	Sanchit Alekh	IIT2012108	Member
7.	Kuram Sai Sankalp	IIT2012131	Member
8.	Yash Awasthi	RIT2012005	Member-RGIIT
9.	Latika Vashishtha	RIT2012022	Member-RGIIT
<b>Sl. No.</b>	<b>Names</b>	<b>Roll No.</b>	<b>Position</b>
1.	Aayush Varshney	IIT2011175	President
2.	Prabal Kaushal	IMB2012003	Secretary
3.	Alisha Singh	IIT2011067	Treasurer
4.	Mehul Agrawal	IBM2012036	Member
5.	Anmol Parikh	IEC2012074	Member
6.	Bhartendu Kumar Singh	IEC2012073	Member
7.	Soumya Sharma	IBM2012001	Member
8.	Anchit Gupta	RIT2011082	Member-RGIIT
9.	Shreya Singh	RIT2011062	Member-RGIIT
<b>Sl. No.</b>	<b>Names</b>	<b>Roll No.</b>	<b>Position</b>
1.	Prabhat Kumar Kulratna	IEC2011041	President
2.	Akash Bhatia	IIT2012071	Secretary
3.	Jatin Mehta	IIT2011103	Treasurer
4.	Akhil Raj Singh	IIT2012167	Member
5.	Paras Asati	IIT2012032	Member
6.	Soumyarka Mondal	IIT2012092	Member
7.	Amol Rajeev Dave	IEC2012102	Member

8.	Prathma Rastogi	RIT2012069	Member-RGIIT
9.	Aman Aggarwal	Rit2011079	Member-RGIIT

**Extracurricular Activity Events scheduled for the calendar year Jan. to Dec. 2013**

**EVEN SEMESTER**

Tentative Dates	Day	EVENT	Organising Club
10-02-2013(submission by 20-02-2013)	Sunday	Creative writing(online)	Literary
10-2-2013(submission by 12-03-2013)	Sunday	iiita bakra	Dramatics
18/02/2013	Monday	dance party	Dance
16/17 - 2-2013	Sat. & Sun.	tennis and squash	Sports
9/10-03-2013	Sat. & Sun.	basketball	Sports
12/13-03-2013	Tuesday	india buzz	Literary
15/03/2013	Friday	chords	Music
16/17 - 3 - 2013	Sat. & Sun.	volley ball	Sports
18/03/2013	Monday	stunning duo	Dramatics
16,17,23,24/03/2013	Sat. & Sun.	dance workshop	Dance
2/3-04-2013	Wed. & Thurs.	table tennis	Sports
6-04 -2013	Saturday	Fusion	Dance/ Drama/Music
7/8-04-2013	Sun. & Mon.	tech workshop	Tech
11-14/04/2013	Thurs. to Sun.	cricket	Sports
11-13/04/2013	Thurs. to Sat.	debate	Literary
March, April	Sat. & Sun.	Silver Screen	ALC

**ODD SEMESTER**

Tentative Dates	Day	EVENT	Organising Club	Tent. Budget
26/07/2013	Saturday	Confusion	Music	3000
27/07/2013	Saturday	dramatellurgy	Drama	2000
28/07/2013	sunday	spell bee	Literary	1500
24/8/2013	Saturday	admad	Drama	2500
13-18/08/2013	Tuesday to Sunday	independence week	Literary	
15/08/2013	Thursday	Marathon	Sports	
24-25/08/2013	Saturday & Sunday	Chess & Carrom	Sports	
20-26/08/2013	one week	online script writing (online)	Drama	
Every Monday and Tuesday of August		hack-a-thon	Tech	2000
2 to 4/09/2013	Mon. to Wednesday	football	Sports	
1-5/10/2013	Tuesday to Saturday	EFFERVESCENCE MM 13	PMP	
21/10/2013	Monday	antakshari	Music	2500
26/10/2013	Saturday	Athletics	sports	
27/10/2013	Sunday	dandiya night	Dance	4500
3/11/2013	Sunday	strings	Music	3000

Club	Event	Date	Venue & Time
Dance	Dance party	28/3/2012	Tennis Court
Sports	Cricket Tournament	5 <sup>th</sup> to 15 <sup>th</sup> April	Field
Literary	Buzz Quiz	03/04/2012	Auditorium

Technical	Codemathica	15/4/2012	Room No. 4305, CC 2 4:00 to 8:00 p.m
Music	Chords	20/4/2012	Pavilion
Technical	IT Quiz	<b>22/4/2012</b>	Auditorium 6:30 to 8:45 p.m

## REPORT OF CLUB EVENTS 2012-2013

### January 2013

#### **Shaurya- The Republic week**

Sarasva marked the onset of a new tradition at IIIT- Allahabad by taking the celebration of Republic Day by organizing SHAURYA- the republic week. A plethora of events were organized by the club throughout the week.

**ABHIVYAKTI**, an open creative writing competition saw an overwhelming participation of over 40 writers from the college.

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

#### **Republic Day Sports Events**

To commemorate the Republic day, Sports Club spirit organized Marathon and 10 m Sprint which saw huge levels of participation.

### February 2013

#### **PETALS (Literary Club)**

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

### March 2013

#### **PRELIMS OF POPCORN QUIZZA (SARASVA)**

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

#### **STUNNING DUO (RANGTARANGINI)**

Stunning Duo was introduced first time in this year. This was an event to discover the most talented duo in the college. The objective of this event was to find the imagination, creativity, and flexible ways of thinking among the participants. The reason of forming couplet at the time was to find their adaptability among them.

### July 2013

#### **Football tournament**

Spirit organized a Football tournament was organized in which a large number of students took part. It witnessed exciting matches and the league matches decided the winning team.

#### **Popcorn Quizza Finals**

The finals of Popcorn Quizza was organized by Sarvasva in which the selected team were tested on their films and entertainment skills.

#### **Foundation Day**

The Foundation day (August 12, 2013) – It is a yearly event of our college marking the foundation of the college. This event is particularly for the new admission into the college from all streams.

#### **Group Dance (Ushma)**

The first years from M.S, MBA and B.Tech perform on this day and showcase their talent to the college. Ushma had presented a total of 3 group dances, one from the MS batch, one from the MBA batch and one from the B.Tech guys.

#### **Drama (Dramatics Club)**

An on stage drama event was organized on Foundation day. The event witnessed some breathtaking performances by the freshman batches of IIITA.

#### **Kavi Sammelan (Literary Club)**

This year Sarasva organized a Kavi Sammelan in which some of the budding poets of B.Tech first year presented their works, drawing much applause from the audience.

### EFFEVERSCENE MM 13

#### LITERARY EVENTS COGNOSCENTIA

The oldest event of IIIT- Allahabad, Cognoscentia was organized once again this year. Considered to be one of the best quizzing contests, it witnessed participation of different teams from over 10 colleges with the likes of **IIIT-Gwalior, HBTI Kanpur, SHIATS, Law Faculty AU, MONIRBA, IIIT-Allahabad** and many more. This year's edition saw the level of excellence in quizzing rise even further.

### **CROSSFIRE**

The annual debating competition was organized by the literary club this year. Some of the best orators from different colleges around the region participated and helped make the event a grand success.

### **MINDSPEAK**

It was an informal group discussion with burning topics of current concerns. A large number of participants from different colleges turned up to air their views on the topic.

### **FEATHERS**

It was an open creative writing competition, which witnessed some masterpieces being written by the budding poets and authors of different colleges across Allahabad.

### **RJHUNT**

Once again the literary club organized the search for the RJ of Effervescence with huge success. With participants from **IIIT-Allahabad, HBTI Kanpur, SHIATS, Law Faculty AU, MONIRBA** and many other colleges; the event some of the best talents fight it out to lay claim to the top prize.

### **DANCE EVENTS**

#### **FOOTLOSE (GROUP DANCE)**

The first event Footlose was the opening main stage event of Effervescence on 26<sup>th</sup> October, 2013. It started at 4:00 pm. Judged by the eminent Atamjeet, the versatile choreographer running dance classes in Katra and Civil Lines.

#### **CARPE DIEM (SOLO DANCE)**

The second event was Carpe Diem. After choosing from lots of entries there were 12 finalists. The event started at 4:00 pm on 24<sup>th</sup> October. This event was judged by Kalpana Sahay, a trained classical dancer. There were participants from IIIT-A, SHIATS, Atamjeet Institute. The first round had participants dancing on the prepared songs. On the basis of their dance 6 were chosen to go the next Impromptu Prop round. The prop and song was given an hour before already.

#### **LA FRENZE (DUET DANCE)**

The third and final event La Frenze was held on 24<sup>th</sup> October after the Drama Club Event Innovation. There were a total of 8 teams who had performed on a prepared dance number. The time limit was 2.5-4 minutes.

### **Dramatics events**

#### **Innovation**

Innovation, the flagship event of Rangtarangini reached newer zeniths. As on stage drama event it witnessed some mesmerizing performances from teams of different colleges like **MNNIT, IIIT-A and RGIIT**.

#### **Tongues on Fire**

An unique event which celebrate the art of leg pulling. Tongues on Fire was a huge success once again. The event was full of energy and excitement with the participants engaging in healthy debates.

#### **Bindas Bol**

This is an event which brings out the very essence of Nukkad Natak. This year a large number of teams participated from different colleges.

#### **Technical Events**

The following online events were organized by GeekHaven during Effervescence MM 13

- a) Al Khwarizm
- b) Coldfire
- c) Platzen
- d) Stockhunt
- e) Webkriti

The numerous technical events organized during the year's effervescence witnessed large scale participation from India and abroad.

## **10. Funding & Finances**

### **10.1 Finance, Accounts & Audit**

The Institute is on the Maintenance Grant of the Govt. of India and accordingly its academic and allied activities are fully funded by the Govt.

The Institute's budget estimates are prepared and approved by the Finance Committee and the Board of Management on the Government patterns and rules that are submitted to Govt. for sanction of grant.

The grant, Plan and Non-Plan, is sanctioned by the Government are then released quarterly on the basis of Utilization Certificates submitted by the Institute for the grant sanctioned in the previous quarter. The current Funding Procedure is based on Performance of the Institute.

Apart from the Grant received from the Govt., the Institute receives substantial portion of its revenues from its internal resources comprising mainly tuition and other kinds of fees from the students. Students are charged fees as approved by the Finance Committee and the Board of management that is revised continually and rateably as in other such institutions.

While the Plan Grant received from the Govt. is the main source of funding for construction of academic / admin buildings, residential quarters and other infrastructural facilities such as development of labs, library and other equipments etc., the Non-Plan Grant coupled with receipts from internal resources are the mainstay for recurring expenses for running the Institute.

## 10.2 Sources and Uses of the Year 2012-2013

### **NON-PLAN**

Resource mobilization of the Institute on the Non-Plan side during the year 2012-2013 was to the tune of **Rs. 3082.15 Lakh** out of which Grant-in-aid accounted for **Rs. 1417.05 Lakhs** and the rest **Rs. 1665.10 Lakh** was raised through the internal sources of the Institute comprising mainly academic fees and return on investments.

The Grant-in-Aid of **Rs. 1417.05 Lakh** was released by the Govt. in following installments:

1. F.No. 25-6/2012-TS.I dt. 21-06-2012	Rs. 142.00 Lakh
2. F.No. 25-6/2012-TS.I dt. 10-09-2012	Rs. 283.00 Lakh
3. F.No. 25-06/2012-TS.I dt. 21-06-2012	Rs. 254.00 Lakh
4. F.No. 25-06/2012-TS.I dt. 10-09-2012	Rs. 250.00 Lakh
5. F.No. 25-06/2012-TS.I dt. 24-01-2013	Rs. 250.00 Lakh
6. F.No. 25-06/2012-TS.I dt. 21-03-2013	Rs. 238.05 Lakh
	<hr/>
	<b>Rs. 1417.05 Lakh</b>

The Non-Plan Expenditure was to the tune of **Rs. 2764.19 Lakh** resulting in excess of **Rs. 1347.14 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. 7000.00 Lakh** in three installments as below for both Campuses of the Institute at Allahabad and Amethi.

1. F.No. 25-06/2012-TS.I dt. 21-06-2012	Rs. 1250.00 Lakh
2. F.No. 25-06/2012-TS.I dt. 06-09-2012	Rs. 1250.00 Lakh
3. F.No. 25-06/2012-TS.I dt. 02-11-2012	Rs. 1250.00 Lakh
4. F.No. 25-06/2012-TS.I dt. 11-02-2013	Rs. 1650.00 Lakh
5. F.No. 25-06/2012-TS.I dt. 28-02-2013	Rs. 600.00 Lakh
6. F.No. 25-06/2012-TS.I dt. 25-03-2013	Rs. 1000.00 Lakh
	<hr/>
	<b>Rs. 7000.00 Lakh</b>

The above approved Plan outlay for the year was to be utilized on approved plan activities of the Institute given under the details of the Tenth Plan in this Report.

On the expenditure side, the Plan Expenditure during the year amounted to **Rs. 7057.69 Lakh**, the balance having been supplemented from Non-Plan side.

### **Accounts**

The Annual Accounts and Balance Sheet of the Institute have been compiled on the common format prescribed by the Govt. of India for Public Sector Units vide letter no. 1703/JS&FA(HRD)/2/2002 dated February 18, 2002.





**10.3 Receipt and Payment Accounts of Projects by Major Head**  
**Financial Year 2012-2013 (Rs. In Lacs)**

Sr.	NAME OF PROJECT	RECEIPTS					PAYMENTS					
		A	B	C	D	T	E	F	G	H	I	T
1	To Establish and Operationalize Bio-Technology (Bioinformatics )Centre--IRCB	5.06	0	0	0.2	5.26	0.02	0	0	0	5.24	5.26
2	Establishment of Joint Indo-Russian Centre for Bio-Technology at IIIT, Allahabad	0.88	0	0	0.03	0.91	0.02	0	0	0	0.89	0.91
3	Digital Library Mega Centre-Language Technology and content Development & Content Creation in Tibetan, Sanskrit & English	0.16	33.28	0	6.26	39.7	25.47	0	0	14.19	0.04	39.7
4	Information Security Education & Awareness	17.46	0	0	5.58	23.04	8.19	0	0		14.85	23.04
5	Development of English to Indian Language Machine Translation System	9.17	23.16	0	6.64	38.97	10.49	0	0	7.62	20.86	38.97
6	Development of Indian to Indian Language Machine Translation System	1.46	2.88	0	2.63	6.97	5.11	0	0	0.43	1.43	6.97
7	Development of Robust Document analysis and Recognition system for printed Indian Scripts (OCR)	10.25	0	0	0.38	10.63	5.4	0	0.1	0	5.13	10.63
8	Allahabad Michigan University Collaborative Fund	0.16	0	0	0.03	0.19	0.18	0	0	0	0.01	0.19
9	Fund for Improvement of S & T Infrastructure in Universities and Higher educational Institutions (Fist Program-2007)	1.14	0	0	0.04	1.18	0.02	0	0	0	1.16	1.18
10	Development of Algorithm Using ECG Bio-signal & Bio-Images	0.05	0	0	0.01	0.06	0.02	0	0	0	0.04	0.06
11	Technology Incubation and Development of Entrepreneurs (Tide Scheme)	34.55	0	2.83	0.08	37.46	3.66		19.73	5.00	9.07	37.46
12	Institutional partnership project (IPP) -Centre of Excellence in Micro-Electronics & Microsystems ,EPFL, and Lausanne Under -Indo Swiss Project	2.68	0	0	0.08	2.76	1.18	0	0.3	0	1.28	2.76
13	Indigenization of Broadband over powerline technology (BPL) from Corinex,Canada by connecting adjoining villages around IIIT, Allahabad and RGIIT, Amethi using existing power lines	57.95	0	0	2.99	60.94	0.07	0	0	2.7	58.17	60.94
14	Establishment of North Zone Resource Centre of Generating Contents,Mentors,Teachers etc.by Conducting Specialized short term HRD Courses for IT/ITES Sector	156.38	0	15.94	16.04	188.36	4.98	0	13.46	13.35	156.57	188.36
15	Methods for Compensation & localization of Interferences in Ultra wide-band wireless Sensor Networks	0.08	10.87	0	0.2	11.15	4.13	0	0	1.21	5.81	11.15
16	Setting UP of an ASEAN -INDIA Science & Technology Library	29.15	115.05	0	2.05	146.25	30.09	0	90.23	0.05		126.32
17	Allahabad High Court Digitilization Project	0	255.5	0	45	300.5	9.04	0	311.39		5.95	320.43
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	0.16	17.04	0	0.28	17.48	6.07	0	0	7.21	4.2	17.48

19	Development of a Neuron like system for Real Time Visual Object Detection	5.1	0	0	0.26	5.36	3.64	0	0.18	0	1.54	5.36
20	Development of a Computer aided Microscopic pool for structural derivation of pathologically significant proteins	0	9.69	0	0.04	9.73	6.63	0	0	0.45	2.65	9.73
21	National Mission on Education through Information & Communication Technology (ICT)	2.26	0	0	0.09	2.35	0.38	0	0	0	1.97	2.35
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)	3.84	0	0	0.21	4.05	2.01	0	0	0	2.04	4.05
23	Inspire Awards-2010	588.79	0	22.61	11.54	622.94	30.8	0	0.45	0	591.69	622.94
24	Disaster Management system for large scale deployment of sensor network using a fault tolerant mechanism	56.86	0	0	8.38	65.24	7.02	0	0.46	0	57.76	65.24
25	Army Technology Board-Network simulation Testbed at MCTE,MHOW	1.74	0	0	5.13	6.87	3.65	0	0	0	3.22	6.87
27	DISTRIBUTING INDUSTRIAL OPTIMIZATION TASKS TO RURAL WORKER - INDO UK BURD PROJECT	0	23.55	0	0.18	23.73		0	0	1.00	22.73	23.73
28	Indo-US project Wireless Sensor Network (WSN) for protecting Wildlife and Humans	0	39.44	0	0.66	40.1	15.93	0	0	0	24.17	40.1
	<b>Total</b>	985.33	530.46	41.38	115.01	1672.18	184.2	0	436.3	53.21	998.47	1672.18

**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**



# Annexures

<b>Annexure</b>	<b>Particulars</b>	<b>Page No(s).</b>
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## MEMBERS OF IIIT-A SOCIETY

1.	Sri P.R. Dasgupta Hon'ble Chairman, IIIT-A Society Director Bangalore International Centre, TERI Complex Bangalore – 560071	Chairman
2.	Secretary Deptt. of Education, MHRD	Member
3.	Secretary Deptt. of Space Govt. of India	Member
4.	Secretary Deptt. of Atomic Energy Govt. of India	Member
5.	Secretary Deptt. of Electronics Govt. of India	Member
6.	Secretary Deptt. of Science and Technology Govt. of India	Member
7.	Director General NIC, New Delhi	Member
8.	Vice Chairman/Member Secretary AICTE, New Delhi	Member
9.	President National Academy of Sciences, Allahabad	Member
10.	Financial Adviser, MHRD	Member
11.	Vice Chancellor Allahabad University	Member
12.	Director IIT, Kanpur	Member
13.	Director Institute of Technology BHU	Member
14.	Prof. Ashoka Chandra Director, IAMR New Delhi	Member
15.	Prof. H.C. Pandey Vice Chancellor Emeritus Ranchi	Member
16.	Director IIIT&M, Gwalior	Member
17.	Prof. Dutta Majumdar Calcutta	Member
18.	Prof. H.S. Mani Director, MRI, Allahabad	Member
19.	Prof. A.K. Gupta JK Institute, Allahabad	Member
20.	Commissioner Allahabad Division Allahabad	Member
21.	Principal Secretary (In-charge IT) U.P. Government	Member

22.	Dr. Y.K. Sharma DDG, NIC	Member
23.	Representative of Bureau of Technical Education, MHRD	Member
24.	CMD Hindustan Futuristic Communications Ltd. Himachal Pradesh	Member
25.	CMD, WIPRO	Member
26.	CMD, INFOSYS	Member
27.	Executive Director, C-DAC	Member
28.	CMD, Reliance Telecommunications	Member
29.	CMD, Bharati Telecom	Member
30.	Director / OSD IIIT, Allahabad	Member Secretary

### THE BOARD OF MANAGEMENT

1	Dr. M.D. Tiwari 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. B.R. Singh Professor, IIIT- Allahabad	Member
8	Dr. Anupam Agarwal Professor, IIIT- Allahabad	Member
9	Prof. O.P. Vyas Professor & Dean (R&D), IIIT- Allahabad	Member Secretary



**THE ACADEMIC COUNCIL**

Sl. No.	Name	Designation
1	Dr. M.D. Tiwari Director IIIT-Allahabad	Chairperson
2	Prof. P.B. Sharma Vice Chancellor Delhi Technological University	Member
3	Prof. Bharat Bhasker Professor, Information Technology & Systems Indian Institute of Management (IIM), Lucknow	Member
4	Prof. K.N.S. Yadava Vice Chancellor Rani Durgavati University, Jabalpur	Member
5	Vice Chancellor Uttar Pradesh Rajarshi Tandon Open University, Allahabad	Member
6	Prof. Jayanta Kumar Bhattacharjee Director Harish Chandra Research Institute (HRI), Allahabad	Member
7	Prof. S.K. Kak Vice Chancellor Mahamaya Technical University, Noida	Member
8	Prof. G C Nandi Dean (Academic) and Divisional Head, IT IIIT-Allahabad	Member
9	Prof. R.C. Tripathi Officiating Dean (Student Affairs) IIIT Allahabad	Member
10	Prof. M. Radhakrishna Professor & Divisional Head (Electronics) IIIT Allahabad	Member
11	Prof. G.N. Pandey Professor IIIT Allahabad	Member
12	Prof. Sudip Sanyal Professor IIIT Allahabad	Member
13	Prof. Hari Prakash Professor IIIT Allahabad	Member
14	Prof. Ramji Lal Professor	Member

<b>Sl. No.</b>	<b>Name</b>	<b>Designation</b>
	IIIT Allahabad	
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	Prof. Anurika Vaish Professor & Divisional Head, Management and Cyber Laws IIIT Allahabad	Member
19	Dr. Shekhar Verma Associate Professor IIIT Allahabad	Member
20	Dr. Shirshu Verma Associate Professor IIIT Allahabad	Member
21	Dr. C.V.S. Siva Prasad Associate Professor & Divisional Head, Applied Science and IRCB IIIT Allahabad	Member
22	Dr. T. Lahiri Associate Professor IIIT Allahabad	Member
23	Dr. Pavan Chakraborty Associate Professor IIIT Allahabad	Member
24	Dr. Vrijendra Singh Associate Professor IIIT Allahabad	Member
25	Dr. B.S. Sanjeev Assistant Professor IIIT Allahabad	Member
26	Prof. O.P. Vyas Dean (R&D) IIIT Allahabad	Member Secretary

### FINANCE COMMITTEE

Sl. No.	Name	Designation
1	Dr. M.D. Tiwari Director IIIT-Allahabad	Chairperson
2	Sri Navin Soi Director (Finance) Dept. of H.E., MHRD, New Delhi	Member
3	Sri S.N. Jha, IAS (Retd.) Former Secretary, Govt. of India Noida, U.P.	Member
4	Sri Chandra Lal Retd. AG(A&E) U.P. Allahabad	Member
5	Prof. G C Nandi Dean (Academic) IIIT-Allahabad	Member
6	Prof. Ramesh Chandra Founder Director Dr. B.R. Ambedkar Centre for Biomedical Research University of Delhi	Member (Co-opted)
7	Mr. R.B. Singh Deputy Registrar (Finance) IIIT-Allahabad	Member Secretary

**BUILDING & WORKS COMMITTEE**

<b>1</b>	Dr. M.D. Tiwari Director IIIT Allahabad	Chairperson
<b>2</b>	Director MHRD, New Delhi	Member
<b>3</b>	Sri S.K. Khanna Retd. Chief Engineer – CPWD, New Delhi & Advisor (Technical), IIIT-Allahabad	Member
<b>4</b>	Sri S.C. Singhal Superintending Engineer (UPPWD) & Advisor (Technical), IIIT-Allahabad	Member
<b>5</b>	Prof. S.K. Srivastava Emeritus Fellow (AICTE) Member, Executive Council, West Bengal Technical University Varanasi & Faculty, IIIT-Allahabad	Member
<b>6</b>	Prof. G. C. Nandi Dean (Academic) & Divisional Head, IT IIIT-Allahabad	Member
<b>7</b>	Prof. R.C. Tripathi Officiating Dean (Student Affairs) IIIT Allahabad	Member
<b>8</b>	Dr. Asheesh Kumar Deputy Registrar (M) IIIT Allahabad	Member
<b>9</b>	Sri R.B. Singh Deputy Registrar (Finance) IIIT Allahabad	Member
<b>10</b>	Sri H.D. Tiwari Advisor (Finance) IIIT Allahabad	Member Secretary

## INSTITUTE PLACEMENTS

Sl. No.	Name	Enrollment No.	Course	Branch	Placed In
1	Vismit Sharma	IEC2009095	BTech	Electronics and Communication Engineering	ZS Associates
2	Kshitij Mohan	IIT2009156	BTech	Information Technology	ZS Associates
3	Mukesh Kapuria	IIT2009070	BTech	Information Technology	ZS ASSOCIATES
4	Rakesh Masipogu	IEC2009068	BTech	Electronics and Communication Engineering	ZS ASSOCIATES
5	Saswat Pritam Sahu	RIT2009077	BTech	Information Technology	ZS ASSOCIATES
6	pranav garg	iec2009092	BTech	Electronics and Communication Engineering	ZS ASSOCIATES
7	Mukul Gupta	IIT2009191	BTech	Information Technology	ZS ASSOCIATES
8	Niharika Singh	Rit2009020	BTech	Information Technology	SAP LABS
9	shishupal kumar	iec2009082	BTech	Electronics and Communication Engineering	@HashedIn
10	Shivani Maheshwari	RIT2009037	BTech	Information Technology	Yahoo
11	Nitin Maheshwari	IEC2009054	BTech	Electronics and Communication Engineering	Walmart
12	Udit Jain	IIT2009069	BTech	Information Technology	Walmart
13	Kamini Singh	iit2009124	BTech	Information Technology	Verizon
14	Tanuj Singh	IEC2009021	BTech	Electronics and Communication Engineering	Verizon
15	Pradeep Kumar	IIT2009174	BTech	Information Technology	Sutra-Analytics
16	Manish Kumar Atri	iit2009064	BTech	Information Technology	Sutra Analytics
17	Gaurav Kawra	IIT2009014	BTech	Information Technology	Sutra Analytics
18	Ankita Khurana	IIT2009122	BTech	Information Technology	Sutra Analytics
19	Mohit Bansal	rit2009027	BTech	Information Technology	Snapdeal
20	Gaurav Kaushik	rit2009035	BTech	Information Technology	Snapdeal
21	arpit	IIT2009060	BTech	Information Technology	Snapdeal
22	tithi gupta	IIT2009116	BTech	Information Technology	Snapdeal
23	Damaresh Dashora	iit2009177	BTech	Information Technology	SISO
24	Tatsat Mishra	IEC2009060	BTech	Electronics and Communication Engineering	SISO
25	vikesh kumar singh	RIT2009061	BTech	Information Technology	SISO
26	Manish Kapoor	IIT2009108	BTech	Information Technology	SISO
27	Kartikey Gupta	IIT2009086	BTech	Information Technology	SISC
28	Vanya	IIT2009187	BTech	Information Technology	SISC
29	Rohan Kumar Jha	IIT2009053	BTech	Information Technology	SISC
30	Mayank Agarwal	IIT2009021	BTech	Information Technology	SISC
31	Sharad Dixit	rit2009010	BTech	Information Technology	SAP LABS
32	Harshit Pathak	iit2009087	BTech	Information Technology	SAP LABS
33	Karan Agarwal	IIT2009028	BTech	Information Technology	SAP LABS
34	Himanshu Agrawal	IIT2009098	BTech	Information Technology	Samsung(SISO)
35	Naveen Shukla	RIT2009054	BTech	Information Technology	Samsung(SISO)

Sl. No.	Name	Enrollment No.	Course	Branch	Placed In
36	mukesh kumar gawadia	iit2009173	BTech	Information Technology	Samsung(SISO)
37	VOONNA SANDEEP	IEC2009098	BTech	Electronics and Communication Engineering	Samsung(SISO)
38	Akshat Sapra	RIT2009008	BTech	Information Technology	Samsung(SISO)
39	Sandeep Kumar	IIT2009041	BTech	Information Technology	Samsung(SISO)
40	Anshul Jain	RIT2009060	BTech	Information Technology	SISC
41	Hitesh Kumar Jhamb	IIT2009147	BTech	Information Technology	SISC
42	Poonam Chaudhary	rit2009047	BTech	Information Technology	SISC
43	Yogesh Miglani	IIT2009190	BTech	Information Technology	Royal Bank of Scotland
44	Gaurav Ranjan	IIT2009012	BTech	Information Technology	Royal Bank of Scotland
45	Vivek Gupta	iec2009091	BTech	Electronics and Communication Engineering	Royal Bank of Scotland
46	Rupal Gupta	IEC2009076	BTech	Electronics and Communication Engineering	Qualcomm
47	Harsh Bansal	IEC2009063	BTech	Electronics and Communication Engineering	Qualcomm
48	Gaurav Mishra	IEC2009051	BTech	Electronics and Communication Engineering	Qualcomm
49	Tushar Singhal	IEC2009040	BTech	Electronics and Communication Engineering	Qualcomm
50	Swati Geriani	IEC2009052	BTech	Electronics and Communication Engineering	Qualcomm
51	Ashish Kumar Sahu	rit2009002	BTech	Information Technology	PWC
52	Khushboo Rajput	IIT2009180	BTech	Information Technology	Price WaterHouse Coopers
53	shivangi agrawal	iec2009073	BTech	Electronics and Communication Engineering	IBM
55	Niharika Bhardwaj	IEC2009007	BTech	Electronics and Communication Engineering	TCS
56	santosh kumar chaurasia	iit2009104	BTech	Information Technology	Freescale Semiconductor
57	Praveen Kumar	IEC2009075	BTech	Electronics and Communication Engineering	TCS
58	Puneet Mangal	iec2009089	BTech	Electronics and Communication Engineering	IBM
59	Keerthi	IEC2009041	BTech	Electronics and Communication Engineering	Ericsson
60	Lokanadh Yandrapu	rit2009048	BTech	Information Technology	TCS
61	Nishant Kaundal	IEC2009056	BTech	Electronics and Communication Engineering	Freescale Semiconductor
62	himanshu	IEC2009036	BTech	Electronics and Communication Engineering	freescale
63	Praveen Kumar	iit2009082	BTech	Information Technology	SEL

Sl. No.	Name	Enrollment No.	Course	Branch	Placed In
64	Ankit Kumar Varshney	RIT2009073	BTech	Information Technology	AirTight Networks
65	MOHD ABDUL KHADEER	IEC2009094	BTech	Electronics and Communication Engineering	Infogain
66	Mangal Deep	IIT2009126	BTech	Information Technology	Samsung SEL Noida
67	Pratibha Chittoria	IIT2009061	BTech	Information Technology	Guavus Network,gurgaon
68	Rakesh Kumar Shah	IIT2009018	BTech	Information Technology	Newgen Software Technologies Ltd
69	Ankur Mangal	iit2009176	BTech	Information Technology	Newgen Software Technologies Ltd
70	Atul Khemka	IIT2009117	BTech	Information Technology	Newgen Software Technologies Ltd
71	Apaar Saraswat	IEC2009064	BTech	Electronics and Communication Engineering	Naukri.com
72	saurabh middha	iit2009196	BTech	Information Technology	NaN
73	mohit khajuria	iec2009097	BTech	Electronics and Communication Engineering	freescale semiconductors,noida
74	Kul Kauwid Rora	IIT2009192	BTech	Information Technology	Samsung Engineering Labs, Noida
75	Prateek Chouhan	IIT2009107	BTech	Information Technology	TCS
76	Prateek Chouhan	IIT2009107	BTech	Information Technology	TCS
77	Mohit Kumar Lal	RIT2009014	BTech	Information Technology	TCS
78	Arpit Mittal	iit2009075	BTech	Information Technology	IBM
79	Sarthak Upadhyay	iec2009087	BTech	Electronics and Communication Engineering	TCS
80	Anju Kumari	IIT2009078	BTech	Information Technology	IBM
81	Dhruva Verma	RIT2009042	BTech	Information Technology	Sapient
82	Ankit Gola	IEC2009005	BTech	Electronics and Communication Engineering	TCS
83	Madhusudan Balai	IIT2009165	BTech	Information Technology	Samsung(SEL)
84	Akash Singh Badal	Rit2009065	BTech	Information Technology	TCS
85	Sushant Prabhakar	IIT2009092	BTech	Information Technology	IBM
86	Anuj Rawat	iec2009100	BTech	Electronics and Communication Engineering	Nvidia
87	Dinesh Goyal	RIT2009072	BTech	Information Technology	Sapient
88	SHASHANK MITTAL	RIT2009071	BTech	Information Technology	SAMSUNG SEL
89	Abhishek kumar	IEC2009028	BTech	Electronics and Communication Engineering	Freescale Semiconductors India Pvt. Ltd.
90	ASHISH SINGH	iec2009101	BTech	Electronics and Communication Engineering	IBM
91	Vinay Kumar	IIT2009168	BTech	Information Technology	TCS
92	SAURAV KUMAR	IEC2009032	BTech	Electronics and Communication Engineering	TCS
93	PRITHVI SINGH	RIT2009001	BTech	Information Technology	IBM
94	VIKAL GUPTA	IEC2009011	BTech	Electronics and Communication Engineering	IBM

Sl. No.	Name	Enrollment No.	Course	Branch	Placed In
95	NAVEEN KUMAR REDDY JULAKANTI	IEC2009088	BTech	Electronics and Communication Engineering	Sapient Nitro
96	Sajan Panchariya	IIT2009020	BTech	Information Technology	TCS
97	pradeep kumar	iit2009184	BTech	Information Technology	samsung
98	abhishek raj	iec2009104	BTech	Electronics and Communication Engineering	freescale,noida
99	Surya Kant Ranjan	IIT2009046	BTech	Information Technology	KSS
100	Suyash Katiyar	IIT2009049	BTech	Information Technology	TCS
101	Updesh Kumar Garg	IIT2009110	BTech	Information Technology	IBM
102	nipun lall	rit2009005	BTech	Information Technology	Sapient
103	Digvijay Singh	rit2009039	BTech	Information Technology	IBM
104	Harsh Jain	IIT2009047	BTech	Information Technology	Informatica
105	Anil Kumar	RIT2009040	BTech	Information Technology	TCS
106	Nitin Bansal	lec2009030	BTech	Electronics and Communication Engineering	Juniper Networks
107	Mayank Gupta	RIT2009055	BTech	Information Technology	Adobe Systems India
108	Ajit Abhipallav	RIT2009034	BTech	Information Technology	VizExperts India Pvt. Ltd.
109	Tushar Garg	IEC2009083	BTech	Electronics and Communication Engineering	Nvidia
110	sarvesh yadav	iec2009026	BTech	Electronics and Communication Engineering	NVIDIA
111	Ritesh kumar	rit2009066	BTech	Information Technology	Freescale Semiconductor
112	Raju Khanal	IIT2009009	BTech	Information Technology	SEL India
113	Mohit Khare	IIT2009006	BTech	Information Technology	IBM
114	Sumit Kumar Jha	iit2009145	BTech	Information Technology	ScaleArc
115	Rachit Garg	iec2009105	BTech	Electronics and Communication Engineering	Freescale Semiconductor
116	M.Gowtam Reddy	iit2009146	BTech	Information Technology	Innopark
117	M.Gowtam Reddy	iit2009146	BTech	Information Technology	Innopark
118	Bharat Kul Ratan	IIT2009195	BTech	Information Technology	Samsung India Electronics Limited, Noida
119	Akhilendra Kumar	IIT2009051	BTech	Information Technology	TCS
120	Khushboo Yadav	IEC2009010	BTech	Electronics and Communication Engineering	Airtel-Bharti, New Delhi
121	Tarini Singh	iec2009031	BTech	Electronics and Communication Engineering	TCS
122	Abhiratna Gupta	IEC2009090	BTech	Electronics and Communication Engineering	REDPINE SIGNALS
123	Rahul Gupta	IEC2009074	BTech	Electronics and Communication Engineering	REDPINE SIGNALS
124	Hunny Mittal	IIT2009099	BTech	Information Technology	McAfee
125	Siddharth	IEC2009086	BTech	Electronics and Communication Engineering	IBM



Sl. No.	Name	Enrollment No.	Course	Branch	Placed In
126	Saurabh Pandey	rit2009011	BTech	Information Technology	Samsung SEL
127	Sandeep dhaked	iec2009069	BTech	Electronics and Communication Engineering	TCS
128	Sanjeev Kumar	iit2009188	BTech	Information Technology	Freescale Semiconductor
129	Rabi C Shah	IIT2009026	BTech	Information Technology	Sapient
130	Rikesh Sinha	iec2009081	BTech	Electronics and Communication Engineering	TCS
131	Pallavi Martolia	iit2009033	BTech	Information Technology	Steria
132	Ankit Jain	IEC2009093	BTech	Electronics and Communication Engineering	Juniper Networks
133	Himanshu Jaiswal	IIT2009023	BTech	Information Technology	Infogain
134	arpit mantry	iit2009163	BTech	Information Technology	juniper networks
135	Nishant Garg	IIT2009050	BTech	Information Technology	Microsoft
136	Ajeet Kumar	IIT2009057	BTech	Information Technology	Microsoft
137	Rohit Raj	rit2009074	BTech	Information Technology	Microsoft
138	Karan Rawat	RIT2009016	BTech	Information Technology	Microsoft
139	Neeraj Arora	iit2009034	BTech	Information Technology	Mcafee
140	Ankush Dubey	IIT2009101	BTech	Information Technology	MAQ Softwares
141	Puneet jain	IIT2009024	BTech	Information Technology	MAQ Softwares
142	Nitish Goyal	IIT2009089	BTech	Information Technology	MAQ Softwares
143	K.Ram Sai Tej	iit2009015	BTech	Information Technology	Sapient
144	Avishek Pant	IIT2009134	BTech	Information Technology	Informatica
145	Ila Jain	IIT2009200	BTech	Information Technology	Informatica
146	Manish Kumar Untwal	iit2009157	BTech	Information Technology	Infoedge
147	siddhant agarwal	rit2009041	BTech	Information Technology	Infoedge
148	Vineet Rao Katta	IIT2009171	BTech	Information Technology	Infoedge
149	Shreya Bhatia	IIT2009119	BTech	Information Technology	Infoedge
150	Sudhanshu Gupta	iit2009118	BTech	Information Technology	Indus Valley Partners
151	Jivesh Singh Gahlawat	IIT2009008	BTech	Information Technology	Indus Valley Partners
152	sourabh gupta	iit2009066	BTech	Information Technology	Hashedin Technology
153	Anurag Jain	RIT2009067	BTech	Information Technology	Hashedin Technologies
154	PUNEET AGARWAL	IIT2009170	BTech	Information Technology	Futures First
155	Satyapal Sharma	RIT2009076	BTech	Information Technology	Futures First
156	Rachit Agarwal	iit2009164	BTech	Information Technology	Futures First
157	Prakhar Jain	rit2009053	BTech	Information Technology	Flipkart
158	Sunil Kumar	RIT2009021	BTech	Information Technology	Flipkart
159	Rishabh Agarwal	IIT2009178	BTech	Information Technology	Flipkart
160	Ankit Gupta	rit2009003	BTech	Information Technology	Facebook
161	Yogesh Sharma	IIT2009175	BTech	Information Technology	Facebook
162	Anshuman Bajpai	IIT2009179	BTech	Information Technology	Directi
163	Udit Agarwal	RIT2009079	BTech	Information Technology	Direct-i
164	Kshitij Bansal	RIT2009078	BTech	Information Technology	D. E. Shaw
165	Abhinav Vishwa	RIT2009038	BTech	Information Technology	D. E. Shaw
166	SHUBHAM JAIN	IIT2009123	BTech	Information Technology	CISCO SYSTEMS
167	Akshansh Jain	IEC2009001	BTech	Electronics and Communication Engineering	Cisco Systems

Sl. No.	Name	Enrollment No.	Course	Branch	Placed In
168	Anish Gupta	IIT2009153	BTech	Information Technology	CISCO
169	Ayushi Singh	RIT2009062	BTech	Information Technology	Cisco
170	Dhiresch Chawla	iiit2009198	BTech	Information Technology	CISCO
171	Ashutosh Sidana	rit2009033	BTech	Information Technology	Amodocs
172	vibhav srivastav	rit2009064	BTech	Information Technology	Amodocs
173	vivek kumar singh	iiit2009022	BTech	Information Technology	Amodocs
174	Ravi Shekhar	rit2009023	BTech	Information Technology	Amodocs
175	CHALASANI NAVEEN	RIT2009075	BTech	Information Technology	Amodocs
176	sachet saurabh	iiit2009063	BTech	Information Technology	Amazon
177	Roshan Kumar	iiit2009048	BTech	Information Technology	Amazon
178	Mohit Arora	IIT2009067	BTech	Information Technology	Adobe
179	Avinash Srivastava	IIT2009013	BTech	Information Technology	Adobe
180	Devang Vyas	RIT2009017	BTech	Information Technology	Accolite
181	Pradeep Kumar Mishra	RIT2009025	BTech	Information Technology	Accolite
182	Lokesh Kumar	RIT2009013	BTech	Information Technology	Accolite
183	Raja Agarwalla	rit2009022	BTech	Information Technology	Accolite
184	Shilpa Goel	IIT2009167	BTech	Information Technology	Accenture
185	Rohit Kumar	IIT2009090	BTech	Information Technology	Accenture
186	Ranvijay	IIT2009085	BTech	Information Technology	Accenture
187	Vivek Agarwal	IIT2009143	BTech	Information Technology	Accenture
188	Vivek Agarwal	IIT2009143	BTech	Information Technology	Accenture
189	Sachin Kr Singh	iec2009044	BTech	Electronics and Communication Engineering	Accenture
190	Maninderpal Singh	IIT2009056	BTech	Information Technology	Drishi-Soft Solutions
191	Naresh Kumar Bhardwaj	iiit2009111	BTech	Information Technology	Juniper Network
192	Hemant kumar	IIT2009039	BTech	Information Technology	TCS
193	Aakash Deep Singh	iec2009099	BTech	Electronics and Communication Engineering	IBM
194	Abhishek nehra	RIT2009057	BTech	Information Technology	Innopark
195	Rishi Gosai	iiit2009130	BTech	Information Technology	SISC
196	Abhishek	rit2009057	BTech	Information Technology	Inopark
197	Prateek Khandelwal	RIT2009043	BTech	Information Technology	Directi
198	aditi khandalkar	RIT2009032	BTech	Information Technology	Comviva Technologies
199	Ashish Kumar Sahu	rit2009002	BTech	Information Technology	PWC
200	Dinesh Kumar Pathak	rit2009063	BTech	Information Technology	TCS
201	Anubhav	RIT2009015	BTech	Information Technology	Microsoft
202	Saurabh Pandey	rit2009011	BTech	Information Technology	Samsung SEL
203	amar deep gupta	iiit2009058	BTech	Information Technology	SRI
204	Hemant kumar	iiit2009039	BTech	Information Technology	TCS
205	milan k.c	iiit2009084	BTech	Information Technology	IBM
206	Raminder Singh Sahani	IIT2009054	BTech	Information Technology	InfoEdge(Naukri.com)
207	Nitin Kumar Kaushik	IIT2009154	BTech	Information Technology	Yahoo
208	jyoti	ihc2011004	MTech(IT)	Human Computer Interaction	RGUKT
209	gaurav sharma	ihc2011001	MTech(IT)	Human Computer Interaction	RGUKT
210	Shivani Rathore	ISE2011001	MTech(IT)	Software Engineering	Qualcomm

Sl. No.	Name	Enrollment No.	Course	Branch	Placed In
211	ASHOK VISHWAKARMA	ISE2011009	MTech(IT)	Software Engineering	IBM
212	subham khanna	ise2011013	MTech(IT)	Software Engineering	IBM
213	akhilesh kumar yadav	ise2011006	MTech(IT)	Software Engineering	IBM
214	AMRITA VERMA	ISE2011019	MTech(IT)	Software Engineering	NEC HCL
215	Anubha Rai	ISE2011022	MTech(IT)	Software Engineering	INFOGAIN
216	Rahul Patidar	imi2011011	MTech(IT)	Microelectronics	IBM
217	Harsh Srivastava	imi2011018	MTech(IT)	Microelectronics	IBM
218	Arpita Bhargava	IWC2011015	MTech(IT)	Wireless Communication and Computing	IBM
219	Aalok Rawat	ihc2011005	MTech(IT)	Information Technology	IBM
220	Prashant Shukla	ISE2011021	MTech(IT)	Software Engineering	IBM
221	Cerin Ninan Kunna Tharayil	IMI2011004	MTech(IT)	Microelectronics	TCS
222	rahul badhwar	ibi2011001	MTech(IT)	Bioinformatics	Lecturer in Aakash Institutes
223	Amit Bansal	ISE2011008	MTech(IT)	Software Engineering	Dolcera
224	mallika srivastava	imi2011017	MTech(IT)	Microelectronics	Dolcera
225	Prachi Gupta	imi2011006	MTech(IT)	Microelectronics	Dolcera
226	Mayank Gupta	IIS2011007	MTech(IT)	Intelligent Systems	Dolcera
227	Sonam Agarwal	ISE2011024	MTech(IT)	Software Engineering	Amdocs
228	Saurabh Sharma	ISE2011023	MTech(IT)	Software Engineering	Amdocs
229	PAVAN KUMAR REDDY.G	ISE2011012	MTech(IT)	Software Engineering	Amdocs
230	Siva Reddy	ISE2011010	MTech(IT)	Software Engineering	Accolite
231	Sneha Govil	ise2011015	MTech(IT)	Software Engineering	IBM
232	Ishna Satyarth	ise2011007	MTech(IT)	Software Engineering	IBM

## Nodal Officer for implementation of the Cigarettes and other Tobacco Products Act, 2003

- Dr. Sudip Sanyal

## LIST OF HUMAN RESOURCES IN MANAGING INSTITUTE IN 2012-2013

## Academic Staff

S. No.	Name	Designation
1.	Dr. M. D. Tiwari	Director
2.	Prof. G. C. Nandi	Professor
3.	Prof. R. C. Tripathi	Professor
4.	Prof. U.S. Tiwary	Professor
5.	Prof. Sudip Sanyal	Professor
6.	Prof. O. P. Vyas	Professor
7.	Prof. Ramji Lal	Professor
8.	Prof. Hari Prakash	Professor
9.	Prof. G. N. Pandey	Professor
10.	Prof. M. Radhakrishna	Professor
11.	Prof. Krishna Mishra	Professor
12.	Prof. B. R. Singh	Professor
13.	Dr. Anupam	Associate Professor
14.	Dr. Shekhar Verma	Associate Professor
15.	Dr. Anurika Vaish	Associate Professor
16.	Dr. Tapobrata Lahiri	Associate Professor
17.	Dr. Shirshu Verma	Associate Professor
18.	Dr. Sanjeev B. S.	Assistant Professor
19.	Dr. C. V. S. Siva Prasad	Assistant Professor
20.	Dr. Vrijendra Singh	Assistant Professor
21.	Dr. Madhvendra Mishra	Assistant Professor
22.	Dr. Pavan Chakraborty	Assistant Professor
23.	Dr. Vijayshri Tewari	Assistant Professor
24.	Dr. Vijay Kumar Chaurasiya	Assistant Professor
25.	Mr. Manish Kumar	Assistant Professor
26.	Dr. Neetesh Purohit	Assistant Professor
27.	Dr. Sanjai Singh	Assistant Professor
28.	Dr. Abhishek Vaish	Assistant Professor
29.	Dr. Rajat Kumar Singh	Assistant Professor
30.	Dr. Manish Goswami	Assistant Professor
31.	Dr. Ashutosh Mishra	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	Lecturer
44.	Dr. Kusum Lata	Lecturer
45.	Mr. Ajay Singh Raghuvanshi	Lecturer
46.	Mr. Triloki Pant	Lecturer
47.	Mr. Santanu Das	Lecturer
48.	Mr. Ashutosh Kumar Singh	Lecturer
49.	Mr. Shashi Kant Rai	Lecturer
50.	Mr. Saurabh Mishra	Lecturer

#### Non-teaching Staff

S. No.	Name	Designation
1.	Dr. Asheesh Kumaar	Deputy Registrar (Miscellaneous)
2.	Sri. R. B. Singh	Deputy Registrar (Finance)
3.	Dr. Seema Shah	Deputy Registrar (Establishment)
4.	Ms. Reema Gupta	Software Engineer
5.	Mr. Lok Nath Sharma	Security Officer
6.	Mr. Mithilesh Mishra	System Analyst
7.	Mr. K. K. Tiwari	Assistant Registrar (Finance)
8.	Mr. Ranjeet Banerjee	Assistant Registrar (Exam)
9.	Mr. Pankaj Mishra	Senior Information Assistant
10.	Mr. Prashant Srivastava	Programmer
11.	Mr. Mukesh Rawat	Personal Secretary
12.	Mr. Vivek Nagar	Personal Secretary
13.	Mr. Yogesh Kardam	Computer Operator
14.	Mr. Ajay Kr. Tiwari	Computer Operator
15.	Dr. Pallavi Dixit	Jr. Technical Assistant
16.	Mr. Vivekanand Sinha	Comp/ Data Processer
17.	Mr. Durgesh Kumar	Data Processor/Data Operator
18.	Mr. Santosh	Data Processor/Data Operator
19.	Mr. Shailendra Singh	Technical Assistant/Data Processor
20.	Mr. Kaushal Kumar Singh	Technical Assistant/Data Processor
21.	Mr. Sanjiv Kumar	Technical Assistant/Data Processor
22.	Mr. Santosh Kumar Mishra	Technical Assistant/Data Processor
23.	Mr. Ashutosh Shukla	Technical Assistant/Data Processor
24.	Mr. Himanshu Pandey	Technical Assistant/Data Processor
25.	Mr. Rajit Ram Yadav	Technical Assistant/Data Processor
26.	Mr. K. S. Aeron	Accountant

S. No.	Name	Designation
27.	Mr. Rajeev Kumar Bhatia	Accountant
28.	Ms. Shweta Gupta	Accountant
29.	Mr. Sanjay Kumar	Accountant
30.	Mr. Sunil Kashyap	Accountant
31.	Mr. Brijesh Kumar Pandey	Multifunctional Assistant
32.	Mr. Rajendra Singh Bisht	Multifunctional Assistant
33.	Mr. Sandeep Kumar Kesarwani	Multifunctional Assistant
34.	Ms. Asha Shukla	Multifunctional Assistant
35.	Mohd. Saleem Ansari	Multifunctional Assistant
36.	Mr. Sumit Kumar Shukla	UDC
37.	Mr. Kapil Srivastava	Executive Assistant
38.	Mr. Abhishek Pandey	Deputy Accounts Assistant
39.	Mrs. Prabha Verma	Computer Assistant (LDC)
40.	Mr. Abhishek Kumar	Computer Assistant (LDC)
41.	Mr. Pramod N. Tripathi	Technical Assistant
42.	Mr. Santosh Kumar Yadav	Lab Assistant
43.	Mrs. Pratibha Verma	Lab Assistant
44.	Mr. Gaj Raj Singh	Junior Engineer
45.	Mr. Akhilesh Kumar	Junior Engineer
46.	Mr. Sivakant Tripathi	Junior Engineer
47.	Mr. Sarvesh Kr. Mishra	Library Information Assistant
48.	Mohd. Izhar	Compounder
49.	Mr. Vinod N. Tripathi	Compounder
50.	Mrs. Priya Pal	Nurse
51.	Mrs. Blessy Anie Shaiju	Nurse
52.	Mr. Rahul	Executive Assistant
53.	Mr. Subhash Kumar	Caretaker
54.	Mr. Manoj Kumar Upadhyay	Caretaker-cum-manager
55.	Mr. Pankaj Srivastava	Lab. Assistant
56.	Mr. Girish Kumar Dixit	Lab. Assistant
57.	Mr. D. N. Shukla	Computer Assistant
58.	Mr. N. K. Tripathi	Computer Assistant
59.	Mr. Raj Kumar	Driver
60.	Mr. Satish Kumar	Driver
61.	Mr. Swatantra Kr. Dwivedi	Attendant

#### Annexure – 09

#### Consultants

1.	Sri H.D. Tiwari	Advisor (Finance)
2.	Sri Govind Saran	Legal Counsel
3.	Sri S.C. Bose	Enquiry Officer
4.	Sri S.K. Khanna	Advisor (Technical)
5.	Sri S.C. Singhal	Advisor (Technical)
6.	Sri S.C. Khare	Accounts Officer
7.	Dr. R. Dayal	Chief Medical Officer
8.	Dr. M.D. Mishra	Medical Officer

9.	Dr. Sonia Agrawal	Medical Officer
10.	Dr. K.S. Pandey	Homoeopath
11.	Dr. Kaushlesh Dwivedi	Medical Officer
12.	Dr. Praveen Singh	Medical Officer
13.	Dr. Pritima	Medical Officer
14.	Dr. Veer Vikram Singh	Medical Officer (RGIIT-A)