



Dhirubhai Ambani Institute of Information and Communication Technology

Near Indroda Circle, Gandhinagar, Gujarat, India 382 007. Tel.: +91 79 3052 0000 | Fax: +91 79 3052 0010 | Web: www.daiict.ac.in





Shri. Dhirubhai Hirachand Ambani (28th December, 1932 – 6th July, 2002)

> Founder Chairman, Reliance Group Founder Chairman, DA-IICT







# Contents

Board of Governors	6
Director's Page	7
About the Institute	8
Academic Programs	10
Placements and Internships	15
Eleventh Convocation	20
Research and Entrepreneurship	22
Workshops, Special Lectures and Visitors	24
Faculty Publications	25
Awards and Professional Activities	31
Faculty and Staff Updates	44
Student Activities and Achievements	45
Alumni Activities and Achievements	51
Resource Centre	52
Infrastructure	56
Annexures	57

- 1. Management
- 2. Theses, Projects and Reports
- 3. Faculty
- 4. Staff

# Board of Governors



<b>President</b> Shri Anil D Ambani	Chairman, Reliance ADA Group, Mumbai
Members	
Prof. R. Natarajan	Former Chairman, All India Council for Technical Education, Bangalore and former Director, Indian Institute of Technology Madras, Chennai
Prof. B. S. Sonde	Former Professor, Indian Institute of Science, Bengaluru and former Vice Chancellor, Goa University
Prof. D. Narasimha Reddy	Chairman, Recruitment & Assessment Centre, Defence Research and Development Organisation, Government of India, New Delhi
Prof. R. Nagaraj	Director, DA-IICT, Gandhinagar
Shri Pankaj Joshi	Principal Secretary, Department of Higher and Technical Education, Government of Gujarat, Gandhinagar
Shri Dhananjay Dwivedi	Secretary, Department of Science and Technology, Government of Gujarat, Gandhinagar
Shri Suresh Rangachar	Dhirubhai Ambani Institute of Information and Communication Technology Society, Mumbai
Shri Dharmendra Bhandari	Dhirubhai Ambani Institute of Information and Communication Technology Society, Mumbai
Shri Vinod Sawhny	Reliance Communications Limited, Mumbai
Shri Manikantan Iyer	Reliance Communications Limited, Mumbai
Shri N. K. Mangla	Reliance Communications Limited, Mumbai
Shri Gurdeep Singh	Reliance Communications Limited, Mumbai
Shri Shrenik Vaishnav	Reliance Communications Limited, Mumbai
Prof. Suman Kumar Mitra	Dean (Academic Programs), DA-IICT, Gandhinagar
Prof. Anish Mathuria	Dean (Research & Development), DA-IICT, Gandhinagar
<b>Secretary</b> Shri Soman Nair	Executive Registrar, DA-IICT, Gandhinagar

# Director's Page





Prof Nagaraj Ramrao

I am honoured to present the Annual Report of DA-IICT for the academic year 2014-15. This is my first report since being appointed as the Director in January, 2015.

The year 2014-15 was a year of expanded activities. It was also a year of planning new activities for institutional growth and development. As the report illustrates, new specializations in the Postgraduate programs, expansion in networking with companies and organizations for internship and placement of students and strengthening of research dissemination by organizing workshops and seminars, took place. Our academic collaboration and global reach continued to advance with new MoUs signed with national Institutions and Universities abroad. Two foremost activities planned during the year were the preparation of a Strategic Plan for 2015-18 and applying for accreditation by the National Assessment and Accreditation Council.

I had the privilege of engaging with a group of dedicated faculty, staff and students. An eminent Board of Governors guided and supported us in managing the affairs of the Institute and we are grateful to them. This report is an open document and we look forward to receiving feedback and comments.

Nagaraj Ramrao Director



# About the Institute

# THE INSTITUTE

Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), Gandhinagar was founded in 2001 by the legendary visionary, Shri Dhirubhai Hirachand Ambani with a vision 'to help build a knowledge-led society founded on intellectual competitiveness for global leadership.' Set up as a Society under the Societies Registration Act, 1850 and Bombay Public Trust Act, 1950, an Act of the Gujarat Legislature conferred on DA-IICT the status of a University in 2003. DA-IICT was subsequently included in the list of Universities maintained by the University Grants Commission under Section 2(f), and became a member of the Association of Indian Universities (AIU) in 2009. The Institute is managed by a Board of Governors chaired by Shri Anil Ambani, Chairman, Reliance ADA Group with visionaries and leaders from industry and academia as its members.

Since its inception, DA-IICT has offered BTech, MTech, and PhD programs in Information and Communication Technology (ICT). ICT was a unique discipline at that time and this move has been emulated by a number of premier institutes across India. Over the years, the Institute has expanded its offerings to include programs such as MSc in information Technology, M.Des in Communication Design and MSc in ICT for Agriculture and Rural Development.

DA-IICT was envisioned to be a leader in higher learning and research in ICT domain. To support this, right from the beginning, Institute attracted the finest talent of faculty with a PhD from eminent institutions across the world.

The Institute has a full range of research infrastructure and facilities, such as well-quipped laboratories, specialized equipment, campus-wide networking and high-speed Internet access and subscription to hundreds of print and online journals. The Institute has dedicated research laboratories -- two such examples are Information Retrieval Laboratory and the Speech Processing Laboratory. It also has an Incubation Centre, supported by the Department of Science and Technology, Government of India to nurture and develop business ideas based on latest and emerging technology.

At the invitation of the Government of Gujarat, DA-IICT is mentoring the new Indian Institute of Information Technology, Vadodara (IIIT-V) setup under Public-Private Partnership mode, which started admitting students from the academic year 2013-14. We are honoured to be the first private University in India to be entrusted with the prestigious task of mentoring a premier central institute like IIIT-V.

Over the years, DA-IICT graduates have made a name for themselves in academia, technical, managerial, and business domains. In keeping with the ethos of DA-IICT, a significant number of our students have set up successful start-up enterprises. Our placement record is at par with the leading engineering institutes in India. Inspite of the slow down experiences in the economy, our placements have not been affected; in fact, it grew every year in numbers and pay packets.

DA-IICT is spread over 50 acres of land in Gandhinagar, Capital City of Gujarat. Eighty percent of land is open space reserved for green cover and garden, making it an environment friendly campus. The campus houses around 1500 students.

In the short span of 14 years, DA-IICT has become a name synonymous with quality education and research in ICT domain and we are committed to provide the leadership role through constant innovation in programs, curriculum, and pedagogy.

# GANDHINAGAR

Gandhinagar, the capital of Gujarat, lies on the west bank of the Sabarmati River, about 30 kilometers away from Ahmedabad. The city is divided into



thirty sectors and each sector has its own civic and educational amenities. After setting up an Information Technology park (Info-City), DA-IICT was founded as the first node of the institutional concentration. The subsequent range of institutes are campuses of the Indian Institute of Technology, National Institute of Design, Pandit Deendayal Petroleum University, Central University of Gujarat, Gujarat Forensic Sciences University, Institute for Plasma Research, Entrepreneurship Development Institute, Gujarat National Law University and National Institute of Fashion Technology. Another emerging institution is the Gujarat International Tec-City (GIFT City) aimed to tap the potential of India's financial services by offering global firms a world class infrastructure and facilities. All these institutions are transforming Gandhinagar into a knowledge and financial services city. DA-IICT can be reached in about 30 minutes from Sardar Vallabhai Patel International Airport and the Central Railway Station located in Ahmedabad.

# CAMPUS

The DA-IICT campus is thoughtfully planned and designed as an environmentally conscious campus in the country. The entire design was oriented towards preserving the environment. The full green coverage on the campus with trees, lawns and bushes bearing green leaves and exotic flowers surrounding the buildings and pathways instills environment consciousness among students and enrich their learning. The campus also has a herb garden with species of rare medicinal plants. The landscape was planned and developed in a manner that no rainwater is lost. The irrigation for campus garden and lawns is carried out with recycled water. The campus is a haven for bird-watchers, with a variety of species of birds being spotted.



# Academic Programs

DA-IICT offers one Undergraduate Program and five Postgraduate Programs including a doctoral program. Beginning the Academic Year 2013-14, DA-IICT launched a unique new undergraduate honours program in ICT with computational science as minor. This is the second distinction the DA-IICT achieved after designing and offering an undergraduate program in ICT for the first time in the country. The program is designed in consultation with the industry to ensure that their needs are met. DA-IICT also offers short term training programs, research seminars and workshops under the Continuing Education Program (CEP). All the teaching programs are designed to develop skills and intellect that is in tune with the contemporary ICT needs of the industry, government, public sector and academia. The details of the academic programs offered are given in the Table 1.

Sr. No.	Programs	Commencement	Duration (Years)	Annual Intake*
1	BTech (ICT)	2001	4	240
2	BTech (Honours) in ICT with minor in Computational Science)	2013	4	60
3	MTech (ICT)	2002	2	50
4	MSc (Information Technology)	2002	2	90
5	MSc (ICT in Agriculture and Rural Development)	2002	2	40
6	MDes (Communication Design)	2004	2	20
7	PhD	2002	3-5	10-20

 Table 1: Academic Programs

\*Exclusive of NRI/Foreign students.

## **REVIEW OF CURRICULUM**

The curriculum review and revision of Undergraduate Program is carried out in five years and the Postgraduate Programs in three years. The Undergraduate and Postgraduate Committees advice the Board of Studies on curriculum review and the Board reviews and recommends appropriate update/revision of the curriculum. The curriculum review and revision of BTech (ICT) with Computational Science as minor, MSc (IT) and PhD programs have been carried out during 2013-14 and the review of other programs have been initiated.

## **ADMISSIONS**

The notifications for admission to all teaching programs were released in leading regional and national newspapers in April, 2015. The admissions were also publicized using Institute's web site, information brochure and the alumni network. The process of receiving online forms was open from 14 April 2015.

# Undergraduate Programs (BTech (ICT) and BTech (ICT) Honours with Computational Science as Minor)

The intake for BTech (ICT) Program is 300. For admission purpose, the seats are divided into two categories equally; All India Category and Gujarat Category. The All India category seats are filled in by DA-IICT. The Gujarat category seats are filled in by the Admission Committee for Professional Courses (ACPC), Government of Gujarat following their procedure of admission.

For admission to the 150 seats of national category, the Institute received 5459 applications. They were filled in on the basis of the All India Rank of Joint Entrance Examination 2014 (JEE-2014) Main conducted by the Central Board of Secondary Education. The admissions to the remaining 150 seats were handled by ACPC. Thirty seats were offered to Non-Resident Indians, Foreign Nationals and Persons of Indian Origin and the admissions to these seats were done on the basis of the SAT/



JEE Main score. The Institute follows the guidelines for admission of reserved category students. The starting and closing JEE merit ranks of the students admitted under each category are given in Table 2.

Rank	Category	BTech (ICT)	BTech (Honours) (CS)
Best	All India (Gen)	4197	1783
Rank	Gujarat (Gen)	3087	849
Lowest	All India (Gen)	15033	8746
Rank	Gujarat (Gen)	54892	15666

# Table 2: JEE Merit Ranks of Students

## **Postgraduate Programs**

**MTech (ICT):** During the reporting year, two new specializations were offered -- Algorithmics and Signal Processing. Possession of a valid Graduate Aptitude Test in Engineering (GATE) score in a discipline specific to the specialization, as mentioned below was one of the requirements for admission:

Name of Specialization	GATE paper
Algorithmics	CS or MA
Communication Systems	EC
Computer Networks	CS or EC
Machine Intelligence	CS or EC
Signal Processing	EC or EE
VLSI and Embedded Systems	EC or CS

The GATE cut-off of the students admitted is as follows:

Specialization	Highest- Score	Lowest-Score
AL	649	542
COMS	623	519
CNS	576	479
MI	630	483
SP	559	500
VLSI SP	651	572

Sixty two students were admitted to the program including two naval officers sponsored by the Indian Navy.

**MSc (IT):** The selection to the program was by an online entrance test. Out of 421 applied, 151 candidates were shortlisted, based on their performance in the test. Ninety three candidates were granted confirmed admissions and 58 were placed in the wait list. Twenty two waitlisted candidates were offered admission on cancellation by the candidates in the confirmed list. Ninety four candidates have accepted the offer of admission and joined the program.

**MSc (ICT-ARD):** The selection to the program consisted of DA-IICT admission test or CAT/CMAT/ XAT/MAT tests and personal interview. Out of 20 candidates shortlisted, 13 were offered admissions and 6 have joined the program.

**MDes (Communication Design):** The admission to the program was through an entrance test followed by personal interview. Twenty two applicants were called for entrance test/interview and 11 candidates were offered admissions. Ten have joined for the program.

**PhD:** The admission to the program was through DA-IICT entrance test/CPI obtained in MTech Degree awarded by DA-IICT/UGC-NET qualification or GATE score. Out of 86 applicants, 10 candidates were called directly for interview based on their UGC-NET qualification/GATE score/DA-IICT CPI. Thirty nine have reported for entrance test, 25 were short-listed for interview and 9 were offered admission and all of them have joined the program. Table 3 shows the number of students admitted.

Programs	Application Received	Admission Offered		
MTech (ICT)	425	62*		
MSc (IT)	421	93		
MSc (ICT-ARD)	32	14		
MDes (CD)	22	11		
PhD	86	09		

**Table 3: Admissions Details** 

\*Including two Navy Officers.

## ORIENTATION

The orientation program for all the students were conducted during 22 July to 31 July 2015. During the orientation, they were given detailed account of the curriculum, academic requirements and policies. Specific sessions were organized program-wise with emphasis on the details of the curriculum and the available options with regard to elective courses. Apart from academic orientation, they were also given orientation to the campus and hostel life by the student volunteers. The students also met instructors of the first semester courses for briefings. One of the sessions during the orientation was held for parents. The orientation familiarized the students and parents with the course structure, evaluation system, grading, academic regulations and faculty, campus and infrastructure facilities.

#### **FINANCIAL SUPPORT**

The Institute provides financial support in the form of fellowships, scholarships and teaching and research assistantships to eligible students.

#### **Reliance Merit Scholarships**

Reliance, as part of its Corporate Social Responsibilities (CSR), has instituted merit scholarships for students pursuing BTech (ICT) and MSc (ICT-ARD) Programs. The number of scholarship offered is 10 for BTech (ICT) and 5 for MSc (ICT-ARD) Programs. Awardees are selected on yearly basis. The scholarship is equal to the full tuition fee for the duration of award. Nine BTech and 2 MSc (ICT-ARD) students have received the Scholarship during the reporting year.

#### **DA-IICT Merit Scholarships**

The Merit Scholarships are awarded to the top five students admitted to the BTech program having an All India Rank not exceeding 5000 in the JEE Main Examination. During the academic year 2014-15, in autumn semester 11 and in winter semester 10 students were awarded the Merit Scholarships.

#### **DA-IICT Merit-cum-Means Scholarships**

The Merit-Cum-Means Scholarships are awarded to five students in each semester based on their academic performance and whose parent(s)/ guardian(s) annual income is up to Rs.2,50,000/-. Fifteen students have received the scholarship during the academic year 2014-15.

#### Assistantships

The Institute offers full-time and half-time teaching assistantships with monthly remuneration to PhD Scholars and MTech (ICT) students. The BTech (ICT) students are offered half-time teaching assistantships in their final year studies. Fifteen PhD Scholars, 46 MTech and 15 BTech students received assistantships during the academic year 2014-15.

#### **TCS Research Fellowships**

Tata Consultancy Services (TCS) has recognized DA-IICT as one of the Institutions to administer the TCS Research Scholar Program. This prestigious program provides attractive doctoral fellowships and contingency grant to full-time students pursuing PhD programs in broad areas of Computer Engineering, Computer Science, Information Systems, Information Technology and Software Engineering. Over and above fellowship, the Scholars are eligible to receive support for paper presentation in one International refereed conference, held outside India, and two National/International refereed conferences held in India, during the Scholar's tenure. Ms. Gitam Shikkenawis, 2012-13 batch PhD Scholar is the recipient of the Fellowship.

#### **TCS Students Award**

DA-IICT is one of the institutions selected by TCS for the 'TCS-100 Best' high-ranking engineering institute student award scheme. The 'TCS 100 Best' is to enhance student's attention towards academics through healthy competition. During the reporting year, Nagendra Chowdary, BTech 2011 batch student was conferred the award in 2015.



# Chief Minister Scholarship Scheme, Government of Gujarat

The students of DA-IICT are encouraged to apply for the 'Chief Minister Scholarship Scheme' introduced by the Government of Gujarat in March 2014. The Scheme provides financial help to bright and needy undergraduate students whose parents income is up to Rs.4.5 lakh. The Government of Gujarat has designated DA-IICT as one of the Institutions to guide the students in preparation and submission of applications for the scholarship. Forty eight BTech students have received the scholarship during the year 2014-15.

# THESES

#### Master's Theses

The thesis work of the MTech (ICT) students starts from the summer semester after their second semester courses. They work comprehensively to generate interesting research outcome under the guidance of the faculty. The list of MTech theses completed during the year is given in the **Annexure 2.** Students of MSc (ICT-ARD) and MDes (CD) programs work full time on projects during their fourth semester at DA-IICT or at leading organizations. The list of projects completed by the students of MSc (ICT-ARD) programs during the year is given in **Annexure 2.** 



# INSTITUTIONAL COLLABORATION AND STUDENT EXCHANGE PROGRAMS

The Institute has signed Memorandums of Understanding with national and international institutions to promote and enhance academic and research interaction as well as collaboration. The MoUs which are in force during the reporting period are as follows:

- The Government of Gujarat: To mentor the Indian Institute of Information Technology, Vadodara set up on Public Private Partnership (PPP) model by the Central and State Governments and Industry.
- Indian Navy: To admit eligible candidates sponsored by the Navy for MTech program and other advanced courses including PhD, joint research and development and training.
- Space Application Centre, Indian Space Research Organisation: To admit eligible Officers sponsored by the Space Application Centre for the PhD Programme of DA-IICT and collaborate on research and training.
- Institut Superieur D'Electronique De Paris, France: For exchange of faculty, students and joint research.
- University of Antwerp, Belgium: To exchange faculty, students and for scientific co-operation.
- International Crops Research Institute for the Semi-Arid Tropics, Hyderabad: To participate in



teaching, training and research; explore external funding opportunities for research, exchange and host students and scholars for research and degree programmes by each other and exchange scientific materials and publications.

- Indian Institute of Technology, Gandhinagar: To collaborate on teaching and research and exchange of scientific and academic personnel.
- Reliance Communications Limited: To institute the Research Chair to lead research and education in Computational Science and setting up of a Computational Science Laboratory at DA-IICT.
- Tata Consultancy Services: To nominate suitable full time PhD candidates of DA-IICT for the TCS Research Scholar Program.



- Erricsson India Private Limited: To impart trainings to the BTech students who have completed their sixth semester of studies at DA-IICT and consider employment of the certified students with Erricson India.
- eiTRA-einfochips Institute of Training Research and Academics Limited, Ahmedabad: To train and upgrade the skills of eiTRA employees, conduct lectures for academic programs offered by Ganpat University, provide consultancy and guidance for technological research and project execution, facilitate DA-IICT students to carry out their internship and project work at eiTRA-einfochips and jointly offer continuing education programs.
- Ramakrishna Sarada Sevashram, Bastar: To sponsor eligible candidates for PhD studies at DA-IICT, develop and support joint research programs and conduct specialized courses.

DA-IICT has also been receiving students from other institutions for research internships or project work regularly. The faculty members work as guides to them. The Institute also accepts students for long duration internships and traineeships.





# **CONTINUING EDUCATION PROGRAM**

DA-IICT designs and offer continuing education programs to researchers, academicians and professionals in Industries, public and government organizations to upgrade their skills. These programs are identified as knowledge–sharing programs and they are in the forms of workshops, seminars and hands on training. The institute provides end– to-end services in training and development for knowledge transfer and skill enhancement in areas as Information and Communication Technology, GIS, VLSI Technology, Embedded Systems, Computer Vision and Image Processing, Wireless Communications, Network Administration and Security, Linux, Database Management, Software Testing and Soft skills.

Programme	Sponsor/Coordinator	Period	No. of Participants
Workshop on Logical Thinking	ACM	15 September 2014	18
Workshop on 'Winter School on Speech and Audio Processing (WiSSAP) 2015: Production- Perception Based New Models of Speech Analysis'	TDIL/DeitY/DA-IICT	4-7 January 2015	62
Workshop on Technical Writing	ACM	16 February 2015	35
DAIICT-TCS Joint Workshop Series	TCS	10 April 2015	26
Workshop on 'Biologically Inspired Computing'	Reliance Communications/ Gujarat Council on Science & Technology	22-24 June 2015	33
Workshop on 'Soft Skills'	Indian Air Force	29 June-3 July 2015	15
Training on MS OFFICE	Indian Air Force	5-10 July 2015	15
Workshop on Patent filing and Intellectual Property Right (IPR)	Technology Information Forecasting and Assessment Council (TIFAC), DST, Government of India	11 July 2015	35
DA-IICT - TCS Academia Industry Joint Research Seminar	TCS	17 July 2015	28
Workshop on 'Geometrical Interpretation of Mathematical Concepts'	DASS Scientific Research Labs Private Limited	17-19 July 2015	15
Workshop on 'Information and Communication Technology for Development (ICT4D)'	Ministry of Earth Sciences, Government of India	25 July 2015	36



# Placements and Internships

# PLACEMENTS

DA-IICT has been one of the most preferred institutes by companies. A good number of students have been recruited with attractive packages by leading companies like Amazon, Bitmapper, Deloitte, Directi, FlipKart, Google, Hike, Linkedin, Morgan Stanley, Oracle and TCS. The 2014-15 placement season saw recruiters from various domains of industries offering job profiles like software development, R&D Engineer, Business Technology Analyst, Data Scientist, Site Reliability Engineer, ASIC Design Engineer, Business Intelligence Consultants and Graduate Engineer Trainees. Other companies that visited DA-IICT for campus placements were Aspire Minds, E-Infochips, Evosys, Future First, Grit Innovations, Juniper Networks, Kuliza, MAQ Softwares, and MuSigma. Fifty two companies participated in campus placement during 2014-15.

The Students were offered project internships in premier research institutions such as Capillary, Amazon and Oracle. The placement process also benefited junior batches with many of them securing summer internships.

Placement 2014-15	BTech	MTech	MScIT	MSc(ICT)ARD
Students opting for campus placement (each batch)	209	45	89	9
Students opting out of campus placement (each batch)	4	0	0	0
Total	214	45	89	9

A good number of students got placements in the companies in which they did their summer internships.

The average annual salary package was **Rs. 6.011 lakh**. The highest salary package touched **Rs. 26.00** lakh per annum.





Pool of Companies visited for placement

#### **RURAL INTERNSHIP**

Rural Internship is a mandatory requirement of BTech curriculum. The objective is to expose students to social and economic realities of rural lives; sensitize them to vulnerabilities the rural people face; and facilitate them to appreciate constraints and opportunities for development of rural India. Rural internship is of four weeks at the end of their Third Semester during December vacation. A three member Rural Internship Committee appointed by the Director is responsible for the Rural Internship.

The Btech 2013 Batch comprised of 276 students -66 female and 210 male students. They were placed in 8 States with 32 Non-Governmental Organizations. The Rural Internship period was from December 01 to December 28. Details appear in Table 1.

# Table 1: Gender and Organization-wise StudentDistribution - 2014 Batch

SI. No.	Non Governmental Organizations	Female	Male
1	Godavari Mahasamakhya	6	4
2	Sri Gowthami Urban and Rural Integrated Development & Educational Society	0	12
3	Ramakrishna Sarada Sevashram	2	2
4	Abhyan	3	0
5	Banaskantha District Co- operative Milk Producers' Union Ltd	0	4
6	Shri Bolbala Trust	0	8
7	Cohesion Foundation	2	16
8	Dharampur Utthan Vahini (DHRUVA)	4	6
9	DISHA Foundation	0	8
10	Gujarat Rural Institute for Socio-economic Reconstruction (GRISERV)	0	4
11	Garmin Vikas Trust (GVT)	0	4
12	Ishwar Gram Vikas Trust	0	4
13	Mehsana District Cooperative Milk Producers' Union Ltd.	0	12
14	Navjeevan Trust	0	12
15	Society for Integrated Land & Water Management (SOFILWM)	4	6
16	Sristi	0	2

17	Tribhuvandas Foundation (TF)	15	15
18	UNNATI Organization for Development Education	6	9
19	UTTHAN	0	6
20	Valsad District Cooperative Milk. Producers' Union Ltd	0	2
21	Sutra	0	3
22	North Himalayan Environment Protection & Education Society	0	11
23	Savigya	4	6
24	Aajeevika Bureau	0	3
25	Action for Food Production (AFPRO)	0	2
26	Astha Sansthan	6	0
27	Foundation for Ecological Security (FES)	0	4
28	Garmin Vikas Trust (GVT)	0	12
29	Jatan Sansthan	4	5
30	Himalayan Environmental Studies & Conservation Organization (HESCO)	3	4
31	Himalayan Institution for Environment Ecology and Development (HIFEED)	7	20
32	Peoples Science Institute (PSI)	0	4
	TOTAL	66	210

As a part of evaluation of Rural Internship, students made group-wise poster presentations which were evaluated by faculty members.







# Number of students opting for Summer internships - 33 (off-campus through Placement section)

Number of Organizations - 6

Sr. No.	Name of the organization/ Institution	No. of students
1	Google-India	1
2	Amazon India Pvt Ltd	10
3	Morgan Stanley Advantage Services Pvt Ltd	4
4	Goldman Sachs Pvt Ltd	1
3	Kivi Technology	8
4	Maq Softwares	7
5	Tata Consultancy Services	1
6	Interview Street	1

# Number of students opting for Industrial Internship - 163

Number of Organizations - 28

Sr. No.	Name of the Organization	No. of Students
1	Amazon Development Centre	4
2	Active Star Consultancy	3



3	Morgan Stanley Advantage Services Pvt Ltd	6
4	Direct-i	3
5	Gujarat Infomatics Limited	
6	Sprinklr Solutions Pvt Ltd	11
7	Kuliza	4
8	Thorogood associates Pvt Ltd	1
9	Deloitte Consultancy	23
10	MAQ Softwares Pvt Ltd	7
11	Verse	8
12	Evolutionary systems Pvt Ltd	5
13	Infibeam (e-commerce)	2
14	Opshub Solutions Pvt Ltd	3
15	Infocusp	6
16	SABA	8
18	HIKE India Itd	2
19	Tata Consultancy Services	31
20	Infosys	26
21	Ishi systems Pvt Ltd	1
22	Grit Innovations Pvt Ltd	6
23	Juniper Networks Pvt Ltd	9
24	Cignex Datamatics Pvt Ltd	3
25	Kivi technologies Pvt Ltd	2
26	Barrix Agro sciences Pvt Ltd	2
27	AKRSP(I)	1
28	American Foundation	2



# Eleventh Convocation

The eleventh Annual Convocation was held on 17<sup>th</sup> January, 2015. Professor Shankar K Pal, Distinguished Scientist, JC Bose National Fellow, INAE Chair Professor and former Director, Indian Statistical Institute, Kolkata graced the occasion as the Chief Guest. Shri Suresh Rangachar, Member, Board of Governors and President, Reliance Communications Limited, Mumbai presided over the function. Three hundred and sixty two students received their Degrees. This included 2 Doctoral Scholars, 44 MTech, 83 MSc (IT), 8 MSc (ICT-ARD), 6 MDes (CD) and 219 BTech (ICT) students. The following students were awarded the President's Gold Medals for attaining scholastic achievements in their respective programs:

MTech (ICT) (2012) Trivedi Nirav Prashantkumar MSc (IT) (2012) Deodhar Prachi Milind MDes (CD) (2012) Namita Shah BTech (ICT) (2010) Mansi Rankawat



**BTech Batch** 



Dr Shankar Pal, dedicated his address to the contemporary topic of 'Big Data: Challenges and National Relevance' in the context of the present information revolution. He recalled his four decades of research experience and highlighted that this topic is a 'must-know' subject to any technologist, applied scientist or practitioner dealing with data. He pointed out that big data analysis or analytics has high potential from the research and development perspective in academia, industry and national planning and development. He stressed that the topic fits well in the frame work of 'Digital India' initiative and has a strong link with the objectives of 'Make India' Program which designed to transform India into a goal manufacturing hub. While concluding his address, he advised the graduates to work hard, define their goals, be honest to their profession, finish the work ahead of deadline and respect the teachers.



Postgraduate Batch

# Research and Development (Sponsored Projects and Entrepreneurship)

# SPONSORED PROJECTS

Ever since it was founded, the Institute has had a vibrant research environment. This has brought dynamism to its all academic activities. The Institute has well eastablished research infrastructure and facilities, such as well-equipped laboratories, specialized equipment, campus-wide networking, and high-speed Internet access, and subscription to hundreds of print and online journals. The Institute also houses an Incubation Center to nurture and develop business ideas based on new technology. The faculty, students, and research staff are active in research in several academic disciplines, including but not limited to the following: computer science, electronics and communication, mathematics, physics, agriculture and rural development, humanities, and social sciences. The faculty members have been regularly publishing their research work in leading refereed journals and conferences. Over the last decade, a large number of sponsored projects have been initiated by faculty. Many students have started their own companies. In the year 2014-15, the Institute received a grant for five new sponsored projects

AGENCY	TITLE	DURATION	INVESTIGATORS
GHM	Techno Feasibility Study on Automation of hydroponics and green house cultivation	2015 (6 MONTHS)	Ranendu Ghosh Rahul Dubey
NBHM	Knowledge Compilation in Modal and Multimodal Logic	2015 (2 Years)	Manoj Raut Rahul Muthu
GUJCOST	Processor RTL Customization and Development of Low Power Design Flow Methodology	2015 (2 Years)	Amit Bhatt Mazad Zaveri
GUJCOST	Enabling Technologies for Remote Health Monitoring	2015 (2 Years)	Biswajit Mishra Manik Lal Das
BRNS	Kinetic Modeling of Large size negative Ion Sources for Fusion Application using Emerging Parallel Processing Computer Architecture	2015 (3 Years)	Bhaskar Chaudhury Mukesh Tiwari

#### **Table 1: New Projects**

Faculty continued work on nine on-going sponsored projects.





AGENCY	TITLE	INVESTIGATORS	
DSTGOI	Development of Infant Cry Analyzer Using Source And System Features	Hemant Patil	
DeitY	Development of Cross Lingual Information (CLIA) System Phase- II	Prasenjit Majumder Suman Mitra	
DST	Indian Digital Heritage (IDH-Hampi) Phase-II (Digital Capture of Culture & Heritage)	Manjunath Joshi Hemant Patil	
National Innovation Foundation	Value Addition in Grassroots Technologies	Anil Roy Rahul Dubey	
BRNS	Techniques for Robust Face Recognition with post variation	Suman Mitra Mehul Raval	
DeitY	Development of Text to Speech System in Indian Languages: High Quality Text to Speech Synthesis and Small Footprint TTS Integrated with Disability Aids	Hemant Patil M.V. Joshi	
DeitY	Speech based Access of Agricultural Commodity Prices and Weather Information in 12 Indian Languages/ Dialects (Automatic Speech (ASR): Consortium Phase-II	Hemant Patil M.V. Joshi	
SAC	Ultra Wide Band Dielectric Resonator Antenna	Deepak Ghodgaonkar Sanjeev Gupta	
NSF/TCPP	Fall-14 CDER Early Adopter	Bhaskar Chaudhury Mukesh Tiwari	

#### Table 2: On-going Projects

Faculty completed work on four sponsored projects. This includes 3 DST and 1 DeitY projects.

## **Table 3: Completed Projects**

AGENCY	TITLE	INVESTIGATORS
DST	Wireless Telemedicine using Body Area Sensor Networks and Heterogeneous Access Networks	Laxminarayana Pillutla
DST	Service–oriented Architecture for spatial Data Integration and Spatial reasoning	Sanjay Chaudhary Minal Bhise
DeitY	Development of Prosodically Guided Phonetic Engine for searching in Indian Languages	Hemant Patil M.V. Joshi
DST (WOS-A)	Evaluation of Spatiotemporal Dynamics of Land Surface Evapotranspiration and Monsoon Rainfall coupling over Indian Region for Climate Change Studies	Indrani Choudhury Singh Ranendu Ghosh

# **INCUBATION CENTRE**

A new student-led startup, Kamkaaj Solutions, was incubated. The company was given startup funding under the TIDE grant received from DeitY. The company has also been allocated office workspace with the incubator.

A patent and IPR awareness workshop was held on 11<sup>th</sup> July. It was jointly organized by DCEI and Technology Information Forecasting and Assessment Council (TIFAC), New Delhi. The workshop attracted participants including 24 faculty members and 26 research scholars from various Institutes and Universities within Gujarat. The workshop topics included patent and IPR management, and relationship between entrepreneurship, patents and IPR. The Chief Guest of the workshop was Dr. Sunil Shukla, Director, EDI, Gandhinagar. Resource Persons for the workshop were Executive Director of TIFAC, Head of PFA-TIFAC, Assistant Controller Patent Office, Corporate Head and Mentropreneur from TCS and icreate (International Centre for Entrepreneurship and Technology).



# SPECIAL LECTURES

**Mr. K. Ananth Krishnan**, Chief Technology Officer, TCS, 'Special Lecture,' 06 August 2014.

**Prof. Gaurav Sharma**, Department of Electrical and Computer Engineering, Univercity of Rochester, Rochester, NY, 'Imaging Arithmetic: Physics U Math > Physics + Math,' 08 January 2015.

**Prof. Indira Ghosh**, School Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi, 'In Search of Structure Based Pharmacophore Using Graph Based Method,' 08 January 2015.

**Prof. Sankar Kumar Pal**, Indian Statistical Institute, Kolkata, 'Soft Granular Mining: Concepts, Applications and Big Data Issues,' 16 January 2015.

**Prof. Vijayan Asari**, University of Dayton, USA, 'Network Enabled Feature Search for High-Speed Face Recognition in Video Sequences,' 15 May 2015.

#### **SEMINAR/WORKSHOPS**

Workshop on Logical Thinking, DA-IICT, 15 September 2014.

Workshop on 'Winter School on Speech and Audio Processing (WiSSAP) 2015: Production-Perception Based New Models of Speech Analysis,' DA-IICT, 4-7 January 2015. Workshop on Technical Writing, DA-IICT, 16 February 2015.

'DAIICT-TCS Joint Workshop Series,' DA-IICT, 10 April 2015.

Workshop on 'Biologically Inspired Computing,' DA-IICT, 22-24 June 2015.

Workshop on 'Geometrical Interpretation of Mathematical Concepts,' DA-IICT, 17-19 July 2015.

DA-IICT-TCS Academia Industry Joint Research Seminar, 17 July 2015.

Workshop on 'Patent filing and IPR,' DA-IICT, 11 July 2015.

Workshop on 'Information and Communication Technology for Development,' DA-IICT, in collaboration with CII-GKAFC, Gujarat, 25 July 2015.

# VISITORS

Library Staff and Network Administrator of Charotar University of Science and Technology, Changa, visited DA-IICT on 16 July 2015 and held discussions on Library Management System implemented at DAIICT.

Two hundred fifty NRI and foreign participants at the 'Vibrant Gujarat Summit 2015' under Youth PBD Program visited DA-IICT on 7 January 2015.





# Faculty Publications

Publications reflect faculty and staff interests and their research initiatives. The publications have appeared primarily in peer-reviewed conferences and journals. Majority publications have student co-authors, indicating a strong faculty commitment to train

# **Books**

1. Alka Parikh, Attaining Food Security: Experiments of 10 Asian Nations, New Delhi: Gyan Publications, 2015.

# **Book Chapters**

- 1. Aditi Nath Sarkar and Delmonico Neal, "Love never tasted quite like this before: Srngara-rasa in the Light of Two Texts from a Sahajiya Vaisnava Notebook," in *Emotions in Indian Thought-Systems*, P. Bilimoria and A. Wenta, Eds., New Delhi: Routledge, 2015, pp. 156-184.
- 2. **B. N. Hiremath** and Deepa B. Hiremath, "Placing Food Security in the Context of Livelihood Security in Fragile Tribal Environment," in *Food Security Law: Interdisciplinary Perspectives*, Bimal N Patel and Ranita Nagar, Eds.; Lucknow: Eastern Book Company, 2014, chapter no. 8.
- 3. Gaurav Mishra, "Telecentres as a Medium for Good Governance in Rural India," in *Handbook* of Research on Democratic Strategies and *Citizen-Centered E-Government Services*, cemal Dolicanin, Ejub Kajan, Dragan Randjelovic, Boban Stojanovic, Eds., Pennsylvania: IGI-Global, 2014. DOI: 10.4018/978-1-4666-7266-6

# **Journal Papers**

- SRoshini Praveen, Sridhar N. and Nagaraj Ramrao, "Interactive self monitoring wireless sensor for smart office using Zig-Bee communications," *International Journal of Emerging Research in Management and Technology*, vol. 4, no. 5, pp. 67-72, May 2015.
- Sridhar N., Nagaraj Ramrao and Manoj Kumar Singh, "PID controller auto tuning using ASBO technique," *Journal of Control Engineering and Technology*, vol. 4, no. 3, pp. 192-204, July 2014.
- Sumukh Bansal and Aditya Tatu, "Active Contour Models for Manifold Valued Image Segmentation," *Journal of Mathematical Imaging and Vision*, vol. 52 no. 2, pp. 303-314, June 2015.
- Sangeeta Sinha, Anil K. Roy and S.N.P. Singh, "CSD Type Family Solar Drying Technology and its Potential Impact on Rural Development and

and mentor both postgraduate and undergraduate students in research.

In 2014-2015, the faculty published 1 book, 3 chapters in books and 113 papers in journals and conferences.

Nutrition – a Case Study," *Energy and Environment Research,* vol. 4, no. 2, pp. 98-104, 2014.

- Chirag I. Patel, Sanjay Garg, Tanish Zaveri and Asim Banerjee, "Top-Down and Bottom-Up Cues Based Moving Object Detection for Varied Background Video Sequences," Advances in Multimedia, vol. 2014, Article ID 879070, 16 Nov. 2014. DOI:10.1155/2014/879070
- Bharani Kollipara, "Gandhi and the Stoics: Modern Experiments on Ancient Values by Richard Sorabji (review)," *Philosophy East and West: A Quarterly of Comparative Philosophy*, vol. 65, no. 1, pp. 354-359, Jan. 2015. DOI: 10.1353/ pew.2015.0001
- Bharani Kollipara, "Praxis as Poeisis: creating oneself as a work of art," *Samyukta: A Journal of Womens' Studies*, vol. XIV, no. 1, pp. 17-29, Jan. 2015.
- 8. Biswajit Mishra, P. Wilson and R. Wilcock, "A geometric algebra Co-Processor detection." Electronics. for color edae Jan. 4. no. 1, *pp*. 94-117, 2015. vol DOI: 10.3390/electronics4010094
- 9. **Biswajit Mishra**, Kochery, M., Wilson, P. and Wilcock, R., "A novel signal processing coprocessor for *n*-Dimensional geometric algebra applications," *Circuits and Systems*, vol. 5, no. 11, pp. 274-291, Nov. 2014. DOI:10.4236/cs.2014.511029
- G. D. Makwana, Deepak Ghodgaonkar and Sanjeev Gupta, "Dual mode and miniaturized rectangular dielectric resonator antenna with a simple feeding scheme," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 25, no. 3, pp. 229-235, Mar. 2015.
- R. J. Doshi, **Deepak Ghodgaonkar**, D. K. Singh and D. K. Das, "Flexible Solid State Power Amplifier for Space Use," *International Journal of microwave and Optical Technology*, vol. 10, no. 2, pp. 126-131, Mar. 2015.
- 12. Namrata Singh and Nikhil Bhendawade and **Hemant A. Patil**, "Novel cochlear filter based cepstral coefficients for classification of unvoiced fricatives," *International Journal on Natural Language Computing*, vol. 3, no.4, pp. 21- 40, Aug. 2014.

- Madhumita Mazumdar, "Review of The Atomic State: Big Science in Twentieth Century India, by Jahnavi Phalkey, Ranikhet, Permanent Black, 2013," *South Asian History and Culture*, vol. 6, no. 4, pp. 512-515, Apr. 2015. DOI: 10.1080/19472498.2015.1063220
- 14. **Manik Lal Das**, "Key-escrow free Multi-Signature Scheme using Bilinear Pairings," *Groups Complexity Cryptology*, vol. 7, no. 1, pp. 47-57, May 2015.
- Jaydeep Solanki, Aenik Shah, Manik Lal Das, "Secure Patrol : Patrolling Against Buffer Overflow Exploits," *Information Security Journal: A Global Perspective*, vol. 23, no. 3, pp. 107-117, May 2014.
- Anand Mudgerikar and Manik Lal Das, "Secure Multicast using IPsec and Multi-party Key Computation," *International Journal of Internet Technology and Secured Transactions*, vol. 5, no. 2, pp. 149-162, Apr. 2014. DOI: 10.1504/ IJITST.2014.064514
- Kishor P. Upla, Manjunath V. Joshi, Sharad Joshi, Prakash P. Gajjar, "Multi-resolution Image Fusion using Edge Preserving Filters," *Journal of Applied Remote Sensing*, vol. 9, no. 1, pp. 096025(1-26), July 2015. DOi: 10.1117/1.JRS.9.096025
- Milind Padalkar and Manjunath V. Joshi, "Auto-inpainting Heritage Scenes: A Complete Framework for Detecting and Infilling Cracks in Images and Videos with Quantitative Assessment," *Machine Vision and Applications*, vol. 26, no. 2-3, pp. 317-337, Mar. 2015. DOI: 10.1007/s00138-015-0661-6
- Jaladhi Vyas, Manjunath V. Joshi and Mehul S Raval, "Automatic Target Image Detection for Morphing," *Journal of Visual Communication and ImageRepresentation*, vol. 27, pp. 28-43, Feb. 2015. DOI: 10.1016/j.jvcir.2014.12.005
- Rakesh C. Patel and Manjunath V. Joshi, "Super-Resolution of Hyperspectral Images: Use of Optimum Wavelet Filter Coefficients and Sparsity Regularization," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 53, no. 4, pp. 1728-1736, April 2015. DOI: 10.1109/TGRS.2014.2346811
- Kishor Upla, Manjunath V. Joshi and Prakash Gajjar," An Edge Preserving Multiresolution Fusion: Use of Contourlet Transform and MRF Prior," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 53, no.6, pp. 3210-3220, June 2015. DOI: 10.1109/TGRS.2014.2371812
- 22. Manoj K. Raut and Arindama Singh, "A survey on computing prime implicants and implicates in classical and non-classical logics," *International Journal of Computer Systems Science and Engineering*, vol. 29, no. 5, Sept. 2014.

- 23. **Mukesh Tiwari**, TRKrishna Mohan and Surajit Sen, "Drag force regimes in granular Impact," *Physical Review E*, vol. 90, no. 6, pp. 062202(1-5), Dec. 2014. DOI: 10.1103/PhysRevE.90.062202
- Nabin Kumar Sahu, "Implicit variational inclusions and algorithms involving (*A*, η)-monotone operators in 2-uniformly smooth Banach spaces," *Journal of Mathematics and System Science*, vol. 5, pp. 269-278. May 2015. DOI: 10.17265/2159-5291/2015.06.006
- 25. Kripabandhu Ghosh, Swapan K. Parui, **Prasenjit Majumder**, "Learning combination weights in data fusion using Genetic Algorithms," *Information Processing and Management*, vol. 51, no. 3, pp. 306-328, May 2015. DOI: 10.1016/j. ipm.2014.12.002
- Nitin Ramrakhiyani, Prasenjit Majumder, "Approaches to Temporal Expression Recognition in Hindi," ACM Transactions on Asian and Low-Resource Language Information Processing, vol. 14, no. 1, Article no. 2, Jan. 2015. DOI: 10.1145/2629574
- 27. **Rutu Parekh**, Jacques Beauvais, and Dominique Drouin, "SET logic driving capability and its enhancement in 3-D integrated SET– CMOS circuit," *Microelectronics Journal*, vol. 45, no. 8, pp. 1087-1092, Aug. 2014. DOI: 10.1016/j.mejo.2014.05.020
- 28. Ratnik Gandhi and **Samaresh Chatterji**, "Applications of Algebra for Some Game Theoretic Problems," *International Journal of Foundations of ComputerScience*, vol.26, no. 1, pp.51-78, Jan. 2015. DOI:10.1142/s0129054115500033
- 29. Vivek Dhoot and **Sanjeev Gupta**, "Design and Analysis of a Novel Multifractal Multiband Antenna using 3D-FDTD Method," *International Journal of Applied Electromagnetic Research*, vol. 9, no. 20, pp. 8129–8139, Sept. 2014.
- Dhoot, Vivek. and Sanjeev Gupta, "Multiband Fractal Antenna for Mobile & Tablet PCs covering LTE, UMTS, GSM and WLAN Applications," *International Journal of Microwave and Optical Technology*, vol. 10, no. 2, pp. 118-125, Mar. 2015.
- 31. G. D. Makwana, Deepak Ghodgaonkar and Sanjeev Gupta, "Dual Mode and Miniaturized Rectangular Dielectric Resonator Antenna with a Simple Feeding Scheme", International Journal of RF and Microwave Computer-Aided Engineering, vol. 25, no. 3, pp. 229-235, Mar. 2015. DOI: 10.1002/mmce.20853
- 32. Ashish K. Sarvaiya, **Sanjeev Gupta**, "Inclusion of Broadband Frequency Responses of Passive and Linear Networks into Circuit Solver: Simple Approach using Vector Fitting," *International*



*Journal of Microwave and Optical Technology*, vol. 10, no. 2, pp. 105-110, Mar. 2015.

33. Ashish Phophalia, Ajit Rajwade and Suman K. Mitra, "Rough set based image denoising for brain MR images," Signal Processing, vol. 103, pp. 24-35, Oct. 2014. DOI: 10.1016/j.sigpro.2014.01.029

# **Conference and Workshop Papers**

- 1. Nagaraj Ramrao, Preeta Sharan and Piruthiviraj P, "Multimedia Data Transfer from IPV4-IPV6 in an Optical Network by Using Routing Table," in *IEEE International Advance Computing Conference* (*IACC*), 2015, Bengaluru, 12-13 Jun. 2015, pp.1044-1049.
- Sridhar N, Nagaraj Ramrao, Manoj Kumar Singh, "Design of PID Controller with Auto tuned Prefilter using Chaotic Optimization," in *IEEE International Conference on Circuits, Communication, Control and Computing (I4C),* Bengaluru, 21-22 Nov. 2014, pp. 141-145.
- Sruthi G, Sridhar N, Nagaraj Ramrao, "Detection of High Impedance faults in Electrical Distribution Networks," in Second International Conference on Emerging Research in Computing, Information, Communication and Applications, Bengaluru, 1-2 Aug. 2014, pp. 151-155.
- 4. Aditya Tatu and Sumukh Bansal, "A Novel Active Contour Model for Texture Segmentation," in 10th International Conference on Energy Minimization Methods in Computer Vision and Pattern Recognition, Hong Kong, 13-16 Jan. 2015, pp. 223-236.
- Alka Parikh, "Inter-Country Comparison of Food Security Schemes: Lessons Learnt," in 2nd International Conference on Arid Land Studies (ICAL 2) on Food Security & Innovations in Arid & Semi-arid Agro-ecosystems, Uzbekistan, 9-13 Sept. 2014.
- Shalin Shah, Vijay Dhameliya and Anil K. Roy, "ImPatho-an Image Processing Based Pathological Decision Support System for Disease Identification and a Novel Tool for Overall Health Governance," in *IEEE Region 10, Humanitarian Technology Conference (R10-HTC)*, Chennai, 6-9 Aug. 2014, pp. 64-69. DOI: 10.1109/R10-HTC.2014.7026311
- Aditya Basu, Anish Mathuria and Nagendra Chowdary, "Automatic Generation of Compact Alphanumeric Shellcodes for x86," in 10th International Conference on Information Systems Security, Hyderabad, 16-20 Dec. 2014, pp. 399 -410.
- 8. Archit Jain, **Manjunath Joshi** and **Asim Banerjee**, "Image compression using DCT and Compressive

Sensing (CS) Theory," in *Eighth International Conference on Advances in Pattern Recognition (ICAPR)*, Kolkata, 4-7 Jan. 2015.

- Aakash Goyal, Chetan Moradiya, Sanjay Chaudhary, Minal Bhise, Asim Banerjee, "Agro Advisory System for Cotton Crop," in Proceedings of the Workshop on Networks and Systems for Agriculture AGRINETS 2015, Bengaluru, 06 Jan. 2015, pp. 1-6. DOI: 10.1109/ COMSNETS.2015.7098701
- Nupur Jain and Biswajit Mishra, "CORDIC on a Configurable Serial Architecture for Biomedical Signal Processing Applications," in 19th International Symposium on VLSI Design and Test (VDAT), Ahmedabad, 26-29 Jun. 2015, pp. 1-6. DOI: 10.1109/ISVDAT.2015.7208050
- 11. Nupur Jain and **Biswajit Mishra**, "QRS Detection Algorithm on a Novel Reconfigurable Multiplierless Architecture," in *IEEE International Conference on Industrial Instrumentation and Control (ICIC 2015)*, Pune, 28-30 May 2015 pp. 469-474. DOI: 10.1109/IIC.2015.7150788
- A. Savaliya and Biswajit Mishra, "A 0.3V, 12nW, 47fJ/conv, Fully Digital Capacitive Sensor Interface in 0.18um CMOS," in International Conference on VLSI Systems, Architecture, Technology and Applications (VLSI-SATA 2015), Bengaluru, 8-10 Jan. 2015, pp. 1-6. DOI: 10.1109/VLSI-SATA.2015.7050485
- C. Patel and **Biswajit Mishra**, "All Digital Delay-line based Ultra Wide Band Transmitter Architecture in 0.18µm CMOS,» in 9th IEEE International Conference on Industrial and Information Systems (ICIIS2014), Gwalior, 15-17 Dec. 2014, pp. 1-6. DOI: 10.1109/ICIINFS.2014.7036588
- 14. Ram Naresh Kumar Vangala, **B. N. Hiremath** and **Maitrayee Mukerji**, "ICTs for Agriculture Knowledge Management: Insights from DHRUVA, India," in *Proceedings of the Seventh International Conference on Information and Communication Technologies and Development (ICTD 2015)*, Singapore, 15-18 May 2015, article no. 51. DOI: 10.1145/2737856.2737863
- 15. Ram Naresh Kumar Vangala, **B. N. Hiremath** and **Asim Banerjee**, "A Theoretical Framework for Knowledge Management in Indian Agricultural Organizations," in *Proceedings of the 2014 International Conference on Information and Communication Technology for Competitive Strategies*, Udaipur, 14-16 Nov. 2014, article no. 6. DOI:10.1145/2677855.2677861
- 16. Deepak B. Hiremath, Harekrishna Misra, **Sanjay Chaudhary** and **B. N. Hiremath**, "Assessment of Village Level Demand on e-Governance Services Using Participatory Rural Appraisal," in *Proceedings of the 2014 International Conference*

on Information and Communication Technology for Competitive Strategies, Udaipur, 14-16 Nov. 2014, article no. 25. DOI:10.1145/2677855.2677880

- 17. M Karthick, Vineet Kumar Dad, Shilpi Soni, Chinmoy Saha and **Deepak Ghodgaonkar**, "Design and Implementation of Miniaturized Dual Band Quadrature Hybrid at S and C Band for SATCOM Application," in 2nd International Conference on Emerging Technology Trends in Electronics, Communication and Networking (ET2ECN), Surat, 26-27 Dec. 2014, pp. 1-4. DOI: 10.1109/ET2ECN.2014.7044933
- Gaurav Mishra, "e-Government in rural India: An insight into the sustainability issues of telecentres," in Proceedings of the 2014 International Conference on Information and Communication Technology for Competitive Strategies, New York: ACM, November 2014, article no. 90. DOI: 10.1145/2677855.2677945
- 19. Pramod B. Bachhav, **Hemant A. Patil** and Tanvina B. Patel, "A novel filtering based approach for epoch extraction," in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, 19-24 Apr. 2015, pp. 4784-4788. DOI: 10.1109/ICASSP.2015.7178879
- 20. Anshu Chittora, **Hemant A. Patil** and Hardik B. Sailor, "Spectro-temporal analysis of HIE and asthma infant cries using auditory spectrogram," in *International Conference on BioSignal Analysis, Processing and System (ICBAPS 2015)*, Kuala Lumpur, Malaysia, 26-28 May 2015, pp. 145-150. DOI: 10.1109/ICBAPS.2015.7292235
- 21. Anshu Chittora and **Hemant A. Patil**, "Analysis of normal and pathological infant cries using bispectrum features derived using HOSVD," in *International Conference on BioSignal Analysis, Processing and System (ICBAPS 2015)*, Kuala Lumpur, Malaysia, 26-28 May 2015 pp. 151-155. DOI: 10.1109/ICBAPS.2015.7292236
- Hardik B. Sailor, Maulik C. Madhavi and Hemant A. Patil, "Significance of phase-based features for person recognition using humming," in Proceedings of the 2nd International Conference on Perception and Machine Intelligence (PerMin), Kolkata, 26-27 Feb. 2015, pp. 99-103. DOI: 10.1145/2708463.2709035
- 23. Purvi Agrawal and **Hemant A. Patil**, "Fusion of TEO Phase with MFCC features for speaker verification," in *Proceedings of the 2nd International Conference on Perception and Machine Intelligence (PerMin),* Kolkata, 26-27 Feb. 2015, pp. 161-166. DOI: 10.1145/2708463.2709057
- 24. Shubham Sharma and **Hemant A. Patil**, "Combining Evidences from Bark scale and

Mel scale warped features for VTLN," in *Proceedings of the 2nd International Conference on Perception and Machine Intelligence (PerMin)*, Kolkata, 26-27 Feb. 2015, pp. 133-136. DOI: 10.1145/2708463.2709042.

- 25. Anshu Chittora, **Hemant A. Patil** and Kewal D. Malde, "Classification of stop consonants using modulation spectrogram-based features," in *Proceedings of the 2nd International Conference on Perception and Machine Intelligence (PerMin)*, Kolkata, 26-27 Feb. 2015, pp. 145-150. DOI: 10.1145/2708463.2709051
- 26. Hemant A. Patil, Shubham Sharma and Maulik Madhavi, "Development of vocal tract length normalized phonetic engine for Gujarati and Marathi languages," in 17th Oriental Chapter of the International Committee for the Co-ordination and Standardization of Speech Databases and Assessment Techniques (COCOSDA 2014), Phuket, Thailand, 10-12 Sept. 2014, pp. 1-6. DOI: 10.1109/ICSDA.2014.7051439
- 27. Anshu Chittora, Kewal D. Malde and **Hemant A. Patil**, "Obstruent classification using modulation spectrogram based features," in 17th Oriental Chapter of the International Committee for the Co-ordination and Standardization of Speech Databases and Assessment Techniques (COCOSDA 2014), Phuket, Thailand, 10-12 Sept. 2014, pp. 1-6. DOI: 10.1109/ICSDA.2014.7051438
- 28. M. C. Madhavi and **Hemant A. Patil**, "Exploiting Variable length Teager Energy Operator in melcepstral features for person recognition from humming," in *9th International Symposium on Chinese Spoken Language Processing (ISCSLP)*, Singapore, 12-14 Sept. 2014, pp. 624-628. DOI: 10.1109/ISCSLP.2014.6936654
- 29. Hemant A. Patil and Tanvina B. Patel, "Chaotic Mixed Excitation Source for Speech Synthesis," in 15th Annual Conference of the International Speech Communication Association (INTERSPEECH 2014), Singapore, 14-18 Sept. 2014, pp. 785-789.
- Anshu Chittora and Hemant A. Patil, "Use of glottal inverse filtering for asthma and HIE infant cries classification," in *International Conference* on Asian Language Processing (IALP), Kuching, Sarawak, 20-22 Oct. 2014, pp.158-161.DOI: 10.1109/IALP.2014.6973505
- Anshu Chittora and Hemant A. Patil, "Classification of phonemes using modulation spectrogram based features for Gujarati languages," in *International Conference on Asian Language Processing* (*IALP*), Kuching, Sarawak, 20-22 Oct. 2014, pp. 46-49. DOI: 10.1109/IALP.2014.6973506
- 32. Mohammadi Zaki, Nirmesh Shah and Hemant



**A. Patil**, "Effectiveness of multiscale fractal dimension-based phonetic segmentation in speech synthesis for low resource language," in *International Conference on Asian Language Processing (IALP)*, Kuching, Sarawak, 20-22 Oct. 2014, pp. 103-106. DOI: 10.1109/IALP.2014.6973508

- Nirmesh Shah, Mohammadi Zaki and Hemant A. Patil, "Influence of various asymmetrical contextual factors for TTS in a low resource language," in *International Conference on Asian Language Processing (IALP)*, Kuching, Sarawak, 20-22 Oct. 2014, pp. 107-110. DOI: 10.1109/ IALP.2014.6973509
- Purushottam Radadia and Hemant A. Patil, "Cepstral mean subtraction based features for singer identification," in *International Conference* on Asian Language Processing (IALP), Kuching, Sarawak, 20-22 Oct. 2014, pp. 58-61. DOI: 10.1109/IALP.2014.6973510.
- 35. Bhavik Vachhani, Kewal D. Malde, Maulik C. Madhavi and Hemant A. Patil, "A spectral transition measure based MELCEPSTRAL features for obstruent detection," in *International Conference on Asian Language Processing (IALP)*, Kuching, Sarawak, 20-22 Oct. 2014, pp. 50-53. DOI: 10.1109/IALP.2014.6973511.
- Shubham Sharma, Maulik C. Madhavi, and Hemant A. Patil, "Vocal tract length normalization for vowel recognition in low resource languages," in *International Conference on Asian Language Processing (IALP)*, Kuching, Sarawak, 20-22 Oct. 2014, pp. 54-57. DOI: 10.1109/ IALP.2014.6973516.
- 37. Shubham Sharma, Maulik C. Madhavi and Hemant A. Patil, "Development of language resources for speech application in Gujarati and Marathi," in *International Conference on Asian Language Processing (IALP)*, Kuching, Sarawak, 20-22 Oct. 2014, pp. 115-118. DOI: 10.1109/IALP.2014.6973517
- **38. Hemant A. Patil** and S. Adarsa, "Nonlinear analysis of speech signals for classification of natural vs. HMM-based synthetic speech," in *International Conference on Asian Language Processing (IALP)*, Kuching, Sarawak, 20-22 Oct. 2014, pp. 119-122. DOI: 10.1109/IALP.2014.6973518
- 39. Ankur G. Undhad, Hemant A. Patil and Madhavi, Maulik C. "Exploiting speech information vowel source for landmark detection for low resource language," in 9th International Symposium on Chinese Spoken Language Processing (ISCSLP'14), Singapore, 12-14 Sept. 2014, pp. 546-550. DOI: 10.1109/ISCSLP.2014.6936660

- 40. Mohammadi Zaki, Nirmesh Shah and Hemant A. Patil, "Effectiveness of fractal dimension for ASR in low resource language," in 9th International Symposium on Chinese Spoken Language Processing (ISCSLP'14), Singapore, 12-14 Sept. 2014, pp. 464-468. DOI: 10.1109/ISCSLP.2014.6936645
- 41. Anshu Chittora and **Hemant A. Patil**, "Classification of pathological infant cries using modulation spectrogram features," in 9th International Symposium on Chinese Spoken Language Processing (ISCSLP'14), Singapore, 12-14 Sept. 2014, pp. 541-545. DOI: 10.1109/ISCSLP.2014.6936626
- 42. TanvinaPateland **HemantA.Patil**, "Novelapproach for estimating length of the vocal folds using Fujisaki model," in *9th International Symposium on Chinese Spoken Language Processing (ISCSLP'14)*, Singapore, 12-14 Sept. 2014, pp. 308-312. DOI: 10.1109/ISCSLP.2014.6936673
- 43. Hardik B. Sailor and **Hemant A. Patil**, "Fusion of magnitude and phase-based features for objective evaluation of TTS voice," in 9th International Symposium on Chinese Spoken Language Processing (ISCSLP'14), Singapore, 12-14 Sept. 2014, pp. 521-525. DOI: 10.1109/ISCSLP.2014.6936618
- 44. Nirmesh J. Shah, **Hemant A. Patil**, Maulik C. Madhavi, Hardik B. Sailor and Tanvina B. Patel, "Deterministic annealing EM algorithm for developing Gujarati TTS system, " in *9th International Symposium on Chinese Spoken Language Processing (ISCSLP'14)*, Singapore, 12-14 Sept. 2014, pp. 526-530. DOI: 10.1109/ISCSLP.2014.6936666
- 45. Hemant A. Patil and Tanvina B. Patel, "Chaotic mixed excitation source for synthesis of speech signal," in *15th Annual Conference of International Speech Communication Association*, Singapore, 14-18 Sept. 2014, pp. 785-789.
- 46. Madhumita Mazumdar, "Sensitive Plant, Contentious Object- Notes on J.C. Bose and the Mimosa Pudica in early 20th century Bengal," in International Conference on Global Histories of Science, New Delhi, 17 Dec. 2015.
- 47. Nidhi Desai and **Manik Lal Das**, "On the security of RFID authentication protocols," in *Proceedings of IEEE International Conference on Electronics, Computing and Communication Technologies*, Bengaluru, 10-11 Jul. 2015, pp. 1-5. DOI; 10.1109/CONECCT.2015.7383895
- 48. Manik Lal Das, "Privacy and Security Challenges in Internet of Things," in *Proceedings of 11th International Conference on Distributed Computing and Internet Technologies (ICDCIT 2015)*, LNCS

8956, Springer, 5-10 Feb. 2015, pp. 33-48. DOI: 10.1007/978-3-319-14977-6\_3

- 49. Raghuvir Songhela and **Manik Lal Das**, "Yet another strong privacy-preserving RFID mutual authentication protocol," in *Proc. of International Conference on Security, Privacy and Applied Cryptographic Engineering (SPACE 2014)*, LNCS 8804, Springer, 18-22 Oct. 2014pp. 171-182. DOI: 10.1007/978-3-319-12060-7\_12
- 50. Shrishail Gajbhar and **Manjunath V. Joshi**, "Design of Extrafine Complex Directional Wavelet Transform and Application to Image Denoising," in *IEEE 16th International Workshop* on Multimedia Signal Processing (MMSP-2014), Jakarta, Indonesia, 22-24 Sept. 2014, pp. 1-6. DOI: 10.1109/MMSP.2014.6958794
- Trupti Padiya, Minal Bhise, Sandeep Vasani and Mohit Pandey, "Query Execution for RDF Data on Row and Column Store," In Distributed Computing and Internet Technology: 11th International Conference, ICDCIT 2015, Bhubaneswar, India, February 5-8, 2015. Proceedings, New York: Springer International Publishing, Feb. 2015, pp. 403-408. DOI: 10.1007/978-3-319-14977-6\_43
- Bhavik Shah, Trupti Padiya, Minal Bhise, "Query Execution for RDF Data using Structure Indexed Vertical Partitioning," in 29th IEEE International Parallel and Distributed Processing Symposium Workshops (IPDPSW 2015), Hyderabad, 25-29 May 2015 pp. 575-584. DOI: 10.1109/ IPDPSW.2015.143
- Trupti Padiya, Minal Bhise, "Data Management for Internet of Things," in *IEEE Region 10 Symposium* (*TENSYMP 2015*), Gandhinagar, 13-15 May 2015, pp. 62-65. DOI: 10.1109/TENSYMP.2015.26
- 54. Sanjay Chaudhary, Minal Bhise, Asim Banerjee, Aakash Goyal and Chetan Moradiya, "Agro-Advisory System for Cotton Crop," in 7th International Conference on Communication Systems & Networks, Bengaluru, 6-10 Jan. 2015, pp. 1-6. DOI: 10.1109/COMSNETS.2015.7098701
- 55. Nabin Kumar Sahu and Nahak, C., "Semiinner Product: Application to Frame Theory and Numerical Range of Operators," in *Mathematics and Computing 2013: International Conference in Haldia, India*, New Delhi: Springer, August 2014, pp 77-90. DOI: 10.1007/978-81-322-1952-1\_6
- 56. Nabin Kumar Sahu and Ram N. Mohapatra, "Frames in Semi-inner Product Spaces," in Proceedings of International Conference on Recent Trends in Mathematical Analysis and its Applications, Springer Proceedings in Mathematics & Statistics 143, Springer, Roorkee, 21-23 Dec. 2014, pp. 149-158. DOI: 10.1007/978-81-322-2485-3\_11

- 57. K Raiyani, **P. M. Jat**, and **Sanjay Chaudhary**, "Virtual Machine Migration for Back-end Mashup Application Deployed on OpenStack Environment," in *International Conference on Parallel, Distributed and Grid Computing*, Solan, 11-13 Dec. 2014, pp. 214-218. DOI: 10.1109/ PDGC.2014.7030744
- Harsh Thakkar, Ganesh Iyer, Kesha Shah, Prasenjit Majumder, "Team IRLabDAIICT at ShARe/CLEF eHealth 2014 Task 3: User-centered Information Retrieval system for Clinical Documents," in *Conference and Labs of the Evaluation Forum* (*CLEF 2014*), Sheffield, UK, 15-18 Sept. 2014, pp. 248-259.
- 59. Abhishek Shah, Dharak Shah, **Prasenjit Majumder**, "Andd7 @ NTCIR-11 Temporal Information Access Task," in *Proceedings of the 11th NTCIR Conference*, Tokyo, Japan, 9-12 Dec. 2014, pp. 456-460.
- 60. Jainisha Sankhavara, Fenny Thakrar, Shamayeeta Sarkar and **Prasenjit Majumder**, "Fusing manual and machine feedback in biomedical domain," in *Proceedings of the 23rd Text REtrieval Conference* (*TREC 2014*), Maryland, USA, 19-21 Nov. 2014. URL: http://trec.nist.gov/pubs/trec23/papers/pro-DA\_IICT\_clinical.pdf
- 61. Shalini Rankawat, **Rahul Dubey**, Mansi Rankawat, "ECG Artifacts Detection in Noncardiovascular Signals using Slope Sum Function and Teager Kaiser Energy," in *IEEE International Conference on BioSignal Analysis*, *Processing and Systems (ICBAPS 2015)*, Kuala Lumpur, Malaysia, 26-28 May 2015, pp. 6-10. DOI: 10.1109/ICBAPS.2015.7292208
- 62. Shalini Rankawat, **Rahul Dubey**, Mansi Rankawa, "Heart rate estimation from non-cardiovascular signals using Slope Sum function and Teager Energy," in *IEEE International Conference on Industrial Instrumentation and Control (ICIC* 2015), Pune, 28-30 May 2015, pp. 1534-1539. DOI: 10.1109/IIC.2015.7150993
- 63. Arun Gupta and **Sanjay Srivastava**, "Distributed Adaptive Connected Dominating Set Protocol for Sensor Networks," in *Annual IEEE India Conference (INDICON 2014)*, Pune, 11-13 Dec. 2014, pp. 1-6. DOI: 10.1109/INDICON.2014.7030667
- 64. Zunnun Narmawala and **Sanjay Srivastava**, "Viral Spread in Mobile Social Network using Network Coding," in *India Conference (INDICON)*, 2014 Annual IEEE, Pune, 11-13 Dec. 2014. DOI: 10.1109/INDICON.2014.7030651
- 65. Tejas Vasavada and **Sanjay Srivastava**, "TDMA Scheduling of Group Aware Tree in Wireless Sensor Networks," in *India Conference (INDICON)*, 2014 Annual IEEE, Pune, 11-13 Dec. 2014. DOI 10.1109/INDICON.2014.7030689



- Manish Chaturvedi, Sanjay Srivastava, "Edge level Vehicular Traffic Estimation using Cellular Infrastructure and other Sources," in 7th International Conference on Communication Systems and Networks (COMSNETS), Bengaluru, 6-10 Jan. 2015, pp. 1-6. DOI:10.1109/ COMSNETS.2015.7098718
- 67. Zunnun Narmawala and Sanjay Srivastava, "Scalable Micro-blogging in Mobile Social Communities," Region in IEEE (TENSYMP), 10 Technical Symposium Gandhinagar, 13-15 May. 2015, pp. 66-69. DOI: 10.1109/TENSYMP.2015.15
- 68. Viral Patel, Manish Chaturvedi and **Sanjay Srivastava**, "Comparison of SUMO and SiMTram for Indian Traffic Scenario Representation," in 11th International Conference on Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC), Bombay, 10-12 Dec. 2014.
- 69. Sanket S. Patel, **Sanjeev Gupta**, **Deepak Ghodgaonkar**, "Ku-Band Low Noise Multistage Amplifier MIC Design having Performance Comparable to MMIIC," in *Proceedings of 3rd International Conference on Advances in Computing, Communications and Informatics* (*IEEE-ICACCI-2014*), Greater Noida, 24–27 Sept. 2014, pp. 501-506. DOI: 10.1109/ ICACCI.2014.6968609
- 70. Sanket S. Patel, Sanjeev Gupta and "Ku-Band Deepak Ghodgaonkar, Novel Voltage Controlled Oscillator Microwave Integrated Circuit with Low Phase Noise," in International Conference on Computational Intelligence and Communication Networks (CICN), Bhopal, 14-16 Nov. 2014, pp. 74-77. DOI: 10.1109/CICN.2014.28
- 71. Sanket S. Patel, Sanjeev Gupta and Deepak Ghodgaonkar, "Analysis of Nonlinear Effects on Operation of Low Noise Amplifier for Satellite Scatterometer," in International Conference on Computational Intelligence and Communication Networks (CICN), Bhopal, 14-16 Nov. 2014, pp. 97-101. DOI: 10.1109/CICN.2014.33
- 72. Ashish Sarvaiya, **Sanjeev Gupta**," An Efficient Macromodeling Methodology for Transient Simulation of Signal Integrity Problems," in *Proceedings of 3rd International Conference on Advanced Electromagnetic Symposium (AES* 2014), Hangzhou, China, 7-10 Dec., 2014. URL:http://mysymposia.org/files/AES14\_ proceedings.pdf
- 73. Gitam Shikkenawis, **Suman K. Mitra**, "Locality preserving discriminant projection," in *IEEE International Conference on Identity, Security and Behavior Analysis*

*(ISBA)*, Hong Kong, 23-25 Mar. 2015. DOI: 10.1109/ISBA.2015.7126365

- 74. Ravi Nagar, **Suman K. Mitra**, "Feature extraction based on stroke orientation estimation technique for handwritten numeral," in *Eighth International Conference on Advances in Pattern Recognition (ICAPR)*, Kolkata, 4-7 Jan. 2015. DOI:10.1109/ICAPR.2015.7050654
- 75. Twinkle Shah, Gitam Shikkenawis, Suman K. Mitra, "Epitome based transform domain image denoising," in *Eighth International Conference on Advances in Pattern Recognition (ICAPR)*, Kolkata, 4-7 Jan. 2015. DOI:10.1109/ICAPR.2015.7050652
- 76. Purvi Koringa, Gitam Shikkenawis, Suman K. Mitra, S K Parulekar, "Modified orthogonal neighbourhood preserving projection for face recognition," in *Proceedings of 6th International Conference on Pattern Recognition and Machine Intelligence (PReMI 2015)*, Warsaw, Poland, 30 Jun.-3 Jul. 2015, pp. 225-235. DOI:10.1007/978-3-319-19941-2\_22
- Prashant Domadiya, Pratik Shah, Suman K. Mitra, "Fast and accurate foreground background separation for video surveillance," in *Proceedings* of 6th International Conference on Pattern Recognition and Machine Intelligence (PReMI 2015), Warsaw, Poland, 30 Jun.-3 Jul. 2015, pp. 95–104. DOI:10.1007/978-3-319-19941-2\_10
- Ashish Phophalia and Suman K. Mitra, "Rician Noise Removal Approach for Brain MR Images Using Kernel Principal Component Analysis," in Proceedings of 6th International Conference on Pattern Recognition and Machine Intelligence (PReMI 2015), Warsaw, Poland, 30 Jun.-3 Jul. 2015, pp. 545-553. DOI: 10.1007/978-3-319-19941-2\_52
- 79. Shweta Rao Garg, "Eat, Cook, Reinvent: Female Traveller in English, Vinglish and Queen," in International Conference on Travel, Space, Displacement and Exile, BITS Pilani, Goa, 13-15 Feb. 2015
- V. Ravindran, G. Bagler and V. Sunitha, "Complex network parameters which determine HIV-1 human molecular interactome," in *Interdisciplinary Conference on the Science and Applications of Networks*, Gautam Buddha Nagar, Uttar Pradesh, 20–22 Mar. 2015.

# Awards and Professional Activities

The faculty and staff continued to be actively involved in international, national, state and local level professional activities and made significant contributions at all levels. They are also associated

# HONORARY WORK/POSITIONS HELD ON PROFESSIONAL BODIES

## Prof Nagaraj Ramrao

Senior Member, IEEE

Chair, IEEE-CIS Gujarat Chapter

Life Member, Institution of Electronics & Telecommunication Engineers

Life Member, Indian Society for Technical Education

Life Member, Computer Society of India

Member, Association for Computing Machinery

Member, Academic Council, Ganpat University, Mehsana

## **Prof Anil K Roy**

Chair, IEEE Gujarat Section

Member-at-Large, IEEE Sensors Council

Member, IEEE Global Strategy AdHoc Committee for 2015

Treasurer, IEEE India Council, 2015

Vice Chair, IEEE India Council Conferences, 2015

Member, Steering Committee, IEEE New Initiative on Internet of Things

Member, Academic Council, Marwadi College, Rajkot

Mentor, International Centre for Entrepreneurship and Technology (iCreate)

Member, Research Project Council, Gujarat Council on Science and Technology, DST, Government of Gujarat

Member, Cyber Security Cell, Raksha Shakti University, Ahmedabad

## **Prof Anish Mathuria**

Member, DeitY Committee for "e-Authentication Standards", Ministry of Communications and Information Technology, Government of India

Member, Project Review and Stearing Group, Government of India

Grant Reviewer, Swiss National Science Foundation, Bern, Switzerland

with a number of professional organisations and delivered invited talks all over the country and abroad. Below is a listing of the major recognitions and activities of the faculty and staff of the Institute.

#### **Prof Bhaskar Chaudhury**

Member, IEEE

Member, Plasma Science Society of India

#### Prof Deepak Ghodgaonkar

Fellow, Institution of Engineers, Malaysia (FIEM), Malaysia

Life Fellow, Institution of Electronics and Telecommunication Engineers, (FIETE), India

Senior Member, Institute of Electrical and Electronics Engineers, (SMIEEE), USA

External Examiner, PhD Thesis, Norizam Sulaiman, Institute of Graduate Studies, Universiti Taknologi MARA, Malaysia, 29 September 2014.

Expert Professor, Review of Research Work of Doctoral Candidates & PG Students, 16 April 2015, Gujarat Technological University, Ahmedabad

## Prof Hemant A. Patil

Member, International Speech Communication Association (ISCA)

Member, IEEE, USA

Member, IEEE Signal Processing Society, USA

Affiliate member, IEEE, Speech and Language Technical Committee (SLTC)

Member, IEEE Circuits and Systems Society, USA

Member, International Association for Engineers (IAENG)

Life member, System Society of India (SSI)

Member, Expert committee (Indian languages), Blizzard Challenge 2014 Workshop, Singapore 14-18 Sept. 2014

Contributed five lecture modules in Text-to-Speech (TTS) Synthesis and three lecture modules in Speaker Recognition, UGC e-PG Pathshala Programme for e-Content Creation in Linguistics

## **Prof Manik Lal Das**

Chair, IEEE Computer Society, Gujarat Chapter Secretary, IEEE Gujarat Section

Member, IEEE Internships/Entrepreneurship Strategic Subcommittee, IEEE Region 10



# Prof Manish K Gupta

Examiner, PhD viva, Jaypee University of Information Technology, November 2014

# Prof Manjunath V. Joshi

Expert resource person, Faculty induction programme, Nirma University 1 June 2015

PhD thesis evaluation, IIT Bombay

PhD thesis evaluation, IIT Roorkee

Expert Committee Member, National Board of Accreditation New-Delhi

#### Prof Prasenjit Majumder

Founding Chairman, ACM Professional Chapter, Gandhinagar

# Prof Sanjay Srivastava

Senior Member, IEEE

#### Prof V. Sunitha

Member, Board of Studies (Mathematics), Pandit Deendayal Petroleum University, India

## **FELLOWSHIPS/VISITING SCHOLAR**

#### **Prof Alka Parikh**

Fellowship, World Bank, Research on Food Security for a country in Central Asian Region, in collaboration with the Economists of Eurasian Centre for Food Security, Russia, May-June, 2015

## Prof Prasenjit Majumder

University of Sheffield, 15-19 September 2014

## **Prof V. Sunitha**

IMSc Associateship, Institute of Mathematical Sciences, India

# JOURNAL EDITORSHIP

## **Prof Hemant A. Patil**

Member Editorial Board, Engineering Letters, International Association of Engineers

# **Prof Rutu Parekh**

Member Editorial Board, Journal of Electrical and Electronic Engineering, Science Publishing Group

#### **Prof Sanjeev Gupta**

Member Editorial Board, International Journal on Science and Technology

Member Editorial Board, International Journal of Engineering and Technology Management

#### Prof Srikrishnan Divakaran

Associate Editor, GSTF Journal on Computer Games and Multimedia, Global Science and Technology Forum, 2015

## **Prof Suman K Mitra**

Associate Editor, International Journal on Image and Graphics, World Scientific Press

# REVIEWING

#### **Book/Book Chapter Reviewing**

#### Prof Laxminarayana Pillutla

Reviewed the monograph: "Sequential Analysis: Hypothesis Testing and Changepoint Detection" by A. Tartakovsky, I. Nikiforov and M. Basseville, publisher: CRC press. The review was published by Computing Reviews (Review #: CR143654 and publication date: July 27, 2015)

Reviewed the monograph: "Statistical Methods for Ranking Data" by M. Alvo and P. Yu, publisher: Springer. The review was published by Computing Reviews (Review #: CR143481 and publication date: May 29, 2015)

Reviewed the monograph: "Information and Control in Networks" edited by G. Como, B. Bernhardsson and A. Rantzer, publisher: Springer. The review was published by Computing Reviews (Review #: CR143202 and publication date: February 23, 2015)

## Prof Manish K Gupta

"Networks of Networks: the Last Frontier of Complexity," D'Agostino G., Scala A., Springer, Cham, Switzerland, 2014. 355 pp. Type: Book (978-3-319035-17-8) Review published on March 11, 2015

"Linear Network Error Correction Coding" (Editor Pick Review), Guang X., Zhang Z., Springer, New York, NY, 2014. 107 pp. Type: Book (978-1493905-87-4). Review published on December 8, 2014

"Handbook of Finite Fields," Mullen G., Panario D., Chapman & Hall/CRC, Boca Raton, FL, 2013. 1068 pp. Type: Book (978-1-439873-78-6) Review published on September 3, 2014 Review #: CR142688 (1411-0923), Journal: Mathematical Reviews

#### **Prof Sanjeev Gupta**

Review of the manuscript chapters, "Principles of Communication: Analog and Digital Systems with Lab Manual," Cambridge University Press India, New Delhi

#### **Journal Paper Reviewing**

#### Prof Nagaraj Ramrao

Peer Reviewer, International Journal on Optimal Control, Applications and Methods, *Wiley* 

#### **Prof Anish Mathuria**

International Journal of Applied Cryptography, *Inderscience* 

#### **Prof Bhaskar Chaudhury**

IEEE Transactions on Plasma Science, IEEE Nuclear and Plasma Sciences Society

Journal of Applied Physics, American Institute of Physics

Physics of Plasmas, American Institute of Physics

#### Prof Deepak Ghodgaonkar

IEEE Transactions on Instrumentation and Measurement, *IEEE* 

IEEE Transactions on Microwave Theory and Techniques, *IEEE* 

IEEE Transactions on Antennas and Propagation, IEEE

# **Prof Manik Lal Das**

IEEE Transactions on Cloud Computing, IEEE

IEEE Transactions on Knowledge and Data Engineering, *IEEE* 

#### Prof Manish K Gupta

Bioinformatics, Oxford University Press

Journal of Applied Mathematics and Computing, *Springer* 

Applicable Algebra in Engineering, Communication and Computing, *Springer* 

Discrete Mathematics, Elsevier

Designs Codes and Cryptography, Springer

#### **Prof Minal Bhise**

Knowledge and Information Systems KAIS, *Springer* 

#### Prof Nabin Kumar Sahu

Acta Mathematica Sinica, Springer

#### **Prof Prasenjit Majumder**

Transactions on Asian Language Information Processing, *ACM* 

Information Processing & Management, Elsevier

#### **Prof Rutu Parekh**

International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, *Ess & Ess Research Publications* 

#### **Prof Sanjay Srivastava**

IEEE Transactions on Vehicular Technology, IEEE

#### **Prof Sanjeev Gupta**

Journal of Electromagnetic Waves and Applications, *Taylor & Francis* 

Progress in Electromagnetic Research, *Electromagnetics Academy. USA* 

International Journal of Applied Electromagnetics and Mechanics, *IOS Press* 

IET Circuits, Devices and Systems, IEEE

Indian Journal of Physics, Indian Association for the Cultivation of Science & Springer

Journal of the Indian Institute of Science, Indian Institute of Science

Iranian Journal of Electrical and Computer Engineering, *Iran University of Science and Technology* 

International Journal on Science and Technology

ICTACT Journal of Communication Technology, ICT Academy of Tamil Nadu

ADIT Journal of Enginnering, A. D. Patel Institute of Technology, Vallabh Vidyanagar



# **Prof Sourish Dasgupta**

IEEE Transactions of Systems, Man & Cybernetics, *IEEE* 

# Prof V. Sunitha

IEEE Transactions on Parallel and Distributed Systems, *IEEE* 

# **Conference-Paper Reviewing**

## **Prof Amit Bhatt**

International Conference on 'VLSI Design,' Bengaluru, 3-7 January 2015

IEEE International Conference on 'Electronics, Communication and Computing (CONECCT-2015),' IIIT, Bangalore, 10-11 July 2015

Nineteenth International Symposium on 'VLSI Design and Test,' Ahmedabad, 26-29 June 2015

# **Prof Anil K Roy**

IEEE Region 10 International Conference (TENCON 2014), 22-25 October 2014

Eleventh IEEE India Conference (INDICON-2014), Pune, 11-13 December 2014

## **Prof Anish Mathuria**

Tenth International Conference on 'Information System Security (ICISS),' Hyderabad, 16-20 December 2014

## **Prof Asim Banerjee**

National Conference on Communication (NCC), Bombay, 27 February to 1 March 2015.

Fifth IEEE International Advance Computing Conference, Bangaluru, 12-13 June 2015

## **Prof Manik Lal Das**

IEEE Region 10 Symposium (TENSYMP 2015), GIFT City, Gandhinagar, 13-15 May 2015

IEEE International Conference on 'Computing, Communication & Automation (ICCCA),' Greater Noida, 15-16 May, 2015

International Conference on 'Distributed Computing and Internet Technologies (ICDCIT),' Bhubaneswar, India, 5-8 February, 2015

International Conference on 'Mathematics and Computing (ICMC 2015),' Haldia, 5-10 January, 2015.

International Conference on 'Contemporary Computing,' Noida, 7-9 August, 2014

# Prof Pokhar M Jat

International Conference on 'Computing Communication and Automation (ICCCA2015),' Uttar Pradesh, 15-16 May 2015

# Prof Prasenjit Majumder

Forum for Information Retrieval Evaluation (FIRE 2014), Bengaluru, 5-7 December 2014

Mining Intelligence and Knowledge Exploration (MIKE 2014), Cork, Ireland, 10-12 December 2014

# Prof Puneet Bhateja

Ninteenth International Symposium on 'VLSI Design and Test,' Ahmedabad, 26-29 June 2015

# Prof Rutu Parekh

IEEE International Conference on 'Electrical, Computer and Communication Technologies (2015 IEEE ICECCT),' Coimbatore, Tamilnadu, 05-07, March 2015

Ninteenth International Symposium on 'VLSI Design and Test,' Ahmedabad, 26-29 June 2015

# Prof Sanjay Srivastava

Seventh International Conference on 'Communication Systems and Networks (COMSNETS 2015),' Bengaluru, 6-10 January 2015

International Conference on Distributed Computing and Internet Technologies (ICDCIT2015), Bhubaneswar, 5-8 February 2015

Sixteenth International Conference on Distributed Computing and Networking (ICDCN 2015), Goa, 4-7 January 2015

Eleventh IEEE India Conference (INDICON-2014), Pune, 11-13 December 2014

IEEE Region 10 Symposium (TENSYMP 2015), GIFT City, Gandhinagar, 13-15 May 2015

## Prof Sanjeev Gupta

International Conference on 'Advances in Electronics,' Computers and Communication (ICAECC-2014), Bengaluru, 10-11 October, 2014

IEEE Asia-Pacific Conference on Applied Electromagnetics (APACE-2014), Johar Bahra, Malaysia, 8-10 December, 2014

Eleventh IEEE India Conference (INDICON-2014), Pune, 11-13 December 2014

Second International Conference on 'Emerging Technology, Trends in Electronics, Communication and Networking (ET2ECN-2014),' Surat, 26-27 December, 2014

International Workshop on 'Signal Processing and Integrated Networks (SPIN-2015),' Noida, 19-20 February, 2015

Third National Conference on 'Innovation and Emerging Rechnolgies (NCIET-2015),' Mehsana, Gujarat, 17-18 April, 2015

IEEE International Conference on 'Electronics, Computing and Communication Technologies (CONECCT-2015),' Bengaluru, 10-11 July 2015

#### **Prof Sourish Dasgupta**

Twenty Ninth AAAI Conference on 'Artificial Intelligence,' Austin, Texas, 25-30 January 2015

Forum for Information Retrieval Evaluation (FIRE 2014), Bengaluru, 5-7 December 2014

### Prof V. Sunitha

First International Conference on 'Algorithms and Discrete Applied Mathematics (CALDAM 2015),' Kanpur, 8-10 February 2015

Nineteenth International Symposium on VLSI Design and Test, Ahmedabad, 26-29 June 2015

#### INVITED LECTURES/TALKS/COURSES

#### Prof Nagaraj Ramrao

Chief Guest, key note address, Workshop on Ethical Issues & Use of Anti-Plagiarism for Research Integrity, INFLIBNET Centre, Gandhinagar, 29 April 2015

Chief Guest, key note address, ISTE approved Faculty Development Programme on "Developing Excellence in Academic & Research Leadership, Nirma University, Ahmedabad, 14th May 2015

#### Prof Aditi Nath Sarkar

'A Centre for Heritage Cinema Access and Retrieval: A Proposal for a Project to digitize and render accessible Indian Cinema Archives,' Forum for Information Retrieval Evaluation (FIRE 2014), Indian Statistical Institute, Bengaluru, 5-7 December 2014

#### Prof Aditya Tatu

'An Active Contour Model for Texture Segmentation,' IIT Mandi, 18 May 2015

#### Prof Alka Parikh

'Qualitative and Quantitative Research Methodology.' KSP Women's Studies Centre, Pune University, 7-8 August, 2014

#### **Prof Amit Bhatt**

'High Performance Computing using Cell-Phone Chipset,' 28th International Conference on VLSI Design (VLSID 2015), Bengaluru, 5 January, 2015

#### **Prof Anil K Roy**

"Ctrl C-Ctrl V' Plagiarism Problem and other Nonethical Practices in Conferences," Conference Organizers Workshop (COW-2015), Hyderabad, 25 April, 2015

'Changing Meaning of Privacy in Current Cyberworld,' National Workshop on Cyber Security, Bengaluru, 8-10 August 2014

#### **Prof B N Hiremath**

'Beyond Sustainable Livelihoods: Ignored Dimensions for Attaining a Good Society,' International Symposium on 'Development Management Pathways towards Good Society,' Rajgir International Convention Centre, Rajgir, Bihar, 13-14 February 2015

'Impact of Climate Change on Small Farmers Livelihoods,' National Seminar on Climate Change and Agrarian Economy: An Indian Perspective, University of Agricultural Sciences, Dharwad, 22-23 January, 2015

'Impact of International trade on Small Farmers Livelihoods. Strategic Issues in Agricultural Trade under WTO Regime,' International Agribusiness Management Institute, Anand, 25 January, 2015

#### Prof Bharani Kollipara

'Modernity, Democracy and the Public,' IIT Gandhinagar, Gandhinagar, Gujarat, 9-11 February 2015

#### **Prof Hemant A. Patil**

'Speech Signal Processing' C-DAC, Mumbai, 26-28 June, 2015


'Speech Signal Processing and Wavelet Signal Processing, STTP on Advances in Control, Automation, Signal and Image Processing' Konkan Gyanpeeth College of Engineering, Raigad, Maharashtra, 22-26 June 2015

'Speech Signal Processing,' short term training program on Applied Digital Signal Processing, BVM Engineering College, Vallabh Vidyanagar, Gujarat. 4-15 May, 2015

'Speech Signal Processing,' National Conference on Emerging Trends in Computer, Electrical & Electronics Engineering (ETCEE-2015), Atmiya Institute of Technology and Science (AITS), Rajkot, 13-14 March, 2015

'Speech Signal Processing,' Parul Institute of Engineering and Technology, Limbda, 21 March 2015

'Speech Signal Processing,' ECE Department, Institute of Technology, Nirma University, Ahmedabad, 10 February 2015

Wavelet Signal Processing,' short term training program under Centre of Excellence (COE) in Signal and Image Processing, SGGS Institute of Engineering and Technology, Nanded, 21 December, 2014

Visiting Faculty, Meghe Group Institutions (MGI), Nagpur, 26-29 September, 2014

Plenary talk on, 'Introduction to Speech Signal Processing and its Applications,' International Conference on Signal and Speech processing (ICSSP-2014), T. K. M. College of Engineering, Kollam, Kerala, 23 August 2014

Visiting Faculty, B.Tech core course on Signals and Systems, IITRAM, Ahmedabad, Autumn 2015

Visiting Faculty, B.Tech core course on Signals and Systems, IIIT Vadodara, Gandhinagar, Autumn 2015

#### Prof Laxminarayana Pillutla

<sup>(</sup>Distributed Indoor Target Tracking using Wireless Sensor Networks and Network Coding,<sup>(</sup> DA-IICT and TCS Joint Seminar-II, DA-IICT, Gandhinagar, 17 July 2015

'Design and Application of Relay assisted Communication based on Network Coding for Maritime Applications,' NRB Evaluation Meeting, Andhra University, Vizag, 18 November 2014

#### Prof Madhumita Mazumdar

'Gender Sensitization for Tribal Welfare policy in the Andaman Islands,' Andaman Nicobar Training and Research Institute, Port Blair, 20 March 2015

'Bharat ki Chhaap: the First Story of Indian Science on Television,' Department of History, University of Calcutta, 20 September 2014

#### Prof Manik Lal Das

<sup>(</sup>Privacy and Security Challenges in Internet of Things,' International Conference on Distributed Computing and Internet Technologies (ICDCIT-2015), Bhubaneswar, 5-8 February 2015

'Security and Privacy Challenges in the Digital Age,' National Conference on Innovative and Emerging Technologies, Ahmedabad, 17-18 April 2015

#### Prof Manish K Gupta

"Why Incubation Center?," IEEE India Entrepreneurship Development Program, GIFT City, Ahmedabad, 15 May 2015

'Mathematical and Computational Opportunities in DNA Computing,' NNMCB Symposium on Mathematical and Computational Biology, IIT Gandhinagar, Gandhinagar, 21-22 March 2015

'How to store Elephants?,' Indo-US conference and workshop on synthetic and systems biology, Jawaharlal Nehru University, New Delhi, 9-12 November 2014

'A Story of Nature: Emerging Trends in Life Sciences,' Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology, Waknaghat, Solan, 13 November 2014

#### Prof Manjunath V. Joshi

'Machine learning in Stereo Vision,' in short term training program, 19 June 2015

#### Prof Pokhar M Jat

'Opinion Mining,' 4<sup>th</sup> National Conference on Computational and Mathematical Sciences (COMPUTATIA-IV), Vivekananda Institute of Technology, Jaipur, 25-16 November 2014

#### **Prof Prasenjit Majumder**

Course offered, 'Human Computer Interaction' Indian Institute of Information Technology, Vadodra, Winter Semester 2014 Course offered, 'Operating systems' Indian Institute of Information Technology, Vadodra, Autumn Semester 2014

Invited Talk, 'Overview of FIRE 2014' Indian Statistical Institute, Bengaluru, 5 December 2014 Invited Talk, 'Natural Language Processing for IR' University of Sheffield, 18th September 2014

#### **Prof Rahul Muthu**

'Computational Complexity: Theory and Applications,' Chandubhai S. Patel Institute of Technology, Changa, November 2014

'Graph Searching Algorithms,' GUJCOST Workshop on Recent Trends and Issues in Graph Theory, January 2015

'Cartesian Product, Acyclic Edge Colouring & a New Chromatic Number,' Indo-Taiwan Conference on Discrete Mathematics, IIT Madras, Chennai, 10-13 July 2015

#### Prof Sanjay Srivastava

'An Overview of IoT Research,' Workshop on Recent trends in Internet of Things (IoT), Charotar University of Science and Technology, Changa, 18 September 2015

#### **Prof Sanjeev Gupta**

'Mixer Design,' Workshop on 'Microwave and RF Circuit Design,' Institute of Technology, Nirma University, 31 August 2014

'Emerging Research Trends and Challenges in Wireless System Design,' Workshop on Mobile Computing and Wireless Technologies, Gujarat Technological University, 18 October 2014

'Solid State Devices,' Charotar University of Science and Technology, Changa, 23 September 2014

'Transceivers-I,' EC Department, Charotar University of Science and Technology, Changa, 27 September 2014

'Transceivers-II,' EC Department, Charotar University of Science and Technology, Changa, Gujarat, 8 November 2014

'Issues and Challenges in RF and Microwave Communication System Design,' Workshop on Global Overview of Developments in Microwave & Millimetre Wave Communication as on Today, Ramrao Adik Institute of Technology, Nerul, 24 January 2015 'Antenna Fundamentals: A Wireless Communication Perspective.' Charotar University of Science and Technology, Changa, 10 February, 2015

#### Prof Shweta Garg

Course offered, 'Communication Skills,' IIIT Vadodara, Gandhinagar, Autumn Semester 2014

'Effective Classroom Communication,' Faculty Development Programme, Shankersinh Vaghela Bapu Institute of Technology, Gandhinagar, 23 June, 2015

'Communication Skills,' Management Development Programme, School of Petroleum Management, PDPU, Gandhinagar, July 2015

#### **Prof Sourish Dasgupta**

Course offered, Shiv Nadar University, Dept. of Computer Science & Engineering, September-November 2014

#### Prof Srikrishnan Divakaran

'Introduction to Algorithms,' short term training program on Computer Algorithms and Applications, Birla Vishwakarma Mahavidyalaya, Anand, 30 December 2014

'Combinatorial Optimization,' short term training program on Computer Algorithms and Applications, Birla Vishwakarma Mahavidyalaya, Anand, 30 December 2014

'Randomized Algorithms with Combinatorial Applications,' short term training program on Design and Analysis of Algorithms, Sardar Vallabhbhai National Institute of Technology, Surat, 18-22 May 2015

#### CONFERENCE/WORKSHOP SESSION CHAIR (CONFERENCES/WORKSHOP PARTICIPATION)

#### Prof Aditi Nath Sarkar

Forum for Information Retrieval Evaluation (FIRE 2014), Indian Statistical Institute, Bengaluru. 4-6 December 2014

#### **Prof Aditya Tatu**

Tenth International Conference on 'Energy Minimization Methods in Computer Vision and Pattern Recognition,' Hong Kong University of Science and Technology, Hong Kong, 13-16 January 2015



#### **Prof Alka Parikh**

Second International Conference on 'Arid Land Studies (ICAL 2) on Food Security & Innovations in Arid & Semi-arid Agro-ecosystems,' Samarkand State University, Uzbekistan, 9-13 September 2014

#### **Prof Anil K Roy**

IEEE Region 10 International Conference (TENCON 2014), 22-25 October 2014

Eleventh IEEE India Conference (INDICON-2014), Pune, 11-13 December 2014

IEEE Region 10 Symposium (TENSYMP 2015), GIFT City, Gandhinagar, 13-15 May 2015

Second National Workshop on 'Cyber Security,' Bengaluru, 8-10 August 2014

National Seminar on 'Computer Vision and Image Processing,' Sarvajanik College of Engineering and Technology, Surat, 19-20 September 2014

IEEE All India Student Congress (AISC 2014), Nirma University, Ahmedabad, 6-8 October 2014

#### Prof Hemant A. Patil

Second International Conference on 'Perception and Machine Intelligence (PerMin-15),' Centre for Development of Advanced Computing, Kolkata, 26-27 February 2015

Winter School on 'Speech and Audio Processing (WiSSAP-2015),' DA-IICT Gandhinagar, 4-7 January 2015

Workshop on 'Image and Speech Processing (WISP),' IIIT Hyderabad, Hyderabad, 13 December 2014

#### Prof Laxminarayana Pillutla

JTG Summer School 2015, Indian Institute of Science, Bengaluru, Bengaluru, 20-24 July 2015

#### **Prof Manik Lal Das**

IEEE Region 10 Symposium (TENSYMP 2015), GIFT City, Gandhinagar, 13-15 May 2015

International Conference on 'Distributed Computing and Internet Technologies,' Bhubaneswar, 5-8 February 2015

National Conference on 'Innovative and Emerging Technologies,' Gujarat Technological University, Ahmedabad, 17-18 April, 2015

#### Prof Manish K Gupta

IEEE India Entrepreneurship Development Program, GIFT City, Ahmedabad, 15 May, 2015 NNMCB Symposium on Mathematical and Computational Biology, IIT Gandhinagar, Gandhinagar, 21-22 March 2015

Indo-US Conference and Workshop on 'Synthetic and Systems Biology,' Jawaharlal Nehru University, New Delhi, 9-12 November 2014

TIFAC Patent and IPR Awareness Workshop, DA-IICT, Gandhinagar, 11 July 2015

#### **Prof Minal Bhise**

IEEE Region 10 International Conference (TENCON 2014), 22-25 October 2014

#### Prof Nabin Kumar Sahu

International Conference on 'Recent Trends in Mathematical Analysis and Its Applications,' IIT Roorkee, Roorkee, 21-23 December 2014

#### **Prof Prasenjit Majumder**

Forum for Information Retrieval Evaluation (FIRE 2014), Indian Statistical Institute, Bengaluru, 4-6 December 2014

Conference and Labs of the Evaluation Forum (CLEF 2014), Sheffield, UK, 15-18 September 2014

#### **Prof Puneet Bhateja**

Ninteenth International Symposium on 'VLSI Design and Test,' Ahmedabad, 26-29 Jun 2015

#### **Prof Rahul Muthu**

Fourth India-Taiwan Conference on 'Discrete Mathematics,' 10-13 July 2015

#### **Prof Rutu Parekh**

TEQIP Workshop on 'MEMS and NEMS (Design and Fabrication),' IIT Hyderabad, Hyderabad, 15-19 December, 2014

#### **Prof Sanjeev Gupta**

Workshop on 'Microwave and RF Circuit Design,' Institute of Technology, Nirma University, Ahmedabad, 31 August 2014

Workshop on 'Mobile Computing and Wireless Technologies,' Gujarat Technological University, Ahmedabad, 18 October 2014

Workshop on 'Good Governance, Leadership and Management,' National Project Implementation

Unit (NPIU)/TEQUIP-II/World Bank, New Delhi, 12-13 October 2014

Workshop on 'Draft Policy for Promoting Innovation based Entrepreneurship by Students,' Youth and other Individuals, Indian Institute of Management, Ahmedabad, 16 December 2014

Gold Book Release Ceremony, JB Auditorium, Ahmedabad, 29 April 2015

Workshop on 'Patent and IPR Awareness,' DA-IICT, Gandhinagar, 11 July 2015

#### **Prof Shweta Garg**

International Conference on 'Travel, Space, Displacement and Exile,' BITS Pilani, Goa, 13-15 February, 2015

#### **Prof Sourish Dasgupta**

ACM Workshop on 'Bio-Inspired Computing,' DA-IICT, Gandhinagar, 22-24 June 2015

#### **Prof V. Sunitha**

Workshop on 'Recent Trends and Issues in Graph Theory,' Charotar University of Science and Technolog, Changa, January 2015

Short Term Training Program on 'Computer Algorithms and Applications,' Birla Vishwakarma Mahavidyalaya, Anand, December 2014

Workshop on 'Computational Complexity: Theory and Applications,' Charotar University of Science and Technolog, Changa, November 2014

#### **CONFERENCE PROGRAM COMMITTEE**

#### **Prof Amit Bhatt**

Twenty Eighth International Conference on 'VLSI Design,' IIIT Bangalore, Bengaluru, 3-7 January 2015

Nineteenth International Symposium on 'VLSI Design and Test,' Ahmedabad, 26-29 Jun 2015

#### Prof Anil K Roy

Technical Program Committee Member, IEEE Region 10 International Conference (TENCON 2014), 22-25 October 2014

Technical Program Committee Member, 11<sup>th</sup> IEEE India Conference (INDICON-2014), Pune, 11-13 December 2014

#### **Prof Anish Mathuria**

Program Committee Member, 10th International Conference on 'Information System Security,' Institute for Development and Research in Banking Technology, Hyderabad, 16-20 December 2014

#### **Prof Biswajit Mishra**

Technical Program Committee Member, 19th International Symposium on VLSI Design and Test (VDAT), Nirma University, Ahmedabad, 26-29 Jun. 2015

#### Prof Deepak Ghodgaonkar

Co-chairman, 2nd International Conference on Emerging Technology Trends in Electronics, Communication and Networking, Sardar Vallabhbhai National Institute of Technology, Surat, 26-27 December 2014

#### **Prof Manik Lal Das**

IEEE Region 10 Symposium (TENSYMP 2015), Gandhinagar, India, May 13-15, 2015

IEEE International Conference on 'Computing, Communication & Automation (ICCCA),' Greater Noida, India, May 15-16, 2015

International Conference on 'Distributed Computing and Internet Technologies (ICDCIT),' Bhubaneswar, India, February 5-8, 2015

International Conference on 'Mathematics and Computing (ICMC 2015),' Haldia, India, January 05-10, 2015

International Conference on 'Contemporary Computing,' Noida, India, August 7-9, 2014

#### **Prof Manish K Gupta**

Coordinator, Organizing Committee, TIFAC Patent and IPR Awareness Workshop, DA-IICT, 11 July 2015

Program Committee Member, Seventh ACM Compute conference, Nagpur, 16-18 October 2014

#### Prof Manjunath V. Joshi

Served as a Program Committee member for ACCV2014

Served as a Program Co-Chair for the 3rd ACCV Workshop on E-Heritage, 2014

#### **Prof Pokhar M Jat**

National Advisory Committee, 4<sup>th</sup> National Conference on 'Computational and Mathematical



Sciences (COMPUTATIA-IV),' Vivekananda Institute of Technology, Jaipur

National Advisory Committee, International Conference on 'Information and Communication Technology for Competitive Strategies (ICTCS-2014),' Sunrise Group of Institutions, Udaipur

National Advisory Committee, National Conference on 'Advancement in Engineering and Technology,' Vision: 2025, Pacific University, Udaipur

National Advisory Committee, National Seminar and Workshop on 'Advances in Open Source Mobile Technologies,' SITG, Himmatnagar

#### Prof Prasenjit Majumder

ACM SIGIR [tire I conference in IR]

#### **Prof Puneet Bhateja**

VLSI Design & Test Symposium

#### **Prof Rutu Parekh**

Member of Program Committee, VDAT-2015 (19th International Symposium on VLSI Design and Test), held at Nirma University, Ahmedabad, June 2015

#### **Prof Sanjay Srivastava**

TENSYMP 2015

#### **Prof Sanjeev Gupta**

Technical Program Committee Member of IEEE Asia-Pacific Conference on 'Applied Electromagnetics (APACE-2014),' Johar Bahra, Malaysia on December 8-10, 2014

Technical Committee Member of 2nd International Conference on 'Emerging Technology, Trends in Electronics, Communication and Networkinh (ET2ECN-2014),' SVNIT Surat, December 26-27, 2014

Technical Programme Committee Member of Two-Day International Workshop on 'Signal Processing and Integrated Networks (SPIN-2015),' Amity School of Engineering and Technology (ASET), Amity University, Noida, February 19-20, 2015

National Advisory Council Member of 3rd National Conference on 'Innovation and Emerging Rechnolgies (NCIET-2015),' SR Patel Engineering College, District Mehsana, Gujarat, April 17-18, 2015

#### **Prof Sourish Dasgupta**

FIRE 2015, DA-ICT

#### Prof Suman K Mitra

Program Committee member of the fifth International Conference on 'Pattern Recognition and Machine Intelligence (PReMI'15),' Warsaw University of Technology, Warsaw, in June 2015

Finance Chair of the Second TENSYMP, Ahmedabad, in June, 2015

#### Prof V. Sunitha

VDAT 2015

#### SPONSORED RESEARCH PROJECTS

#### **Prof Amit Bhatt**

Qualcomm HPC Project

#### **Prof Anil K Roy**

Value Addition in the Grassroot Technologies Blind Person Navigation System Text to Speech Conversion System Object Locator

#### **Prof Bhaskar Chaudhury**

Principal Investigator, GPU teaching center at DA-IICT, Gandhinagar, sponsored by nVIDIA Corporation, USA

#### Prof Biswajit Mishra

Enabling Technolgies for Remote Health Monitoring, funded by Gujarat Council on Science and Technology, DST, Government of Gujarat

#### Prof Deepak Ghodgaonkar

Principal Investigator, Ultra Wide Band Dielectric Resonator Antennas, funded by Space Application Centre, ISRO, Ahmedabad (RESPOND Programme), (1 January 2015 to 31 December 2016)

#### Prof Hemant A. Patil

Principal Investigator, Development of Text to Speech Synthesis (TTS) System in Indian Languages: High Quality Text to Speech Synthesis and Small Footprint TTS Integrated with Disability Aids, funded by Department of Electronics and Information Technology (DeitY), Ministry of Communications & Information Technology, Government of India Principal Investigator, Development of Prosodically Guided Phonetic Engine for Searching Speech Databases in Indian Languages, funded by Department of Electronics and Information Technology (DeitY), Ministry of Communications & Information Technology, Government of India

Development of Infant Cry Analyzer using Source and System Features, funded by Department of Science and Technology (DST), Government of India

Speech-Based Access of Agricultural Commodity Prices and Weather Information in 11 Indian Languages/Dialects, funded by Department of Electronics and Information Technology(DeitY), Ministry of Communications & Information Technology, Government of India

Co-investigator, India Digital Heritage (IDH) – A DST Initiative, funded by Department of Science and Technology (DST), New Delhi, India

#### Prof Laxminarayana Pillutla

Wireless Telemedicine using Body Area Sensor Networks and Heterogeneous Access Networks, funded by DST-SERC under the FAST track scheme for young scientists

#### **Prof Manik Lal Das**

Co-Principal Investigator, Enabling Technologies for Remote Health Monitoring, funded by Gujarat Council on Science and Technology, Government of Gujarat

#### **Prof Minal Bhise**

Principal Investigator, Service-Oriented Architecture for Spatial Data Integration and Spatial Reasoning, funded by Department of Science and Technology, Government of India, The Natural Resources Data Management Systems (NRDMS) and National Spatial Data Infrastructure (NSDI)

#### Prof Prasenjit Majumder

Cross Lingual Information Access, funded by Deity, Government of India

#### **Prof Sanjeev Gupta**

Ultra Wideband Dielectric Resonator Antenna, sponsored by SAC-ISRO, Department of Space, Government of India

#### **Prof Suman K Mitra**

Techniques for Robust Face Recognition with Pose Variation, sponsored by Board of Research in Nuclear Science, Department of Atomic Energy, Government of India

Development of Cross Lingual Access System-Phase II, sponsored by Department of Information Technology, Government of India

#### **HONORARY WORK**

#### Prof Nagaraj Ramrao

Member, Draft Policy of Science and Technology of Gujarat, GUJCOST (Under DST, GoG)

Member, Selection Committee, Gujarat University

Member, Expert Committee, for selection of Dr. Vikram A. Sarabhai Award

External Expert, Selection of Director for Institute of Technology, Nirma University

Member, Board of Directors, Gujarat Informatics Limited.

Member, Board of Directors, Electronics and Quality Development Centre, Gandhinagar

Member, New Education Policy, Government of Gujarat

Chief Guest, Award function of Royal Technosoft Private Limited., Ahemedabad

Member, Academic Council, Ganpat University, Mehsana

#### Prof Aditi Nath Sarkar

Member, Governing Council, Satyajit Ray Film & Television Institute (SRFTI), Kolkata

#### **Prof Asim Banerjee**

Member, Jury for the Diploma Projects of PG students at National Institute of Design (NID) Gandhingar and Ahmedabad

Member, Board of Studies of Nirma University

Member of Faculty of Engineering of Nirma University

Member of Board of Studies of UV Patel College of Engineering, Ganpat University

Member of Faculty of Engineering - Computer



Science and Engineering, UV Patel College of Engineering, Ganpat University

Member of RPS committee for three PhD Students of Computer Science and Engineering Department of SVNIT, Surat

Member of RPS Committee for one PhD Student of Electronics and Communication Engineering Department of SVNIT, Surat

Examiner for a PhD student of Electronics & Communication Engineering Department of SVNIT, Surat

Supervisor of one doctoral student of Ganpat University, in the area of Bio-medical Engineering

#### **Prof Sanjeev Gupta**

External Expert of SAC Promtion Interview Committee (Scientist-SB to Scientist-SC and Scientist-SC to Scientist-SD), Space Applications Centre (SAC), Department of Space, Government of India, Ahmedabad.

Member of the Advisory Committee for PG Research Center for Mobile Computing & Wireless Technologies, Gujarat Technological University (GTU), Ahmedabad.

Member of the Board of Studies (BOS) of Charotar University of Science and Technology (CHARUSAT), Changa, Gujarat

Member of the Board of Studies (BOS) for SATCOM (Satellite Communications) Course conducted by Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP – affiliated to the United Nations), IIRS Campus, Dehradun (Headquarters) & SAC Campus, Ahmedabad

Member of Board of Governors (BOG) of Government Engineering College (GEC), Gandhinagar

Member of Academic Council of CU Shah University, Wadhwan City, Surendranagar District, Gujarat

Member of Board of Studies (BOS), Indus University, Ahmedabad

Member of Board of Studies (BOS), LDRP Institute of Technology and Reasearch, Kadi Sarva Vishwavidyalaya, Gandhinagar

External Expert Member for selection of faculty at Institute of Technology, Nirma University, Ahmedabad External Expert Member for selection of faculty, Gujarat Technological University (GTU), Ahmedabad

Subject Expert for faculty selection at Charotar University of Science and Technology (CHARUSAT), Changa, Gujarat

Doctroral Progess Review Committee (DOC) Member for PhD students of Gujarat Technological University (GTU), Ahmedabad

Expert Member of Research Progress Committee (RPC), Faculty of Doctoral Studies and Research, Nirma University, Ahmedabad.

PhD Reviewer at Charotar University of Science and Technology (CHARUSAT), Changa, Gujarat

Reviewer of ME Disserations, Gujarat Technological University (GTU), Ahmedabad.

Subject Expert to review the academic performance of ME in Wireless and Mobile Computing of Gujarat Technological University (GTU)

PhD Thesis Examiner for evaluation of Doctoral thesis at Mukesh Patel Institute of Technlogy, Narsee Monjee Institute of Management Studies, Mumbai

PhD Thesis Examiner at Charotar University of Science and Technology (CHARUSAT), Changa, Gujarat

Coordinator for cooperation with SAC under the MoU for cooperation in research and academic activities, Space Applications Centre, Department of Space, Government of India, Ahmedabad

Expert Member of Committee for Techno-Commercial Evaluation of 220 GHz Vector Network Analyzer, Institute of Plasma Research, Dept. of Atomic Energy, Government of India, Ahmedabad

Member of "Antenna Test and Measurement Association" (ATMA)

Member of Agilent's Test Advisory Panel.

Editorial Board Member of International Journal on Advanced Communication Technology, (IJSAT), ISSN: 2229-7677

Editorial Board Member of International Journal of Engineering and Technolgy Management, bimonthly on-line journal published in Iran

#### **VISIT TO INSTITUTES/ INDUSTRIES**

#### Prof Nagaraj Ramrao

March 10 - Visit to INS Valsura, Jamnagar for exploring avenues for mutual cooperation in academics as well as research through an MoU.

July 14 - Visit to SAC-ISRO for a discussion with the Director for exploring avenues for mutual cooperation in academics as well as research through an MoU.

#### **Prof Amit Bhat**

Cadence, Qualcomm, Intel.

#### **Prof Hemant A. Patil**

Visited Gujarat Technological University (GTU), Chandkheda (Ahmedabad) as Expert Professor to review the work of PG and doctoral students during 4-8 July 2015.

Attended first PI meeting on 14 December 2014 at IIIT Hyderabad for DeitY sponsored ASR Phase-II consortium project.

Attended second PI meeting on 14 February 2015 at C-DAC Kolkata for DeitY sponsored ASR Phase-II consortium project.

Attended third PI meeting on 16 May 2015 at IIT Madras for DeitY sponsored ASR Phase-II consortium project.

Attended ASR workshop on introduction to KALDI Toolkit during 14-17 December 2014, IIIT Hyderabad for DeitY sponsored ASR Phase-II consortium project.

Attended ASR workshop during 15-17 May 2015 at IIT Madras for DeitY sponsored ASR Phase-II consortium project.

Attended PRSG meeting on 3 July 2015 to report the progress of DeitY sponsored ASR Phase-II consortium project.

Visited IIIT Vadodara as visiting faculty during Autumn 2015 to teach a B.Tech. Sem III core course on System and Signal Theory.

Visited IITRAM, Ahmedabad as visiting faculty during Autumn 2015 to teach a B.Tech. Sem III core course on Signals and Systems.

#### **Prof Manik Lal Das**

National Institute of Technology, Surat, India, December 2014 and June 2015.

#### **Prof Minal Bhise**

Research Progress Committee Subject Expert Member at Nirma University, Ahmedabad.

#### **Prof Sanjeev Gupta**

Doctoral Progress Committee (DPC) Member – Subject Expert for evaluation of PhD Students, Gujarat Technological University (GTU), Ahmedabad, 2 August 2014 and 29 November 2014 and 18 March 2015.

Expert Member of Committee for Techno-Commercial Evaluation of 220 GHz Vector Network Analyzer, Institute of Plasma Research (Deptt. of Atomic Energy, Government of India), Ahmedabad, 5 August 2014.

Meeting of Board of Governors (BOG) of Government Engineering College (GEC), Gandhinagar, 21 August 2014 and 30 January 2015 and 6 June 2015.

Tenth Board of Studies (BOS) Meeting at EC Department of Electronics and Communication Engineering, Charotar University of Science and Technology (CHARUSAT), Changa, Gujarat, 30 August 2014.

Meeting with Dr. Anup Singh, Director General, Nirma University, Ahmedabad, on introduction of new programs, 9 September 2014.

Meeting of Board of Governors (BOG) of Government Engineering College (GEC), Gandhinagar with TEQIP Performance Audit (carried out by Prof. YV Joshi), 17 October 2014.

Expert Member of Research Progress Committee, Faculty of Doctoral Studies and Research, Nirma University, Ahmedabad, 18 November 2014 and July 4, 2015.

Tenth Faculty Board Meeting, Faculty of Technology and Engineering, Charotar University of Science and Technology, Changa, Gujarat, 22 November 2014.



Board of Studies (BOS) Meeting for SATCOM Course at Centre for Space Science and Technology Education in Asia and the Pacific (affiliated to United Nations), SAC-ISRO, 5 December 2014.

Reviewer of ME Dissertations, Charotar University of Science and Technology, Changa, Gujarat, 26 December 2014 and 15 May 2015.

Financial Assistance Committee Meeting at Institute of Technology, Nirma University, Ahmedabad, 8 December 2014.

External Expert of SAC Interview Committee (Scientist-SC to Scientist-SD), Space Applications Centre, Department of Space, Goverment of India, Ahmedabad, 9 December 2014 and 15 June 2015.

External Expert of the Selection Committee for grant of higher academic grade pay to faculty under Career Advancement Scheme, Department of Electronics and Communication Engineering, Institute of Technology, Nirma University, Ahmedabad, 23 December 2014 and 24 March 2015.

External Examiner for ME Dissertations, Gujarat Technological University, Ahmedabad, 26 December 2014 and 7 July 2015.

Meeting to appoint joint guide of a PhD candidate of EC Department, Institute of Technology, Nirma University, Ahmedabad, 21 January 2015.

Subject Expert for selection of faculty (Professors and Associate Professors) at Institute of Technology, Nirma University, Ahmedabad, 5 February 2015.

Research Progrees Seminar (RPS) of PhD candidate, Charotar University of Science and Technology, Changa, Gujarat, 10 February 2015.

PhD Thesis External Examiner, Charotar University of Science and Technology, Changa, Gujarat, 6 April 2015.

Second Advisory Board Meeting, Charotar University of Science and Technology, Changa, Gujarat, 14 April 2015. Faculty Selection Committee Member, IIIT Vadodara, 17-18 April 2015.

Selection Committee Member for selection of faculty (Assistant Professors), Charotar University of Science and Technology, Changa, Gujarat, 9 May 2015.

Board of Studies (BOS) Meeting, LDRP Institute of Technology and Reasearch, Kadi Sarva Vishwavidyalaya, Gandhinagar, 13 May 2015.

Meeting with Director, Space Application Centre (SAC), ISRO (Department of Space, Government of India) for MoU between DA-IICT and SAC on 18 May 2015.

Faculty Selection Committee Member, Babaria Institute of Technology, Vadodara, 20 May 2015.

Subject Expert for promotion of faculty (Assistant to and Associate Professors) at Institute of Technology, Nirma University, Ahmedabad, 9 June 2015.

Meeting with Senior Scientists, Space Application Centre (SAC), ISRO (Department of Space, Government of India) on 16 July 2015 for discussion on CEP Programmes to be offered by DA-IICT to SAC personnel.

#### Prof V. Sunitha

Institute of Mathematical Sciences, India, May-June 2015.

#### ANY OTHER SIGNIFICANT CONTRIBUTIONS

#### Prof Nagaraj Ramrao

In-charge Director, IIIT Vadodara.

Member, Appellate Committee, Centre of Excellence, Gujarat.

#### Prof Aditi Nath Sarkar

Submitted upon request, a proposal for 'A Centre for Heritage Cinema Access and Retrieval: A Proposal for a Project to digitize and render accessible Indian Cinema Archives' (written with inputs from Holden Aust, San Francisco, USA, & Prasenjit Majumder, DA-IICT Gandhinagar), to Ministry of Information and Broadcasting, Government of India, New Delhi and National Film Archive of India, Pune, during May-June 2015.

#### **Prof Asim Banerjee**

Convenor of the Postgraduate Committee (PGC).

Warden, Boys Halls of Residence.

Organised 3-D CEP Workshop on "Geometrical Interpretation of Mathematical Concepts" at DA-IICT, 17-19 July 2015.

#### Prof Deepak Ghodgaonkar

MTech Program - Communication Systems Specialization Coordinator.

#### Prof Hemant A. Patil

Developed a state-of-the-art speech signal processing laboratory of international standard at DA-IICT Gandhinagar. The lab is fully airconditioned and equipped with high performance computing servers, personal computers, good quality microphones, Bose speakers, storage drives, printer, scanner, web cam, etc. In addition, the lab is equipped with very popular and costly LDC Speech Corpora.

Contribution to manpower training and resource building: With the support from sponsored projects and DA-IICT Gandhinagar, we trained about 7 PhD scholars, 27 Masters students and 10 B.Tech students, 5 consultants, 1 data entry operator and 1 visually challenged person.

Link Speech Lab at DA-IICT to ISCA Speech Labs (across the world) website. In addition, this





is first Speech Lab from India which is linked to ISCA Speech Labs (across the world).

Principal Investigator (PI) and Co-PI for five centrally Government funded sponsored projects.

Coordination to develop DST FIST Proposal (which is under progress).

Proposed a new M. Tech. (ICT) program with specialization in Signal Processing.

Working as the coordinator for M.Tech. (ICT) with specialization in Signal Processing.

Chair for Organizing Committee, Winter School on Speech and Audio Processing (WiSSAP) 4-7 January 2015.

Chair of the Organizing Committee, Summer School on Speech Source Modeling and Its Applications, 4-8 July 2016.

#### **Prof Naresh Jotwani**

Collaborated actively in the design and development of the advanced Solar PV Inverter for agricultural water-pumping, produced by the Ahmedabad-based startup Kisan Solar. The system provides for centralized remote monitoring of the inverter/pump, and is at present undergoing extensive field trials in Rajasthan.

#### **Prof Pokhar M Jat**

External Expert, Selection committee for Vice President (Management Services Division)) at GSFC, Vadodara, 2015.

Member, e-Urja up-gradation committee, GUVNL, Vadodara, 2014.

External Expert, Selection committee for GM(IT) at GUVNL, Vadodara, 2014.

#### **Prof Sourish Dasgupta**

Co-founded the first faculty-led start-up at DA-IICT in 2015.

Ranked among top 100 US start-ups in 2015 (out of 600+ start-ups) in the prestigious Techweek Launch KC competition.

#### Prof Srikrishnan Divakaran

Supervised and mentored around 25 students towards (i) Summer Research Internship, (ii) ACM Competitions.

Filed a technical report titled 'An optimal Algorithm for List Update,' 2014.



# Faculty and Staff Updates

### FACULTY

The faculty consisted of 56 regular faculty members besides 18 adjunct faculty members who taught specialized courses in all Programs. The list of faculty members is available at **Annexure 3**.

#### **New Faculty**

The following faculty have joined the Institute during the year 2014-15:

- 1. Nagaraj Ramrao joined as Director & Professor on 19 January 2015.
- 2. Gagan Garg Joined as Assistant Professor on 1 August 2014.
- 3. Shweta Garg Joined as Assistant Professor on 1 September 2014.
- 4. Ganesh Bagler joined as Assistant Professor on 17 July 2015.
- 5. Purushothaman A joined as Assistant Professor on 22 July 2015.

#### **Faculty Retirement**

- 1. S C Sahasrabudhe, Director & Professor on 20 January 2015.
- 2. Samaresh Chatterji, Professor, on 28 January 2015.
- 3. Anjan Ghosh, Professor on 28 January 2015.
- 4. Ganesh Devy, Professor on 31 January 2015.
- 5. Radha Parikh, Associate Professor on 30 June 2015.
- 6. V P Sinha, Distinguished Professor on 31 July 2015.

#### **Faculty Resignations**

- 1. Srinivasa Rao Zinka, Assistant Professor on 24 November 2014.
- 2. Mazad Zaveri, Assistant Professor on 28 November 2014.

- 3. Vijay Kumar Chakka, Associate Professor on 5 January 2015.
- 4. Girja Sharan, Professor on 29 January 2015.
- 5. Gaurav Mishra, Assistant Professor on 31 May 2015.
- 6. Maitrayee Mukerji, Assistant Professor on 30 June 2015.

# 

#### **New Staff**

During the reporting period, five staff members have joined the Institute: A list of staff is given in **Annexure 4**.

- 1. Virendrakumar Sathwara, Library Trainee on 1 September 2014.
- 2. Vipul Banker, Library Trainee on 1 October 2014.
- 3. Vibha Prajapati, Secretary F B No 4 on 9 July 2015.
- 4. Gauri Wagenaar, CEP Officer on 14 July 2015.
- 5. Nandini Banerjee, Counselor on 20 July 2015.

#### **Staff Resignations**

- 1. Saurabh Prajapati, Junior Professional Assistant on 31 October 2014.
- 2. Dinesh S Prajapati, Senior Programmer on 28 February 2015.
- 3. Trinayan Borgohain, Library Trainee on 31 March 2015.
- 4. Anjali Kulshrestha, Placement and CEP Officer on 30 April 2015.





# Student Activities and Achievements

Co-curricular activities form an important component of student life at DA-IICT. As in the past, the campus continued to be a vibrant and lively place, with sports, cultural and other activities happening throughout the year. Students also distinguished themselves in a diversity of international and national level competitions, and won several prizes, or made it to the finalist teams, and made the name of DA-IICT more prominent among the top engineering institutions in the country.

#### Synapse-2015

Synapse, the Annual Techno-Cultural Festival of DA-IICT, was organized from February 26, 2015 to March 1, 2015. The events at Synapse were designed to inspire solutions in which technology, culture, humanitarianism, and viability symbiotically coexist. With systematic and generous support from the corporate community and overwhelming participation of students from all over India, it can definitely be said that the festival was successful as the spirit of co-operation, involvement, publicity, sponsorship, innovation, creativity, fusion, rhythm, aesthetics, fun and frolic, drama, fashion - were all at their peak during Synapse-2015. The plethora of technical and cultural events that Synapse-2015 showcased enthralled audiences of all kinds - from those interested in the arts, to the geeks who only enjoy life in front of a computer screen.

#### Sports

Concours, the Annual Inter-College Sports Festival of DA-IICT was held during November 5–9, 2014 at DA-IICT. Shri Salim Durani (ex-Cricketer of the Indian Cricket Team) was the Chief Guest at the Opening Ceremony while Col. Anuj Shrivastava (CO.2 Gujarat NCC, Gandhinagar) was the Chief Guest at the Closing Ceremony of Concours 2014. This event saw a participation by about 1500 students (including 190 girl students) from 35 colleges from and outside Gujarat.

Sports activities during the year saw a significant increase, with the highlights being the hosting of tournaments with other institutes, a wider variety of activities and competitions involving many more students than earlier years, and events that involved faculty, staff and students. The 8X Cricket Tournament (Fun with Game) was organized in February 2015.

#### Cultural

The Cultural Committee continued its tradition of organizing highly successful, and highly attended cultural events on the campus. It aims to bring out talent in the student community in all the possible forms whether it is music, dance, theatre, literary skills, sketching or other fine art styles. In order to showcase these talents various competitions like 'Sangeet Sandhya,' 'Dance Nite,' 'Drama Nite,' 'Rangoli,' '*Hasya-Kavi Sammelan*' were calendared throughout the year.

Various festivals and National festivals like Independence Day, Gandhi Jayanti and Republic Day were celebrated. The Cultural Committee along with the Sambhav Committee visited the blind people at the BPA (Blind Peoples' Association) and spent a joyful day with the special people, and thus marked the end of Independence day on a satisfying note. On Gandhi Jayanti, poetry recitation and a debate on the relevance of Gandhian values in contemporary India were followed by a quiz where participants were made to strain their brain cells and recall those facts about Gandhi that they had read in their school history textbooks. '**Garba Night'** was organized on September 29, 2014.

To enrich the students with various hobbies such as theatre, dance, instrumental and vocal music, art etc., workshops were conducted to nurture budding talent. 'Friday Night Live,' an initiative of the Music Club in DA-IICT was introduced to encourage the students and to showcase their talent.



'Maniere - the night of fashion' was and remains the most anticipated event; it was organized on September 19, 2014. The theme of Maniere 2014 was 'Once Upon a Time.' Students are given an opportunity to bring forth their creative and aesthetic skills when they were asked to design costumes on the basis of a particular theme.

The musical talent of the students of the Institute was put on display during the much awaited musical night '**Raaga**,' which was organized on February 18, 2015. The musicians proved their metal when many prizes were won in the categories of Indian Solo, Indian Group, Duet, Western Solo and Western Group. Poetry night '**Rhyme'** was also organized on same day. In another event '**Rang Manch**,' the scriptwriters and the dramatists put on their thinking caps and presented wonderful and colourful plays depicting various aspects of India's social and cultural heritage.

**Rashtriya Ekta Diwas (National Unity Day)** was celebrated on October 31, 2014 (Birth Anniversary of Sardar Vallabhati Patel). As part of the celebrations, the **Rashtriya Ekta Diwas** Pledge was administered to the students, staff and faculty of DA-IICT. Run for Unity (within campus), and a debate competition were also organized.

On **Martyrs' Day** – January 30, 2015, a drawing competition was conducted on the topic 'Mahatma Gandhi aur Safai.' The students and staff of DA-IICT also took a pledge for cleanliness. A two-minute silence was observed in the memory of the martyrs.

DA-IICT conducted a Yoga Session on Raja Yoga based Meditation and Relaxation as part of the **International Yoga Day Celebrations** on June 21, 2015. The session was conducted by Dr. Bhadresh Rami, Regional Program Coordinator, Shri Ram Chandra Mission (www.srcm.org).

DA-IICT hosted a group of 250 youth (NRIs, PIOs, Foreigners) on **Youth Pravasi Divas** – January 7, 2015. A cultural program by various student clubs of DA-IICT was organized. This event held was under the auspices of **Vibrant Gujarat Summit 2015**.

#### **Student Clubs**

Student Clubs at DA-IICT campus are the medium to channel the bubbling creativity and enormous potential of students. All club activities are for the students, by the students and of the students. Some of the clubs that exist currently include the Film Club, DA-IICT Theatre Group (DTG), Prayaas, Sambhav, The Press Club, Forward Forum, Quiz Club, Martial Arts Club, Dance Club, Debate Club.

While **film club** provides regular entertainment to DA-IICTians in the form of screening of popular cinema, the **DA-IICT Theatre Group (DTG)** has been motivated by the Budhan Theatre Group of Ahmedabad and is focused on producing prosceniums and street plays. A fabulous 2-day event, Drama Night (*Rangmanch*) was organized on January 21, 2015 with active participation of 11 teams (5 felicity – musical plays and 6 stage plays) presenting plays of varying genre including suspense, thriller, dramatic, comedy, sarcasm on social issues, etc.







**Prayaas** has been set up with the vision of 'personal transformation through outreach activities.' It is involved in community service in the form of caring about people with disabilities and other problems.

**Sambhav** is a non-profit student's group which strives for bringing smiles on the faces of underprivileged people. Apart from regular teaching projects at Blind School, Orphanage for HIV positive kids and Government Primary Schools, it organised mass events on Independence Day, Republic Day, Gandhi Jayanti, etc. One event worth mentioning was the Independence Day Celebration with the children from Deaf and Dumb School, Blind School and Orphanage. These children were served the food and chocolates and were taken from the Orphanage to visit Science City in Ahemdabad. They were brought to DA-IICT campus for evening supper and were finally dropped at their orphanage.

Sambhav also organized a **Blood Donation Camp** (with the Civil Hospital) on April 11, 2015. Sambhav's Cycle Initiative, named **Cyclon** also started on March 18, 2015. As a part of this initiative, cycle service is provided to the student community of DA-IICT at a very nominal price.

The **Press Club** regularly brings out an e-magazine called 'Entelechy,' with sections ranging from global news, to DA-IICT news, to movie, book and music reviews, to poetry, technical articles and debates.

**Entelechy**. The magazine covers articles by the students and the alumni on various sections – Campus Clamour, Self Science Scion, Sports, Techyon, Books, Films, Music, Food, Freeze Frame, GNA, Vuelo, Random Noise, Point Counterpoint, Warps and Wefts, Summer Chilliers, etc. The first edition of the magazine came out in the year 2005 and July 2015 is the latest one. A Press Club under the guidance of a faculty mentor is constituted every year by the Student Body Government. One of the students is elected as the Editor of the Magazine and other student members of the Press Club serve as Section Heads of various sections of the magazine.

During the reporting period, the Press Club have also initiated **'Portraits'**, a weekly affair wherein the Press Club brings a fresh anecdote from the lawns and lanes of the DA-IICT campus. It gave a face to the unknown story-tellers and a voice to their fantastic tales, in an attempt to capture the very essence of DA-IICT. These stories are published in the form of a pamphlet and a new one is displayed every Monday on various notice boards.

The newly introduced **Spic-Macay Heritage Club**, a Student Chapter of DA-IICT was inaugurated on September 3, 2014. The invited artist was Pandit Sarathi Chatterjee, a North Indian Classical Vocalist who has performed far and wide – not only in India but also many other countries. DA-IICT also launched live @ spicmacay.daiict.ac.in on March 4, 2015.





Padma Vibhushan Pandit Hariprasad Chaurasia, Indian classical flute maestro, performed at DA-IICT. on September 14, 2014. This event also marked the curtain raiser event for the Gandhinagar Chapter of Spic-Macay.

**Dance Club** - the Dance Coders, tries its best to combine the deep seated passion for the art with dedication and teamwork. A Dance Nite was conducted on November 12, 2014.

The **Debate Club** has grown remarkably since its inception in 2009. Besides conducting its weekly debates and Intra-college debate competitions, the club has also organised a Youth Parliament and an Inter-college Parliamentary Debate.

Apart from these non-academic and social activity clubs, few groups sound serious academic. **Electronics Hobby Club (EHC)**, **DA-IICT Linux Users Group (DLUG)** and **IEEE (Institute of Electrical and Electronics Engineers) Student Branch** belong to this category. EHC is a place for playing with electronic circuits and instruments outof-the-classroom. DLUG has been committed to actively promote the use of Linux and other open source software for strengthening the objective of the worldwide open source movement. Various other student clubs were active during the reporting period and organized their own events for student groups ranging from a few dozens, to a few hundreds. Notable among these Clubs were **The Aryans, Web Dev Club** and **The Programming Club**. The Programming Club conducted DA-IICT Intra Programming Contest which was an online event, where students have 6 problems to solve in 3 hours of time on Online Judge Platform SPOJ.

**Forward Forum** organises lectures and other activities by eminent national and international personalities on campus.

**Quiz Club** organizes regular quiz events on campus and encourages students to participate in various quiz competitions around the country.

**Cubing Club** conducted various sessions on different methods of solving the 3x3 Rubik's cube and the notations of the cube. The session introduced them to various types of puzzles including the Pyraminx, Mirror cube and the regular 3x3, 4x4, 5x5, etc.

**'Ideoson'**, an initiative taken by the **Microsoft Technical Club (MSTC)** of DA-IICT, is all about developing an idea into a live app and giving it a new face and scope. Cool apps that surprise and delight





mobile users, built by developers in the student community, are a vital part of the Ideoson vision. MSTC approached the students to present their ideas and then work with the skilled members over the summer to build an app and finally take them to the competitions like Microsoft Imagine Cup, Microsoft BizSpark India StartUp Challenge, mBillionth App Competition etc. The final presentations of the wellplanned ideas were carried out on April 12, 2015.

The **Hostel Management Committee (HMC)** organized the Hostel cleanliness drive and cleanest room and wing competitions, in both the Halls of Residences (HOR) – Men and Women in March 2015.

A series of motivational weekly lectures on topics - Focus, IQ EQ SQ, Time Management, Beyond Vegetarianism, Power of Habits, Science beyond, Low of Karma, Art of Mantra Meditation and Beyond Spirit were organized by **YES+ (Youth Empowerment Seminars).** These weekly lectures were conducted on Tuesday evenings from 15th September to 30th November 2014 by the speakers from *Akshyapatra* Foundation.

#### IEEE Student Branch Activities

IEEE Student Branch provides opportunities to the students to gain relevant knowledge and learn technical skills from experts of ICT and related areas.

**Summer School 2015 – Internet of Things:** The Summer School 2015 was conducted from June 1 to 6, 2015. This year summer school's theme was 'Internet of Things (IoT)' - that will make real life things come alive. The Internet of Things (IoT) is the network of physical objects or 'things' embedded with electronics, enabling it to achieve greater value and service by exchanging data with the manufacturer, operator and/or other connected devices. Each thing is uniquely identifiable through its embedded computing system but is able to inter-operate within the existing Internet infrastructure. Lt. Cdr. Rahul Sitaraman was the invited speaker

**i.Fest'14 – Integrating Ideas:** Annual Technical Festival was organized by the IEEE student Branch of DA-IICT from October 31 to November 2, 2014. The aim of i.Fest was to create magic by bringing the right mix of minds, perspectives and ambition

with the fusion of technology and fun. Connected Thinking was about stretching ourselves to bring new perspectives that challenge conventional thoughts and solutions. It was about bringing best of ideas and technologies together. i.Fest'14 had refreshing challenges, inspiring interactions and ingenious concepts and most importantly, fun 'n' frolic. It spanned domains like app development (i.app), robotics (i.bot), i.rubble, i.quiz, i.design, i.decipher, i.capture, i.maze, B2B, Treasure Hunt and Customised Game Controller, etc. Various events like robo race, Line follower bot competition, technical quiz, online programming contest, business plan competition, treasure hunt, etc., were also organized during the three day event. The hangout was joined by several IEEE members from across the country.

IEEE Gujarat section Educational Activity, Industry Applications Society (IAS) and IEEE DA-IICT student chapter conducted a series of workshops from August to November 2014 on the theme of '**Computer Controlled Systems** (CCS).' The purpose of these workshops was to explain design of computer controlled systems. There were six, one day workshops in the series. All six workshops consisted of a lecture session, followed by a practical (hands-on) session. The six workshops that were conducted are:

- Basic computer controlled systems using Arduino® - 24<sup>th</sup> August 2014
- Networked control systems using Raspberry PI & BeagleBone Black – 7<sup>th</sup> September 2014
- Mechatronics (use of sensors, controllers, gears, motors) – 21<sup>st</sup> September 2014
- Wireless networks for Internet of Things (IoT) 12 October 2014
- Autonomous devices (Robots, UAV, unmanned vehicles) – 9<sup>th</sup> November 2014
- Case studies on real world computer controlled systems - 9<sup>th</sup> November 2014

**ACM-DAIICT student chapter** organized a half day workshop on 'Technical Writing' on February 16, 2015 DA-IICT.

'**Tech Nite**' an 'Only for Girls' event and was organized in the girls' hostel post-midnight keeping in mind the hostel culture. The night started with a TED talk by Sheryl Sandberg to motivate the students how enthusiastic technological work can be.

#### STUDENT ACHIEVEMENTS

Eleven students were selected to intern with Google Summer Code (GSOC) of 2015. Of the 11 students selected for the GSOC, one is from first year BTech, four each from third and fourth year BTech and two from the MTech programme. The students who were chosen are Rishi Shah, Prakhar Joshi, Saurabh Patel, Kaushik Varanasi, Avinash Srivastav, Kesha Shah, Abhimanyu Tak, Akshay Ratan, Shaurya Singh, Ganesh Iyer, Ainish Dave along with Vaibhavi Desai as mentor. The GSOC is a global internship opportunity for students that offers stipends to write code for various open source software projects. Through GSOC, accepted student applicants are paired with mentors from the participating projects, thus gaining exposure to real-world software development scenarios and the opportunity for employment in areas related to their academic pursuits. These students received a stipend of \$5,000 (Rs. 3.18 lakh). With 'Flip bits not burgers' as its original slogan, the idea of the programme was to get students be paid to develop open source code than a summer job flipping burgers.

One of the interns Kaushik Varanasi, a third year BTech student, got selected for a start-up in Bengaluru as part of the institute's summer internship and simultaneously work with a firm called Tardis for GSOC.

Vaibhavi Desai, BTech 2011 batch student and Kesha Shah bagged the 2014 Google Anita Borg Memorial Scholarship (Asia Pacific) on September 2, 2014. Asia Pacific Scholars received a scholarship amount towards their tuition and attended the Google Scholars' Retreat in Tokyo, consisting of workshops, technical talks, panel discussions, a hackathon and plenty of networking opportunities.

Devanshu Jain, BTech 2012 batch student was shortlisted for USC Viterabi Internship.

Kesha Shah, BTech 2011 batch student, was selected as one of the five finalists for 'Women in Open Source by Red Hat' internationally.

Nidhi Vyas, BTech 2013 batch student, got the opportunity to work under Professor Jenniffer mankoff at Carnegie Mellon Universit, USA from May to July 2015. She was paid \$1859 per month.

Abhimanyu Tak, BTech 2011 Batch student and his team won third prize in the Line Seguidor event of IIT-





Jodhpur's Annual Festival. More than twenty teams from various institutes participated in the event.

Anshu Chittora, PhD student received best paper award for the paper 'Analysis of Normal and Pathological Infant Cries using Bispectrum Features Derived using HOSVD' at International Conference on BioSignal Analysis, Processing and System (ICBAPS 2015) held at Kuala Lumpur, Malaysia on May 26-28, 2015.

One hundred and twenty three students of DA-IICT participated and won prizes in various sports events at BITS Goa Sports Festival held in March 2015.

# DA-IICT Centre for Entrepreneurship and Incubation (DCEI)

**DCEI** aims to encourage students with an entrepreneurial bent of mind to come up with innovative ideas and channelise their efforts to give births to new ventures based on ICT products. DCEI has collaborations with entrepreneurship communities like NEN and CIIE (Centre for Innovation, Incubation and Entrepreneurship, IIM Ahmedabad).

DCEI periodically organises workshops, seminars and talks by entrepreneurs and people from diverse

backgrounds. It also facilitates visits to various research and design institutes across the country to enable students to obtain ideas for new business ventures. It tries to arrange for part-time assistance, short-term and long-term internships (BTPs, etc) with entrepreneurial ventures. With this, DCEI attempts to give the students a first-hand exposure to the challenges faced by entrepreneurs through realworld projects with startups.

Companies incubated by DCEI are:

Company Name: Alma Connect Solutions Pvt. Ltd. Founders: Swapnil Khandelwal & Rubish Gupta Comapny URL: www.almaconnect.com

Company Name: PlayPower Labs India Pvt. Ltd. Founder: Kishan Patel Comapny URL: www.playpowerlabs.com

Company Name: Areysun Online Pvt. Ltd. Founders: Abhi Desai & Yash Shah Comapny URL: www.areysun.com

Company Name: Appbin Labs Pvt. Ltd. Founders: Siddharth Kothari & Sagar Chandrana Comapny URL: www.getappbin.com



## Alumni Activities and Achievements

The DA-IICT alumni, spread all over the world are over 3700. They are known to have made distinguished contributions in their respective domains. To reach, engage and connect with them, the DA-IICT Alumni Association organised its fifth annual meeting on 25th January, 2015. The meeting, chaired by Professor R Nagaraj, Director was attended by Prof Suman K Mitra, Dean (AP) and Prof Rahul Muthu, Convenor, Alumni Board , faculty and members of the Student Body in Government (SBG). A good number of alumni joined for discussions online from India and abroad. The Association welcomed Prof Nagaraj and expressed that with his leadership, DA-IICT will further grow as an influential institution in the area of ICT. Professor Nagaraj advised alumni to share with their juniors, new technology and practices in

their workplace, so that they are exposed to the latest technology. He also sought their support in tapping private funded research projects to bring industry environment among the students particularly, the Postgraduate and Doctoral Scholars. He discussed with them the future plans of the Institute and sought their participation in managing programmes and activities of the Institute by serving in internal Committees.

The Alumni Association also organized their chapter meetings in various locations in the country. The DA-IICT Alumni Website (https://daiict.almaconnect. com/), Alma Connect, a company incubated by the DA-IICT Incubation Centre and co-founded by a DA-IICT alumnus, manages the Alumni Web Portal.





## Resource Centre

The Resource Centre (RC) has become a fuel-station for academic and research activities of the Institute. Whenever faculty and students need any piece of information for their academic requirements, they first search the RC resources. These resources include printed books, journals, bound volumes, online databases and videos. The RC continued to play catalytical role in maintaining academic excellence at the Institute.

eResources are increasing rapidly and their usage is spreading among the user-community. The student community still perceives the RC as a place to study with concentration in the academic ambience of books, journals, cubicles surrounding them. It is all reflected in the occupancy statistics. The RC print-book collection is on rise covering not just ICT studies but also humanities, literature, history and social sciences (refer to Additions to Collection Table below). Programmes and events spread throughout the year supported teaching, learning, research and scholarly activities of the Institute. New methods were adopted to provide available information in structured format for effective utilization and to facilitate the end-user. Based on the suggestions received from users, changes were effected in the section layouts. That had helped the users to take advantage of the RC infrastructure effectively. Services like Current Contents, Content Page Service, Newspaper Clippings continued to keep users updated, not only in their subjects of interest but also in interdisciplinary branches and society in general. The RC's emphasis on both Print and Digital Resources helped the users balance learning activity by referring to both types of resources. Good number of useful specialized as well as general eResources were brought under one umbrella of the RC's website to facilitate users to find information from a single window. Proactive, innovative approach in disseminating right, useful and latest information using modern technological tools remained the main objective of the Resource Centre. Some of the significant activities and services carried out during the year of this report are given below.

#### **Print and Audio Visual Collection**

The RC collection includes books, conference proceedings, reference books, CDs, VCDs, DVDs etc. The following Table presents the additions during the academic year 2014-15.

#### Additions to Collection

Collection Type	Added in 2014-15	Total as on 31 July 2015
Books	610	30186
Bound Volumes of Journals	204	2338
Theses and Dissertations	52	487
Audio Visual Resources	64	3731
Total Collection	930	36742

#### **Printed Books :**

Faculty helped the RC to develop its Print-Books collection. Out of 787 suggestions/orders placed, the RC could procure 646 Titles. Utmost care was taken in ordering and procuring the titles suggested by faculty for their courses (Course Reserves & Short-term Loans).

#### **Print-Journals :**

In the academic year 2014-15, the RC renewed printjournal subscriptions of 159 journals of which 91 were from the **9** academic disciplines and the remaining from interdisciplinary and allied subjects.

#### **Digital Resources**

The RC subscribed to the following 12 digital resources during the year under review. The RC Committee has declared it as a core collection to support Institute's academic and research activity.

- ACM Digital Library
- ASA Digital Library
- American Institute of Physics (AIP) Online
  Journals
- American Physical Society (APS) Online
  Journals
- ASABE Technical Library
- IEL Online Library (IEEE Xplore)
- indiastat.com

- JSTOR Archive
- LNCS Online Collection
- ITU Recommendations
- Publications from USENIX
- ScienceDirect (Computer Science Collection)

These online resources contain more than 4600 peer-reviewed/specialised e-journals and statistical databases.

#### **Circulation Services**

During 2014-15, over 13314 documents were issued to users. These documents included books, reference books, current and bound volumes of journals and audiovisual materials and were mainly circulated among the faculty, students and staff members of the Institute.

# Resource Sharing (Inter-Library Loan Service)

The Resource Centre has been taking an active part in resource-sharing activities with local Libraries and the libraries at the national level through ADINET, DELNET and INFLIBNET Library networks. During the reporting period, the RC borrowed 41 books and lent 12 books to other institutions. It also received 322 research papers from professional journals required by faculty members and delivered 125 research papers/articles to other institutions.

To further support academic and research activity, the RC is a member of Development Library Network (DELNET). This membership entitles access to all the databases created by this network, and support on Inter Library Loan and Document Delivery Services.

#### **Institutional Memberships**

Institutional Membership of other professional bodies, institutions and consortia play an important role in providing information from the sources not stocked by the RC. The RC renewed the membership of 12 professional bodies, institutions and consortia and availed the benefits of participation in professional programs. They are Ahmedabad Library Network (ADINET), Ahmedabad Management Association (AMA), American Society of Agricultural and Biological Engineers (ASABE), British Library, Ahmedabad, Computer Society of India (CSI), International Telecommunication Union (ITU), UGC-Infonet Digital Library Consortium, among others.

#### **Project Reports**

The RC has been maintaining a collection of all PhD theses (13), MTech dissertations (419) and MDes

Projects (42) both print and digital formats submitted by students of DA-IICT. Efforts made to collect, organize and provide access to all the BTech project reports of the last batches were successful and now 1126 digital copies of the Project Reports are added to the Institutional Repository. These reports are now available in digital form for consultation. A separate batch-wise catalogue providing details of each project along with an abstract is now available on the internet through the RC website.

#### **Research Information**

To promote and support the Institute's research undertakings, the RC continued to put its concerted efforts in tracking and providing updated information relating to 'Call for Research Proposals' and 'Research Funding Sources.' The faculty and researchers have found this service useful in identifying potential projects for funding.

#### **Access to Special Lectures**

During the reporting period, the RC continued its efforts to collect, organize and provide access to the information relating to all special lectures held in the Institute. These included a collection of power point presentations and video recordings of lectures delivered by prominent persons. The list with links to presentations and video recordings of all possible events is now made available through RC website.

#### **Preview Room Facility**

The RC has a preview room which is equipped with multi-media projector, DVD player, audio-amplifier with high-quality sound system to view in-group the education materials in support of teaching and learning. Faculty from Humanities and ICT-ARD extensively used the facility and arranged lectures here taking advantage of the facilities. Special Interest Groups like MyKindOfMusic too used Preview Room for their monthly experience-sharing meetings. Placement Cell of DA-IICT arranged group presentations for visiting companies at the Preview Room. Preview Room is also used for orientation programmes for freshers.

#### **Reference and Information Services**

To promote the effective use of available resources, the RC continued all the information services introduced in the previous years with updated information. These services were well received by the student community. A new service i.e., 'Topical Display on Course-related Titles' was introduced during the reporting period to create awareness about collections available in the RC and thereby promote reading habits among students. Also new bibliographies were compiled on different subjects to promote the use of collections.



# Digital Repository of Scholarly Resources (DRSR)

The DRSR which was launched in 2011 to collect, organize, preserve, provide access to, and promote dissemination of the scholarly output of DA-IICT Community, was well-received by the faculty and students. The metadata-database of the faculty publications, research papers, journal articles and other professional presentations serves as a platform to the faculty, researchers, and students of the Institute to share their research work with wider community. Currently it hosts close to 2273 resources.

# Orientation and Information Literacy Programs

A detailed orientation program to introduce the fresh students with the RC collection, facilities and services was held during 22–24 and 28–31 July 2015. The sessions were conducted in fourteen batches of 60 minutes each.

#### Visitors to RC

Institution	No. of visitors	Date
Department of Library & Information Science, Gujarat University, Gujarat	24 Students + 2 Faculty	11 September 2014
Department of Library & Information Science, S P University, Vallabh Vidyanagar, Gujarat	36 Students + 4 Faculty	20 February 2015
Library Staff and network administrator of Charotar University of Science and Technology, Changa, Anand	4 Professionals	16 July 2015

#### Internship

As part of its regular internship program for fresh Library Science Graduates, the RC recruited three MLISc graduates in September 2014 for one year as trainees. They were given training in all areas of LIS work including handling of digital resources. They were also offered monthly stipend.

#### **Staff Training**

For efficient delivery of services, domain-centric staff training is needed to upgrade their knowledge and skills. During 2014-15, the following staff members attended the workshops/seminars

 Shashikumara A A, participated in a immersive workshop on 'Simple rules to unleash a culture of innovation Liberating Structures for Library & Information Sector' organised by Mudra Institute of Communications, Ahmedabad, 28 February, 2015.

- Nitesh Singh Pawar, participated in National Workshop on 'Content Management System Using Joomla' organized by INFLIBNET Centre at Gandhinagar, 20-22 May 8-10, 2015.
- Prasanna Kumar, attended seminar on 'Libraries & Education: Vision 2020' organized by Ahmedabad Library Network (ADINET), Gujarat University Senate hall, Gujarat University Tower, Ahmedabad, 23 August 2014.

#### **Paper Presented**

Nitesh Singh Pawar, Mayuri Asalkar, Subodh Kumar Bajpai and Surendra Kumar Soni, 'Computer Vision Syndrome among Library Professionals,' in *National Seminar on Re-Defining the Strategic Role of Libraries in Indian Culture and Modern Society*, Udaipur, 30–31 July 2015..



## Infrastructure

The renovation, up-gradation and creation of infrastructure facilities supportive to teaching and research have always been the priority of the Institute.

The Speech Research and Computational Science Laboratories with furniture and air conditioners were set up with an investment of Rs.35.00 lakh.

During the reporting year, the Institute started allotting rooms to the students in the newly constructed extension block in the girl's hostel with 48 rooms. To ensure provision for clean drinking water, a new pipe line was drawn for direct supply of drinking water from Reverse Osmosis (RO) plant to the hostels, food courts, student's activity centers and campus residences and 14 RO plants (25 litre capacity each) were set up and commissioned in various locations.

A good number of infrastructure facilities were added in the Resource Centre and notable among them were (a) air-conditioning the periodicals hall and digital resources centre with over 250 user seats; (b) a new IBM Server 7945 ICS for hosting SLIM LAS and NPTEL Video courses with 3 TB HDD; (c) up gradation of two old servers for IR and ILMS by adding 4 GB RAM and 600 GB HDD each (Total 6 GB RAM and 700 GB HDD); (f) one CD mirroring server; (e) up gradation of six PCs allotted to staff and 16 users PCs with latest hardware; (g) a new PoE switch for WiFi access points and three additional WiFi access points for uninterrupted internet connectivity; (h) one Bluray Disc player; (i) two advanced auto detect barcode scanners, two manual barcode scanners and one barcode printer; (j) one external I HDD with 1 TB Capacity for backup; (k) a separate digital repository for hosting scholarly content generated within the institute using D-Space; and (l) eight security cameras for security of library materials and monitoring user activities.

DA-IICT has fully networked campus with optical fibre cable connectivity between various having 1GBps internet bandwidth. Half of the 900 personal computers in the Laboratories were replaced with latest configuration of PCs. The Data centre was upgraded with 20 servers and 100 network switches to provide email, web hosting, files sharing, license management, campus management, imaging of PCs, cluster and other services. The controller based wireless access with 25 access points at various locations have also been set up during the reporting year.





# Annexure 1



## MANAGEMENT

#### Academic Council

Prof Nagaraj Ramrao, Chairman	Director, DA-IICT
Shri K Narayan, Member	Management Consultant, Reliance ADA Group, Mumbai
Prof Surendra Prasad, Member	Professor, Indian Institute of Technology Delhi, New Delhi
Prof David Koilpillai, Member	Professor, Indian Institute of Technology Madras, Chennai
Shri Suresh Rangachar, Member	President, Reliance Communications Limited, Mumbai
Prof. Naresh Jotwani, Member	Professor, DA-IICT, Gandhinagar
Prof. Sanjay Srivastava, Member	Professor, DA-IICT, Gandhinagar
Prof. Binita Desai, Member	Professor, DA-IICT, Gandhinagar
Prof. Anish Mathuria, Member	Dean (R&D), DA-IICT Gandhinagar
Prof. Suman Mitra, Member	Dean (Academic Progams), DA-IICT, Gandhinagar
Shri Soman Nair, Secretary	Executive Registrar, DA-IICT, Gandhinagar

### **Finance Committee**

Prof. R. Nagaraj, Chairman	Director, DA-IICT, Gandhinagar
Shri Suresh Rangachar, Member	Trustee, Dhirubhai Ambani Institute of Information and
	Communication Technology Society, Mumbai
Shri Shrenik Vaishnav, Member	Vice President & Head (Consolidation), Reliance Communications
	Limited, Mumbai
Prof Suman Mitra, Member	Dean (Academic Programs), DA-IICT, Gandhinagar
Shri Soman Nair, Secretary	Executive Registrar, DA-IICT, Gandhinagar

#### **Board of Studies**

Prof. Suman K Mitra, Chairman	Dean (Academic Programs), DA-IICT, Gandhinagar
Prof. Anish Mathuria, Member	Dean (Research & Development), DA-IICT, Gandhinagar
Prof. Asim Banerjee, Member	Convenor, Postgraduate Progammes, DA-IICT, Gandhinagar
Prof. Anil K Roy, Member	DA-IICT, Gandhinagar
Prof. Hemant Patil, Member	DA-IICT, Gandhinagar
Prof. PM Jat, Member	Coordinator, M Sc (IT) Program, DA-IICT, Gandhinagar
Prof. Madhumita Mazumdar, Member	Coordinator, MDes(CD) Program, DA-IICT, Gandhinagar
Prof. Ranendu Ghosh, Member	DA-IICT, Gandhinagar
Prof. Biswajit Mishra, Member	DA-IICT, Gandhinagar
Prof. Shweta Garg, Member	DA-IICT, Gandhinagar
Prof. Pratik Shah, Member	Indian Institute of Information and Communication Technology Vadodara, Gandhinagar (Alumnus of DA-IICT)
Shri Hasit Kaji, Member	Tata Consultancy Services (Industry Representative)
Dr. Sumitesh Sarkar, Member	Space Application Centre, Indian Space Research Organisation (Nominated by the Academic Council)
Dr. Sanjay Chaudhary, Member	Professor & Head (Research), Institute of Engineering and Technology (IET), Ahmedabad University, Ahmedabad (Nominated by the Academic Council)
Prof. Manik Lal Das, Convenor	Convenor, Under-Graduate Programs, DA-IICT, Gandhinagar

#### Internal Quality Assurance Cell

Prof. Nagaraj Ramrao	Director DAIICT - Chairman IQAC
Prof. Suman Mitra	Dean-AP, DAIICT - Director IQAC
Shri Suresh Rangachar	Reliance ADA Group – Management Member
Prof. Anish Mathuria	Dean R&D, DAIICT – Faculty Member
Prof. Sanjeev Gupta	Dean Students, DAIICT – Faculty Member
Prof. Rahul Muthu	Alumni Board, DAIICT – Faculty Member
Prof. Ranendu Ghosh	Convenor, Placement Committee, DAIICT – Faculty Member
Shri Soman Nair	Executive Registrar, DAIICT – Administrative Member
Shri Hasendrasinh Jhala	Head, HR, DAIICT – Administrative Member
Shri Anamitra Das	TCS, Gandhinagar – Member from Employer
Shri Aman Agarwal	Student, DAIICT – Student Member
Shri Valay Vaidya	Student, DAIICT – Student Member
Shri Swapnil Khandelwal	Alumnus, DAIICT – Alumni Member
Shri Roghuvir Songhela	Alumnus, DAIICT – Alumni Member

#### Director

Prof R. Nagaraj Prof S C Sahasrabudhe (up to 19 January 2015)

**Deans** Academic Programs Prof. Suman K Mitra

Research and Development Prof Anish Mathuria

## Students

Prof Sanjeev Gupta

#### **Executive Registrar** Shri Soman Nair

**Librarian** Shri Satish Deshpande (Consulting Librarian)

#### Head—HR and Administration

Shri Hasendrasinh Jhala

### **Internal Committees**

#### **ICT Committee**

Prof. Rahul Dubey, Convenor Prof. Laxminarayan Pilluta, Member Prof. Bhaskar Chaudhury, Member Prof. Rutu Parekh, Member Mr. Rajendra Shah, Member Mr. Nimesh Patel, Member

#### **Placement Committee**

Prof. Ranendu Ghosh, Convener Prof. Amit Bhatt, Member Prof. V Sunitha, Member Prof. Jaideep Mulherkar, Member Ms. Anjali Kulshrestha, Member

#### **Resource Centre Committee**

Prof. Manjunath V Joshi, Convener Prof. Hemant Patil, Member Prof. Amishal Modi, Member Prof. Nabin K Sahu, Member Shri Soman Nair, Member Shri Satish Deshpande, Member Secretary





#### Web Committee

Prof. Manish Gupta, Convenor Prof. Bharani Kollipara, Member Prof. Puneet Bhateja, Member

#### **CEP Committee**

Prof. Amit Bhatt, Convenor Prof. Gaurav Mishra, Member Prof. Binita Desai, Member Prof. Shweta Garg, Member Mr. Sunil Kumar Jain, Member

#### **Annual Report Committee**

Shri Satish Deshpande, Convener Dean (Academic Programs), Member (ex-officio) Dean (R & D), Member (ex-officio) Dean (Students), Member (ex-officio) Convenor, Placement Committee, Member (exofficio) Prof. Madhumita Mazumdar, Member Executive Registrar, Member (ex-officio)

#### **Disciplinary Action Committee**

Dean (Students), Convener (ex-officio) Warden, HOR-Men, Member (ex-officio) Warden, HOR-Women, Member (ex-officio) Associate Warden, HOR-Men, Member (ex-officio) Dy. Registrar, Member (ex-officio) Student Representatives – two students (nominated)

#### Gender Cell

Prof. Binita Desai, Convener Dean (Academic Programs), Member (ex-officio) Prof. Maitrayee Mukherjee, Member Ms. Geeta Mehta, Member Dr. Neeta Shah (Director, Gujarat Infomatics Limited) - External Member Student Representatives – two students (nominated)

#### **Student Activities Council**

Prof. Nabin Sahu, Convener (Sports Committee) Prof. Prasenjit Majumder, Convener (Cultural Committee) Prof. Jaideep Mulherkar, Convener (Synapse Committee)

#### Alumni Board

Prof. Rahul Muthu, Convener Prof. Asim Banerjee, Member Prof. Gautam Dutta, Member Prof. Alka Parikh, Member Student Representatives – four students (nominated)

#### International Student Cell

Prof. Srikrishnan Divakaran, Convener Dean (Academic Programs), Member (ex-officio) Executive Registrar, Member (ex-officio) Convenor (UGC), Member (ex-officio)

#### Information System Committee

Dean (Academic Programs), Convener (ex-officio) Convener (UGC), Member (ex-officio) Convener (PGC), Member (ex-officio) Executive Registrar, Member (ex-officio) Deputy Registrar, Member (ex-officio) Assistant Registrar, Member Secretary Mr. Dinesh Prajapati, Invited Member

#### BTP Coordinator (2014-15)

Prof. Mukesh Tiwari

#### **Rural Internship Committee (2014-15)**

Prof. B N Hiremath, Convenor Prof. Gaurav Mishra, Member Prof. Jaideep Mulherkar, Member

Summer Internship Coordinator (2014-15) Prof. Manoj K Raut



## Annexure 2

#### **THESES, PROJECTS AND REPORTS**

#### **PhD Theses**

- Bhatt, Jignesh Shashikant, Novel Approaches for Spectral Unmixing of Hyperspectral Data; xvi, 146 p.; 2015. (Supervisor: Joshi, Manjunath V.)
- Mall, Vinod Kumar, Detection of Tampering in Digital Images Using Feature Based Hash Generation; vi, 120 p.; 2015. (Supervisor: Roy, Anil K. and Mitra, Suman Kumar)
- Patel, Chandulal Rakeshkumar, New Techniques for Spatial Resolution Enhancement of Hyperspectral Images; xvi, 145 p.; 2015. (Supervisor: Joshi, Manjunath V.)

#### **MTech Theses**

- 1. Agrawal, Purvi, Analysis of Nonlinearity in Speech Production Mechanism for Speaker Verification: Phase-based Approach; xv, 67 p.; 2015. (Supervisor: Patil, Hemant A.)
- 2. Bachhav, Pramod, A Novel Filtering Based Approach for Epoch Extraction; xiii, 42 p.; 2015. (Supervisor: Patil, Hemant A.)
- Bharmal, Sara, Spectrum Sensing in Cognitive Radio Using Quickest Change Detection Framework; vii, 38 p.; 2015. (Supervisor: Pillutla, Laxminarayana)
- Chandarana, Mahek Harshad, Microwave imaging of a 36-cell human body by moment method formulation; vii, 31 p.; 2015. (Supervisor: Ghodgaonkar, Deepak)
- Chhaya, Rachit, Readability of Hyperlinked Data with Experiments on School Textbooks; vii, 36 p.; 2015. (Supervisor: Majumder, Prasenjit)
- Chikte, Shoeb, Power Aware Software Design Parallel Programming with DVFS; viii, 52 p.; 2015. (Supervisor: Bhatt, Amit)
- Desai, Jeet, Heuristic Approach for Segment Based Pairwise Sequence Alignment in Bioinformatics; vii, 45 p.; 2015. (Supervisor: Divakaran, Srikrishnan)
- Domadiya, Prashant, Object-Background Segmentation from Video; xi, 53 p.; 2015. (Supervisor: Mitra, Suman K.)
- Gadhiya, Tushar, Detection and Localization of Tampering in a Digital Medical Image Using Discrete Wavelet Transform; vi, 47 p.; 2015. (Supervisor: Roy, Anil K. and Mitra, Suman K.)
- Garg, Garima, Privacy Preservation in Vehicular Adhoc Networks (VANETs); vi, 33 p.; 2015. (Supervisor: Das, Manik Lal)
- Gargave, Soumya, Single Precision Floating Point Matrix Multiplier using Low Power Arithmetic Circuits; x, 48 p.; 2015. (Supervisor: Parekh, Rutu)
- 12. Gupta, Dhruv, Study of Fuzzy Clustering Algorithms and Enhanced Fuzzy Reasoning Application to

Texture Based Image Segmentation; viii, 89 p.; 2015. (Supervisor: Banerjee, Asim; Raval, Mehul S. and Shah, Pratik)

- Hapani, Hitesh, Schema Based Indexing for Namespace Mapping of Raw Sparql and Summarization of LOD; ix, 39 p.; 2015. (Supervisor: Jat, P. M.)
- Iyer, Ganesh R., Summarizing Medical Texts for Effective Retrieval; vii, 31 p.; 2015. (Supervisor: Majumder, Prasenjit)
- Joshi, Nikita Rajeshbhai, Precision Agriculture using Wireless Sensor Network; x, 50 p.; 2015. (Supervisor: Shrivastava, Sanjay)
- Joshi, Rathin K., Single Electron Transistor based 4-bit ALU Design, Simulation & Optimization; ix, 34 p.; 2015. (Supervisor: Parekh, Rutu)
- Joshi, Shivendra, Hardware Software Co-Design of Software Defined Radio; x, 64 p.; 2015. (Supervisor: Dubey, Rahul)
- Kanwar, Jai Jai, Hot and Cold Data Identification using Query Aware Hybrid Partitioning; viii, 61 p.; 2015. (Supervisor: Bhise, Minal)
- Krishnan, Arun, Medical Image Security with Cheater Identification using Secret Sharing Scheme; viii, 64 p.; 2015. (Supervisor: Das, Manik Lal)
- 20. Kumar, Dheeraj, Learning Based Approach for Image Compression; vii, 32 p.; 2015. (Supervisor: Joshi, Manjunath V.)
- 21. Ladhar, Kanahiya Lal, Automated Sparql Generation; ix, 49 p.; 2015. (Supervisor: Jat, P. M.)
- 22. Majithiya, Bhumik Kiritbhai, An Active Sub-harmonic Mixer; ix, 42 p.; 2015. (Supervisor: Gupta, Sanjeev)
- 23. Malodiya, Prakash B., Ontology Learning from Relational Database and Reuse it with Popular Vocabularies; vii, 36 p.; 2015. (Supervisor: Jat, P. M.)
- Mehta, Nilay V., Study of Communication Schemes for Multiple Neural Processing Nodes; ix, 35 p.; 2015. (Supervisor: Zaveri, Mazad S.)
- Mulchandani, Bharti Dholoomal, Distributed Meeting Scheduling Using Vehicular-Social Network; viii, 39 p.; 2015. (Supervisor: Shrivastava, Sanjay)
- 26. Nagpal, Ankit, Spectro-Temporal Features Based Automatic Speech Recognition; xi, 53 p.; 2015. (Supervisor: Patil, Hemant A.)
- 27. Pandey, Vijay Raghav, A Wideband Active Mixer with High Gain and High Linearity; ix, 40 p.; 2015. (Supervisor: Gupta, Sanjeev)
- 28. Patel, Dhara, Heuristics for Pair-wise Sequence Alignment; viii, 38 p.; 2015. (Supervisor: Divakaran, Srikrishnan)



- 29. Patel, Radhika, Binarizing Degraded Document Image for Text Extraction; x, 52 p.; 2015. (Supervisor: Mitra, Suman K.)
- Patel, Sagar, Low-power Pipelined Crypto-core using a Backup Flip-flop; x, 36 p.; 2015. (Supervisor: Bhatt, Amit)
- 31. Rajpal, Avni, Acoustic-to-Articulatory Inversion: Speech Quality Assessment and Smoothness Constraint; xii, 73 p.; 2015. (Supervisor: Patil, Hemant A.)
- Ramesh, Lekshmi, Low-Rank and Sparse Decomposition of Compressively-Sensed Matrices: Applications to Surveillance Video Processing; ix, 48 p.; 2015. (Supervisor: Shah, Pratik and Sinha, V. P.)
- Rathore, Bhanu Pratap Singh, Ultra Wide Band Dielectric Resonator Array Antenna; viii, 41 p.; 2015. (Supervisor: Ghodgaonkar, Deepak)
- Sankhavara, Jainisha, Query Expansion in Biomedical Information Retrieval; viii, 42 p.; 2015. (Supervisor: Majumder, Prasenjit)
- 35. Shah, Falak, Road Detection for Intelligent Transport Systems; vii, 45 p.; 2015. (Supervisor: Shah, Pratik and Dubey, Rahul)
- Sharma, Vineet, All-Digital Time based Analog-to-Digital Converter and Time-to-Digital Converter; ix, 44 p.; 2015. (Supervisor: Mishra, Biswajit)
- Singh, Dushyant, Application of Network Coding in Wireless Sensor and Relay based Ad hoc Networks; vi, 40 p.; 2015. (Supervisor: Pillutla, Laxminarayana)
- Singh, Shikha, Performance Enhancement of a Pipelined Architecture using Backup FF; x, 38 p.; 2015. (Supervisor: Bhatt, Amit)
- Sodani, Arpit, Hardware-Software design of realtime MPEG-2 Video Encoder; viii, 47 p.; 2015. (Supervisor: Dubey, Rahul)
- 40. Soni, Pushtivardhan, GPU-Accelerated Method of Moments; xi, 67 p.; 2015. (Supervisor: Zaveri, Mazad S.)
- 41. Tailor, Divyesh, An Exact Algorithm for Segment based Sequence Alignment; viii, 45 p.; 2015. (Supervisor: Divakaran, Srikrishnan)
- Thakrar, Fenny, Integrating Semantics into Biomedical Information Retrieval; viii, 42 p.; 2015. (Supervisor: Majumder, Prasenjit)
- Tripathi, Prakriti Vaibhav, Study and Analysis of Primary Database Operations using Single Node Hadoop Cluster; viii, 39 p.; 2015. (Supervisor: Jat, P. M.)
- 44. Tripathi, Saurabh, D-Latch Based Low Power Memory Design; viii, 48 p.; 2015. (Supervisor: Mishra, Biswajit)
- 45. Vasani, Hiral, Text Retrieval from the Degraded

Document Images; vii, 38 p.; 2015. (Supervisor: Mitra, Suman K.)

- Vijayvergiya, Nishant, Ontology Alignment Based Support for Searching LOD-datasets Using SPARQL Query; viii, 34 p.; 2015. (Supervisor: Jat, P. M.)
- Vora, Ankitkumar, Path Planning of Data Mule using Responsible Short Circuit with Steiner Points; viii, 28 p.; 2015. (Supervisor: Shrivastava, Sanjay and V. Sunitha)

#### **MDes Project Reports**

- Arora, Neha, Website Design [Birds of Nalsarovar]; 59 p.; 2015. (Supervisor: Raje, Nitin and Desai, Binita)
- 2. Patel, Pooja, The Nameless Workers; 42 p.; 2015. (Supervisor: Sarkar, Aditinath)
- Prajapati, Soham, Ragpickers: A Documentary Film on Recycling in Ahmedabad; 54 p.; 2015. (Supervisor: Sarkar, Aditinath)
- Sanghani, Palak, Dhows: The Traditional Art of Wooden Boat Making; 71 p.; 2015. (Supervisor: Desai, Binita)
- 5. Sharma, Mitali, Fist Tales: Cuisine of Coastal Gujarat; 75 p.; 2015. (Supervisor: Desai, Binita)
- Shiroya, Hardik, Fishing in Common Waters: Fishing communities in Coastal Gujarat; 92 p.; 2015. (Supervisor: Desai, Binita)
- 7. Singh, Nitendra, In Search of clear Skies; 46 p.; 2015. (Supervisor: Mazumdar, Madhumita)

#### **MSc ICT-ARD Project Reports**

- 1. Bhikadiya, Kajal, ENVIS Website Development; 21 p.; 2015. (Supervisor: Ghosh, Ranendu)
- Jivani, Jay and Amrutya, Feni, Integration of the Forest Management Information System (FMIS) with Windows Based Mobile Application for Forest Surveillance & Tracking System (GIS) and Testing of the Gujarat State Road Transport Corporation (GSRTC) website; 47 p.; 2015. (Supervisor: Ghosh, Ranendu)
- 3. Patel, Bhargavi and Mendapara, Devang, ICT as a Catalyzer for Reducing Digital Divide in Primary Education; 24 p.; 2015. (Supervisor: Hiremath, B. N.)
- Praneeth, Raphael, Website Development & Market Data Analysis for Barrix Agro Science; 19 p.; 2015. (Supervisor: Hiremath, B. N.)
- 5. R. S., Kiran and Patel, Jigna, ICT to Improve Health and to Provide Superior Services to Grassroot; 75 p.; 2015. (Supervisor: Parikh, Alka)
- Sarvan, K V Y K, Automation of Pheromone Traps: A Report on Internship Project; 27 p.; 2015. (Supervisor: Ghosh, Ranendu and Dubey, Rahul)



## FACULTY WITH AREAS OF INTEREST

## **Regular Faculty**

Name of the Faculty	Areas of Interest
R Nagaraj (Director)	Fault tolerant control, Non linear control systems, neural networks
PhD (Electrical & Electronics	and reconfigurable control systems.
Engineering) Visvesvaraya Technological	
University, Belgaum	
Banerjee, Asim	Pattern recognition, medical imaging, image processing, digital
PhD (Electrical Engineering) IIT Bombay	signal processing, speech coding, software engineering, software quality assurance and project management.
Bhateja, Punnet	Formal Methods used for Testing and Verification.
PhD (Computer Science)   Chennai	
Mathematical Institute, Chennai	
Bhatt, Amit	3D IC, computer architecture, low power methodology in digital
PhD (Electrical Engineering)   North Carolina State University, USA	design.
Bhise, Minal	Semantic web, distributed databases, software system analysis
PhD (Computer Science)   BITS Pilani	and design.
Chatterji, Samaresh	Algebra, discrete mathematics, computer simulation and
PhD (Mathematics)   Wayne State University,	applications.
USA	
Chaudhury, Bhaskar	Computational Plasma Physics, Computational
PhD (Computational Physics) Institute for	Electromagnetics, High Performance Computing, Scientific Data
Plasma Research,Gandhinagar, Gujarat	Management.
Das, Manik Lal	Information security, cryptography, system design and analysis.
PhD (Information Technology) IIT Bombay	
Dasgupta, Sourish	Distributed multi-agent system, semantic web, artificial
PhD (Computer Science) University of	intelligence.
Missouri-Kansas City USA <b>Desai, Binita</b>	Animation communication decign and multimodia
BFA (Fine Arts) MS University,	Animation, communication design and multimedia.
Baroda Animation National Institute of	
Design, Ahmedabad	
Devy, Ganesh	Comparative literature, cultural studies.
PhD (English) Shivaji University, Kolhapur	
Divakaran, Srikrishnan	Design and analysis of algorithms for problems in bioinformatics,
PhD (Computer Science) Rutgers University,	machine scheduling and distributed systems.
USA	
Dubey, Rahul	Design and prototyping of digital systems, factory automation.
PhD (Electrical Engineering) IIT Roorkee	
Dutta, Gautam	Quantum computers, signal processing, image processing,
PhD (Physics) Physical Research Laboratory,	
Ahmedabad	
Garg, Gagan	Information theory, cryptography, number theory.
PhD (Computer Science) Indian Institute of	
Science, Bangalore	
Garg, Shweta	Food and Cultural Studies, Performance Studies, Creative Writing,
PhD (English) IIT Rorkee	Literature of the Indian Diaspora.
Ghodgaonkar, Deepak	RF and microwave engineering, Microwave measurements,
PhD (Electrical Engineering) University of	microwave characterization of composite materials, biomedical.
Utah, USA	applications of microwaves, RFID and metamaterials.



Ghosh, Anjan	Optical computing, optical communications and networking,
PhD (Electrical Engineering) Carnegie Mellon	
University, USA	instrumentation, e-health, open-source software, engineering
	education.
Ghosh, Ranendu	Satellite remote sensing, GIS, satellite communication applications
PhD (Soil Science and Agricultural	for rural development, sustainable agriculture system.
Chemistry) Indian Agricultural Research	
Institute, New Delhi	
Gupta, Manish K.	Information processing in biology, bio-molecular (DNA,
PhD (Mathematics) IIT Kanpur	membrane, cell) computing, coding and information theory,
	cryptology, quantum computing, computational, structural and
	systems biology and bioinformatics.
Gupta, Sanjeev	Smart antennas, communication and radar systems, RF/
PhD (Communication Engineering) Queen's	microwave applications.
University, Belfast, UK	
Hiremath, B. N.	Sustainable rural livelihoods, food and livelihood security at
PhD (Agricultural Economics) University of	household level, participatory approaches, rural development,
Kentucky, USA	natural resources and environmental economics, research
lat Dakhar Mal	methodology.
Jat, Pokhar Mal MTech (Mechanical Engineering) IIT Delhi	Databases, software design and semantic web.
Joshi, Manjunath V.	Computer vision, image processing, super resolution, restoration
PhD (Electrical Engineering) IIT Bombay	Computer vision, image processing, super-resolution, restoration, signal processing, digital communication.
Jotwani, Naresh	Solar energy, engineering design, economics.
PhD (Computer Science) Rice University	oliai energy, engineening design, eeonomies.
Houston, Texas, USA	
Kollipara, Bharani	Literature and Philosophy, Ancient Greek Philosophy, Political
PhD (English Literature) English And Foreign	Theory, Aesthetics.
Languages University, Hyderabad	
Majumder, Prasenjit	Information retrieval, natural language processing, digital libraries.
PhD (Computer Science), Jadavpur	
University, Kolkata	
Mathuria, Anish	Computer security.
PhD (Computer Science) University of	
Wollongong, Australia	
Mazumdar, Madhumita	Social history of science, technology and medicine in India,
PhD (Modern History) University of Calcutta,	cultures of communication and media.
Kolkata	
Mishra, Biswajit	Ultra low power and subthreshold circuit methodologies, very low voltage circuits for wireless sensor networks, digital IC design,
PhD (Electrical & Electronics Engineering), University of Southhampton,	power management for energy harvesters, signal processing
UK	hardware for color image processing, geometric algebra and
	novel hardware.
Mishra, Gaurav	E-Governance, ICT for development, communication for
PhD (Information and Communication	development, rural development, human-computer interaction.
Technologies for Rural	
Development) University of Reading, UK	
Mitra, Suman Kumar	Image processing, pattern recognition, fractal, Bayesian network,
PhD (Computer Science) Indian Statistical	digital image watermarking.
Institute, Kolkata Modi, Amishal	English language teaching, victorian literature, indian poetry in

Mulhadran laidaan	Mathematical physical guantum computation and information
Mulherkar, Jaideep	Mathematical physics, quantum computation and information.
PhD (Mathematics) University of California,	
Davis, USA	
Mukerji, Maitrayee	Management Information Systems (MIS), Strategic Information
Fellow (Rural Management) Institute of Rural	Systems (SIS), ICTs and Development, e-Governance.
Management, Anand (IRMA)	
Muthu, Rahul	Graph theory, algorithms.
PhD (Computer Science) Homi Bhabha	
National Institute, Mumbai	
Pandya, Vishvajit	Material culture, design and communication culture, visual
PhD (Anthropology) University of Chicago,	anthropology, rituals and history.
USA	
Parekh, Rutu	Nanoelectronics, nano device-CMOS hybridization, design
PhD in Electrical Engineering Sherbrooke	and simulation, circuit design, modeling and simulation of next-
University, Sherbrooke, Quebec, Canada	generation memory (PCM), nanofabrication.
Parikh, Alka	Rural development and the related issues like agriculture,
PhD (Agriculture and Allied	poverty, unemployment and wages, rural finance, environment
Economics) Cornell University, USA	and development, disaster management.
Parikh, Radha	Communication, value education, constructivist approach to
PhD (Special Education) University of	teaching and learning, technology in education (e-learning).
Missouri, Columbia, USA	teaching and learning, technology in education (e learning).
Patil, Hemant	Speaker recognition and wavelet signal processing.
PhD (Signal Processing) IIT Kharagpur	Speaker recognition and wavelet signal processing.
······································	Statistical signal processing information theory, game theory
Pillutla, Laxminarayana	Statistical signal processing, information theory, game theory,
PhD (Electrical Engineering) University of	non-linear optimization, wireless sensor networks, cognitive radio,
British Columbia, Canada	cross layer design of wireless networks.
Raut, Manoj Kumar	Combining decision procedures, theorem proving, knowledge
PhD (Mathematics) IIT Madras	representation and reasoning, logic.
Roy, Anil	Fiber optics and optical communication, quantum optics,
PhD (Physics) IIT Delhi	nanotechnology, semiconductor devices.
Sahasrabudhe, S. C.	Communications, signal and image processing and
PhD (Communication/Signal	microprocessor applications.
Processing) Leningrad University, USSR	
Sarkar, Aditi Nath	Literature, religion, cultural history, South Asian civilization
M.A. (South Asian Languages and	studies.
Civilizations) University of Chicago, USA	
Sahu, Nabin Kumar	Applied Functional Analysis, Operator Theory, Variational
PhD (Mathematics) IIT Kharagpur	Inequality, Variational Inclusion Problems.
Sharan, Girja	Modeling of agricultural and biological systems, technology for
PhD (Agricultural and Biological Engineering)	arid areas, earth-tube-heat-exchanger, greenhouse, dew harvest
Cornell University, USA	condensers, radiation-cooling.
Sinha, V. P.	Digital signal and image processing, theory of communication,
PhD (Electrical Engineering) University of	discrete mathematics and logic, modern Fourier theory.
London, UK	
Srivastava, Sanjay	Computer networks, protocol modelling, simulation.
PhD (Physics) University of California, Los	
Angeles, USA	
Sunitha, V.	Algorithms, discrete mathematics, graph theory, parallel
PhD (Mathematics) IIT Madras	and distributed computing, theoretical computer science,
	interconnection networks
Tatu, Aditya	Mathematical image processing, shapes, image features.
PhD (Image Analysis) University of	
Copenhagen, Denmark	



<b>Tiwari, Mukesh</b> PhD (Optical Science and Engineering) University of New Mexico, USA	Statistical physics, non linear dynamics, quantum transport, surface science.
Vijaykumar, C. PhD (Communication Engineering)   REC Tiruchirapalli	Digital signal processing, estimation theory, wireless communications, speech processing.
<b>Zaveri, Mazad</b> PhD (Electrical and Computer Engineering) Portland State University, Oregon, USA	Cortex-inspired computational models: artificial and spiking neural networks, associative memories, intelligent signal- processing, Bayesian inference, hierarchical and modular models of the mammalian cortex, neuromorphic hardware, circuits and architectures: digital and mixed-signal VLSI, nano-architectures, hybrid nanotechnology - CMOL, architecture performance/price assessment, hardware design-space exploration.
Zinka, Srinivasa Rao PhD (Microwave Engineering)   Chung-Ang University, Seoul	Phased Array Antennas, Microwave Filter Design, Frequency Selective Surfaces.

## **Adjunct Faculty**

The following adjunct faculty members were associated with the teaching work during the academic year 2014-15.

Name of the Faculty	Areas of Interest
<b>Banerjee, Nandini</b> Ph. D. (Economics) R. D. University, Jabalpur	Organisational behaviour, economics, management
<b>Banerjee, Soumitra</b> MBA, Indore University	Business strategy and management
<b>Brahmbhatt, Kaushik</b> PG in Jourmalism, Public Relation & Advertising, PG in Commercial Photography, PG in Performing Art-Pupperty	Photography, performing art, puppetry
<b>Dandekar, Prakash</b> MTech (Electrical Engineering), Bombay	Embedded wireless networked systems and product design; Realtime software application development for robotics, automotive, industrial automation and natural resources monitoring
<b>Dasgupta, Kuntala</b> B Sc Calcutta University, Kolkatta	Rabindranath Sangeet
<b>Dey, Shalini</b> PG in Information & Digital Design, NID, Ahmedabad	Information Design (Print, Interactive), User Experience Design (persona creation, user journeys,information architecture) Wayfinding (print,interactive, signage), Inforgraphics, Culture studies and Storytelling
<b>Doctor, Khushru F.</b> MCA, Gujarat University, Gujarat, Certified Information Systems Auditor (CISA)	Project management and Computer Security
<b>Kumar, Naveen</b> PhD Scholar, DA-IICT	Information Security and Privacy, Cloud Computing

<b>Nagchoudhuri, Dipankar</b> PhD (Electrical Engineering), Michigan State University,USA	VLSI Design, CMOS Circuits And Technology, Biomedical Signal Processing Chip Design.
Patel, Bhavesh MDes(CD), DA-IICT, Gandhinagar, Diploma in Professioanl Photography Light & Life Academy Ooty	Music, Movies and Sports.
Patel, Narendra	Film & Animation film, HFX, Communication Design, eLearning,
Diploma in Visual Communication, National Institute of Design, Ahmedabad	Photography, Web Design, Multimedia, Graphics user Interface, Software Development, Printing Technology.
Phophalia, Ashish Ph.D Scholar, DA-IICT,Gandhinagar	
Raval, Nikhil MBA (Strategic Management), California State University, USA	Business management, strategy and finance.
Sengupta, Amit PhD, (Biomedical Engineering), IIT Delhi	Medical electronics, instrumentation, imaging, affordable technology, woman's health.
Singh, Indrani Choudhury PhD (Environmental Science), Space Applications Centre, ISRO, Ahmadabad, in association with Kalyani University West Bengal	Agriculture, Agriculture Statistics, Environmental Science
<b>Sisodia, Dixsha</b> Ph D Scholar, Faculty of Management Studies, Mohanlal Sukhadia University, Udaipur	Quantitative Techniques, Business Research Methodology
Yagnik, Jignasu MBA, Gujarat University, Ahmedabad	Management Information System.
Zunnun A Raoof Narmawala MTech(ICT), DA-IICT,Gandhinagar	Network Coding, Mobile Social Network, Delay Tolerant Network.



## Annexure 4



### LISTING OF STAFF

**Registrar** Soman Nair, Executive Registrar

#### Administration & HR

Hasendrasinh Jhala, Head —HR & Admin. Rajesh V Patel, Estate Engineer Sudhir Dave, Commercial Officer Bhavesh Shah, Senior Stores Assistant Kiritkumar Pandya, Assistant Administrative Officer Gyanesh Pandya, Senior HR Assistant Niketa P Raval, Receptionist-cum-Office Assistant Keshurbhai M Zala, General Assistant Bahadursinh M Vagehla, Driver

#### Accounts

Geeta Mehta, Chief Accounts Officer Santosh Pandit, Assistant Accounts Officer

#### **Director/Dean/Registrar/Faculty Offices**

Venugopal PR, Senior Secretary to Director Abhilash Kumar Bhaskaran, Senior Secretary, Registrar's Office Satyabir Singh, Senior Secretary to Dean - (AP) Mukesh Thaker, Secretary to Dean - (R & D) Deepa Poduval, Secretary, Faculty Block 2 Geeta S Nair, Secretary, Faculty Block 3 Vibha Prajapati, Secretary, Faculty Block 4

#### **Academic Programs**

Jigar P Yagnik, Deputy Registrar (Academic) Jalpesh Pandya, Assistant Registrar (Academic) Suryakant Goswami, Senior Programmer Nandini Banerjee, Counselor Jainik Patel, Academic Assistant

# Placement & Continuing Education Programme (CEP)

Sunil Kumar Jain, Manager-Placement & CEP Gauri Wagenaar, CEP Officer Anuradha Srivastava, Secretary

#### **Resources Centre**

Satish Deshpande, Consulting Librarian Prasanna Kumar Muduli, Assistant Librarian Shashaikumara A A, Assistant Librarian Nitesh Singh Pawar, Professional Assistant Surendra Kumar Soni, Library Trainee Trinayan Borgohain, Library Trainee Vipul Banker, Library Trainee Virendra Sathwara, Library Trainee Manish Goswami, Library Attendant Mukesh Shrimali, Library Attendant [contractual]

#### **Computer Systems**

Nimesh B Patel, Manager-(IT& Systems) Prabhunath Sharma, Senior Design & Systems Assistant

#### Laboratory

Rajendra B Shah, Lab Superintendent Ramesh Prajapati, Deputy Laboratory Superintendent Krupa B Kinkhabwala, Senior Laboratory Assistant Sanjay Bariya, Senior Laboratory Assistant Krunal G Patel, Senior Laboratory Assistant Firoja Sheikh, Laboratory Assistant Bhargav Patel, Laboratory Assistant Naresh J Patel, Laboratory Assistant

#### **Sports**

D S Karmyal, Sports Officer Shirish Varma, Sports Assistant

#### **Hostels**

Jitendra Parmar, Senior Hostel Supervisor Sawankumar Sachaniya, Hostel Supervisor

#### Project Staff 2014-15

- Aanal Patel, Part Time Research Assistant (CLIA sponsored project wef 25 May 2015) [Supervisor : Prof Prasenjit Majumder]
- Aarsee Aeron, Part Time Research Assistant (CLIA sponsored project wef 15 May 2013) [Supervisor : Prof Prasenjit Majumder]
- Aditi Shah, Part Time Research Assistant (CLIA sponsored project wef 15 May 2013) [Supervisor: Prof Prasenjit Majumder]
- Alpesh Sathwara, IT Manager in CEID Project (CEID Project wef 11 April 2011) Supervisor Prof: Anish Mathuria
- 5. Ankit Nagpal, Project Personnel Cat-B (ASRC-II sponsored project wef 12 December 2014) [Supervisor : Prof Hemant Patil]
- Anusha Pathak, Senior Research Fellow (DDHIB sponsored project wef 01 June 2013) [Supervisor: Prof Rahul Dubey]
- Ashish Phophalia, Research Associate (TRFRPV sponsored project wef 4 January 2013) [Supervisor : Prof Suman K Mitra]
- Avni Rajpal, Project Personnel Category-B (ASRC-II sponsored project wef 12 December 2014) [Supervisor : Prof Hemant Patil]
- Bhumika Chauhan, Project Assistant (AHSUMC sponsored project wef 1 March 2015) [Supervisor: Prof Gaurav Mishra]
- Dr. Indrani Choudhury Singh, Scientist, DST WOS-A (WOS-A sponsored project wef 04 April 2012) [Supervisor : Prof Ranendu Ghosh]
- Hardik Sailor, Project Personnel Category-A (DITSSIL2 sponsored project wef 19 February 2014) [Supervisor: Prof. Hemant Patil]
- 12. Harsh Trivedi, Part Time Research Assistant (CLIA sponsored project wef 25 May 2015) [Supervisor : Prof Prasenjit Majumder]
- Hemil Shah, Part Time Project Assistant (AHSUMC sponsored project wef 1 May 2015) [Supervisor : Prof Gaurav Mishra]
- 14. Hiral Parikh, Part Time Research Assistant (CLIA sponsored project wef 25 May 2015) [Supervisor: Prof Prasenjit Majumder]

- 15. Jainisha Sankhavara, Project Personnel (CLIA sponsored project wef 1 June 2015) [Superviso: Prof Prasenjit Majumder]
- 16. Janki Akhani, Project Personnel (DIT TTS sponsored project wef 31 March 2014) Supervisor: Prof. Hemant Patil
- Maulik Madhavi, Project Personnel Category-A (DIT Indian Languages sponsored project wef 2 April 2012) [Supervisor : Prof. Hemant Patil]
- Miten Shah, Part Time Research Assistant (CLIA sponsored project wef 25 May 2015) [Supervisor: Prof Prasenjit Majumder]
- Mahammadi Zaki, Project Personnel Category-A (DIT TTS sponsored project wef 18 February 2014) [Supervisor: Prof. Hemant Patil]
- Nirmesh Shah, Project Personnel Category-A (DTSSIL2 sponsored project wef 19 February 2014) [Supervisor: Prof. Hemant Patil]
- 21. Pankaj P Chaudhary, Junior Research Fellow (UWDRA ISRO sponsored project wef 12 January 2015) [Supervisor : Prof Deepak Ghoadgaonkar]
- 22. Parth Mehta, Junior Research Fellow (CLIA sponsored project wef 21 May 2012) [Supervisor: Prof Prasenjit Majumder]
- 23. Pramod Bachhav, Project Personnel Cat-B (ASRC-II sponsored project wef 12 December 2014) [Supervisor : Prof Hemant Patil]
- 24. Purvi Koringa, Senior Research Fellow (TRFPRV sponsored project wef 12 June 2013) [Supervisor : Prof Suman Kumar Mitra]
- 25. Shubham Sharma, Research Assistant (DPGPE sponsored project wef 15 May, 2013) [Supervisor : Prof Hemant Patil]
- 26. Tanvina Patel, Project Personnel Category-A (TTS Indian Languages Phase II wef 21 May 2012) [Supervisor : Prof Hemant Patil]
- 27. Tushar Vilas Kokane, Junior Research Fellow (MBHM sponsored project wef 1 May 2015) [Supervisor : Manoj Kumar Raut]
- 28. Vibha Prajapati, Project Personnel (DTSSIL2 sponsored project wef 02 April 2012) Supervisor: [Supervisor : Prof Hemant Patil]

Annual Report Committee

Prof Anish Mathuria | Prof Sanjeev Gupta | Prof B N Hiremath | Mr Satish Deshpande | Prof Suman Mitra | Prof Madhumita Mazumdar | Mr Soman Nair