ANNUAL REPORT

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DA-IICT Dhirubhai Ambani
Institute of Information and Communication Technology
Gandhinagar

ANNUAL REPORT

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August 2009 – July 2010

DA-IICT **Dhirubhai Ambani**
Institute of Information and Communication Technology

Shri. Dhirubhai Hirachand Ambani
(28th December, 1932 – 6th July, 2002)
Founder Chairman, Reliance Group
Founder Chairman, DA–IICT

Diwali Celebrations

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BOARD OF GOVERNORS

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Shri. Ravi Saxena	Principal Secretary Dept. of Science and Technology Govt. of Gujarat, Gandhinagar
Prof. S. C. Sahasrabudhe	Director, DA-IICT, Gandhinagar
Prof. Samaresh Chatterji	Dean, Academic Programs DA-IICT, Gandhinagar
Shri. P. K. Chopra Secretary	Executive Registrar DA-IICT, Gandhinagar

[For the rest of the Institute Management, please see **Annexure 1**]

DIRECTOR'S PAGE

Prof. S. C. Sahasrabudhe

DA-IICT completes ten years of its life this year. The year 2009 – 2010, for which the progress report is presented in this document, has been a very good one for us. The Institute has continued to progress steadily and decisively in all its fields of activity. Right from the beginning, our objective has been to become a valued research-cum-teaching Institute in the field of information and communication technology (ICT). We remain on course to do exactly that. This report will enable the reader to see and judge how far we have come.

In addition to the steady increase in our sponsored research funding, this year we received a grant of one and a half crore to set up an innovation-cum-incubation center from Department of IT (DIT) of Govt. of India.

In the days ahead we propose to expand the scope of academic activities to include newer emerging areas in line with our pioneering the degree programs in ICT. These initiatives will build on our existing core competence in ICT and seek to reach out to new fields that will be in the need for highly qualified human resources. It is expected that a beginning will be made by the next academic year.

A capable faculty that values scholarship and research, and a motivated and gifted student body, are two essential ingredients for this march towards our stated objective. During the year the Institute has made some valuable additions to its faculty. As we seek to establish ourselves in the academic community, we have tried to reach out to our peers all over the world for co-operation in research and education. We hope to extend this reach in the years ahead.

As always we make this report a public document open to close and critical scrutiny, and welcome comments and constructive suggestions from everyone.

Prof. S. C. Sahasrabudhe
Director, DA-IICT

ABOUT THE INSTITUTE

Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT) seeks to invoke the wider vision of the Late Shri. Dhirubhai Ambani and weave both knowledge and innovation as part of an evolving style. DA-IICT was visualized as a research driven institute embodying the vision of India as a knowledge society. It is the only advanced institute named after the Late Shri. Dhirubhai Ambani, the founder of Reliance Group.

DA-IICT, a UGC recognised statutory university established in 2001, is a major educational and research institution of the Reliance ADA Group. A highly qualified faculty, supported by stateof-the-art infrastructure brings research-led teaching to the classroom. In addition to a unique undergraduate program - B.Tech. (Information and Communication Technology), the first of its kind in India - the institute offers a variety of academic programs at postgraduate and doctoral levels.

Research initiatives of DA-IICT are aimed at technological development and to enhance interaction with leading industries and organisations in India and abroad. Continuing Education Program is also a focus area of the Institute.

The faculty of the Institute represents the multiple disciplines that ICT entails. It is the convergence of computer science and information technology, electronics and telecommunication, humanities and social sciences, and mathematics and physics, in the

main. To promote and foster interdisciplinary research, the Institute has chosen to have a single multidisciplinary faculty body, rather than one segregated into separate departments. As of January 2011, the Institute has over 50 faculty members. A distinguishing feature of the faculty is that 46 of these faculty members hold doctorates in their respective areas of specialization.

The capital of Gujarat, Gandhinagar, is a modernized twin city for Ahmedabad and is fast emerging as a knowledge city. After the establishment of an Information Technology park, DA-IICT was founded at Gandhinagar as the first node of institutional networks. Some of the relevant institutional network in the twin cities includes Bhaskaracharya Institute for Space Applications and Geo-informatics, Space Application Centre (ISRO), Indian Institute of Management, National Institute of Design, CEPT University, Physical Research Laboratory, Institute of Plasma Research, Indian Institute of Technology among others. The city does not only constitute a knowledge network but also an ecological corridor rendering it into a green city. Located at the Indroda Circle, the Institute can be reached in about 30 minutes from Ahmedabad Airport and Railway Station.

The architecture of DA-IICT is eco-friendly and functional with a fascinating garden-like atmosphere. The entire design was oriented towards preserving the environment. The entire landscape was planned and developed in a manner that no excess rainwater is lost and all irrigation is carried out with recycled water. Over 30 species of birds are sighted on the campus.

ACADEMIC PROGRAMS

DA-IICT offers an undergraduate program (ICT), four postgraduate programs and a doctoral program leading to the award of the Ph. D. degree. It also offers short term courses under the Continuing Education Program (CEP). The details of the academic programs offered are given in the Table 1.

Table 1: Academic Programs

	Name of the Program	Commencement	Duration (Years)	Annual Intake
1	B. Tech. (ICT)	2001	4	240
2	M. Tech. (ICT)	2002	2	50
3	M. Sc. (Information Technology)	2002	2	60
4	M. Sc. (ICT in Agriculture and Rural Development)	2002	2	20
5	M. Des. (Communication Design)	2004	2	20
6	Ph. D.	2002	3-5	

Curriculum Revision for M. Sc. (ICT-ARD) Program

The Review Committee for the M. Sc. (ICT-ARD) program set up in September 2009, under the chairmanship of Prof B N Hiremath, submitted its report for approval to the Academic Council. The revised curriculum was approved in the 15th Meeting of the Academic Council held in January 2010 with minor changes. The revised curriculum has a stronger focus on ICT, while combining the agriculture and rural development contents into a smaller number of core courses. The revised curriculum will be effective from academic year 2010-11.

ADMISSIONS

B. Tech.

The notification for admission to the 10th batch of B. Tech. program was issued in all major national newspapers in the third week of March, 2010. The last date for receipt of applications was 5th May, 2010. A total of 25,033 application forms were sold. As in 2009, in 2010 also, 50% of the total 240 seats were offered in the open category and the remaining 50% of seats were offered to students from the state of Gujarat. The admission criterion remained unchanged – the merit rank in the AIEEE 2010 examination of CBSE board was used as the sole criterion for admission. The starting and closing AIEEE merit ranks of the students admitted under each category are given in the Table 2.

The eligible students in the all India category and the State category were invited to a counseling session on 24th and 25th June, 2010. During counseling, students and their parents gained first hand information about the Institute's programs, faculty, and campus facilities. Subsequent to the counseling sessions, a total of 240 students were admitted. In addition, four students were admitted through Direct Admission of Foreign Student's Channel.

Table 2: AIEEE Merit Ranks of Students

Best AIEEE Rank	All India (Gen)	4661
	Gujarat (Gen)	4382
Lowest AIEEE Rank	All India (Gen)	15998
	Gujarat (Gen)	30175

Postgraduate (PG) Programs

The admission to all PG programs, except for the M. Tech. program, was done on the basis of merit rank in the entrance test conducted by the Institute at Gandhinagar. For the M. Tech. program admission was carried out on the basis of the GATE score in the disciplines of Electronics and Communication, Computer Science and Information Technology only. Applicants having a B. Tech. /B.E. degree in ICT or allied disciplines or M. Sc. degree in Mathematics, Physics, Electronics or Statistics were eligible. For the M. Sc. (IT) program, the students were admitted solely on the basis of their merit rank in the entrance test. For the other programs, short listed students were called for interview at DA-IICT.

Institute successfully conducted an on-line test at 14 major cities of India (including Gujarat) for the two M. Sc. programs of the institute using facilities provided by Reliance Web World for the first time. The details about the entrance test dates for different graduate programs are given in the Table 3.

Table 3: Entrance Test Details

Program	Test Location	Date
M. Sc. – ICT-ARD	On-line at 14 major cities in India	30th May 2010
M. Sc. IT	On-line at 14 major cities in India	30th May 2010
M. Des.	DA-IICT Campus, Gandhinagar	23rd June 2010
Ph. D.	DA-IICT Campus, Gandhinagar	21st & 22nd June 2010

The Table 4 shows the total intake of each program and the number of students admitted at the end of the admission process.

Table 4: Admissions Details

Program	Application Received	Candidates Selected for Admission
M.Tech. (ICT)	813	50
M. Sc (IT)	1044	60
M. Sc. (ICT-ARD)	50	20
M. Des.	47	none
Ph. D.	88	7

In addition, three sponsored candidates from the Space Applications Centre (SAC) of ISRO were admitted in to the Ph.D. program. These candidates were selected after a rigorous admission screening carried out at SAC, followed by an interview at the institute. Under the terms of the MoU signed, they were exempted from the entrance test.

Orientation

All new UG and PG entrants reported to campus one week before the commencement of classes for orientation. During the general orientation, the UG students were given detailed account of the curriculum, academic requirements and policies. The students were given a campus tour to familiarize them to the facilities and resources available on campus. They met instructors of the first semester courses for briefings. Similar sessions were organized program-wise for the PG students, 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 hostel life by student volunteers. All new entrants were exposed to engineering and the role of ICT by faculty.

FINANCIAL SUPPORT

Scholarships

The institute offers Merit Scholarship and Merit-Cum-Means Scholarships for B. Tech. (ICT) students. In each category, up to five students are awarded scholarships at the beginning of every academic year. The scholarship amount covers full tuition fees of ₹ 30,000 per semester for entire duration of the program. The Merit-cum-Means scholarship is awarded to students on the basis of the AIEEE – all India rank up to 2500 and whose parent(s)/guardian (s) annual income is up to ₹ 1,20,000/-. Four Merit-Cum-Means Scholarships have been awarded for the batch admitted in 2010.

Assistantships

The Institute offers full-time and half-time teaching assistantships to students of the M. Tech. (ICT) and Ph. D. programs; half-time teaching assistantships are offered to B. Tech. (ICT) students in their final year only.

MASTER'S DISSERTATIONS

The list of M.Tech. dissertations completed during the year is given in the **Annexure 2.**

INSTITUTIONAL COLLABORATION AND STUDENT EXCHANGE PROGRAMS

DA-IICT welcomes students from other institutions to carry out internships or project work under the guidance of our faculty. Most of the trainees arrive during the summer semester when it is usually possible to provide hostel facilities as well as use of the laboratories and resource centre.

During the summer semester 2009-10, DA-IICT offered a course on "Processor Architecture" jointly with IIT, Gandhinagar. Prof. D. Nagchoudhuri coordinated the course with inputs from Prof. R. N. Biswas (former faculty member) and Dr. Kaushik Saha of ST Microelectronics.

CONTINUING EDUCATION PROGRAMS (CEP)

CEP has been an integral part from the early stage of DA-IICT and it provides high end courses in ICT for the benefit of professionals in various fields on a regular basis. It became an independent unit of the institute in 2005. Thus far, about 75 courses have been conducted. Many courses have been conducted for the Indian Air Force training over 1500 IAF personnel to date. The details of CEP offered are presented in Table 5.

Table 5: Details of CEP Offered

Sl No	Title of the Course	No of Candidates	Duration (Weeks)
1	Windows 2003 Server, RHEL, System Administration and IT Security	15	4
2	IT Security	15	3
3	Windows XP & MS Office	20	2
4	AFNET Course	15	2
5	Web Designing and Multimedia	25	3
6	Hardware Repair, Networking and Network Maintenance	25	3
7	Civilians – 002	30	2
8	AFNET Course	30	2
9	Civilians	30	2
10	JAVA, J2EE & JBOSS	15	4
11	Oracle 10g and DBA on Linux	15	4
12	Windows 2003 Server, RHEL, System Administration and IT Security	15	4
13	Object Oriented Programming and JAVA for SAC (ISRO)	30	2
	Total Number of Participants in 2009-10	**280**	

A notable feature of 2009-10 CEP was the course offered in Object Oriented Programming and JAVA for the scientists of Space Application Centre (SAC), Ahmedabad. It was attended by 30 scientists during the period April 5-13, 2010.

INTERNSHIPS

Rural Internships

Rural Internship is an integral part of the B. Tech. curriculum that provides experiential learning of village life and social patterns. In partial fulfillment of the requirement of the B.Tech. program, 202 students undertook their Internship in rural areas (less than 10,000 habitations) in 13 states. More than 50 per cent of them had chosen rural organizations in Gujarat and Rajasthan. The internship lasted for four weeks starting in December, 2009. They were affiliated with non-governmental, panchayati-raj and charitable organizations. The Organization with which the student chose to affiliate had provided the individual student their specific projects. The projects undertaken were in the area of elementary education, rural information and communication systems, ecology, and rural governance, agriculture, and citizen rights.

All students successfully completed their internships documenting their observations and experiences. The internship has positively added value to their education while contributing meaningfully to the civil society organizations' efforts towards rural re-construction.

Industrial and Research Internships

As a part of B. Tech. program requirement, each student has an option to choose either Industrial or Research Internship based on their interests and career goals after completing four semesters of course work. Industrial internship provides students with an opportunity to work closely with experienced professionals in an industrial setting. It exposes the students to the working and functions of industries and gives them an opportunity to apply, test and polish their skills acquired in the classroom. During the reporting year, 191 B. Tech. students opted for Research Internships and 26 for Industrial Internships.

Figure 1: Internships Details

Student Opting for Research/Industrial Internship in B.Tech.Program, 2009-2010

Industrial Internship 12%

Research Internship 88%
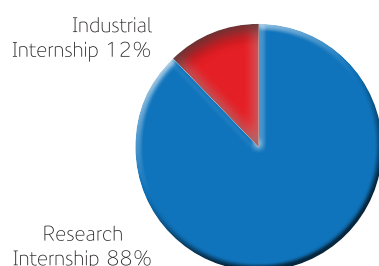
Of the 191 total students opting for Research Internships, 186 chose to complete their internships on-campus under the supervision and guidance of the Institute's faculty and the remaining 5 students opted for off-campus projects with organizations like C-DAC JNTU, Hyderabad (1), TIFR (1), Indraprastha Institute (1) and Carnegie Mellon University, USA (2).

Of the 26 Students opting for Industrial Internship, they worked in both private and public sector companies like Microsoft (1), Ericsson (8), Hindalco (1), MindTree (3), MTNL (1), BHEL (1), Space Application Center – ISRO (1), among others (4). One student was also offered a stipend as a part of his internship. The internship has also allowed the Institute to identify opportunities in terms of work direction, sectors and companies that our students can explore for placement after completing their engineering.

PLACEMENTS

The Institute facilitates the placement of graduating students at the culmination of their studies. Notwithstanding the financial crisis experienced globally including India, the Institute was able to place the graduating batches successfully. The placement season commenced in July 2009 and lasted for around 9 months. A total of 284 students participated in the campus placement and 20 opted out of campus placement for various reasons. The composition of students opting for on-campus placements was 193 B. Tech., 25 M. Tech., 55 M. Sc. – IT and 11 M. Sc. ICT-ARD batches.

Figure 2: Placement Details
Student Opting /Not Opting for Campus Placement by Programs, 2009-2010

- Number of Students Opting for Campus Placement
- Number of Students Opting out of Campus Placement
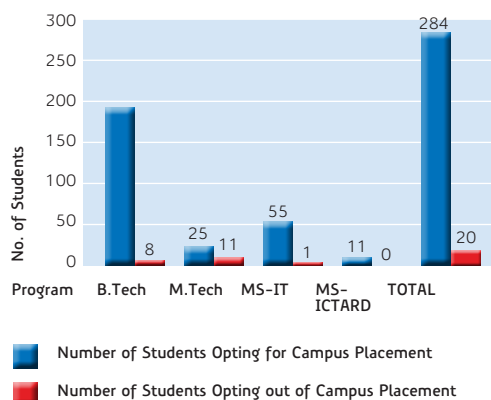
During the reporting year, 53 Companies visited the campus for recruitment. The companies include: Airvana, Anindus, Argusoft, Bit Mapper, Cambridge, Capillary, Chakpak, Compro, Cybage, Deloitte, Digital Green, Direct I, Educational Initiatives, EliteCore, Ericson, Evosys, Fiserv, FlipKart, Gujarat Watershed, HP, IBM, Indigo Architects, Infosys, J P Morgan, Kothari Infotech, Kuliza, Mahyco, Maxim, Microsoft, MindTree, MU-Sigma, National Instruments, Omega Maritime, Open-Silicon, Ops Hub, Paaggalguy, Patni Computes, Paul Mason, Qualcomm Offers, Qualcomm, Reliance Communications, Reliance Media World, Saba, Sapient, Scanpoint Geomatics, Spice Global, TCS, Tech Mahindra, Texas Instruments, V Mukti, Verse Innovations, Wipro IT, Wipro VLSI and Zeus.

Figure 3: Jobs Offered and Accepted Details
Mumber of Jobs Offered and Jobs Accepted by Programs, 2009-2010

- Number of Jobs Offered
- Number of Jobs Accepted
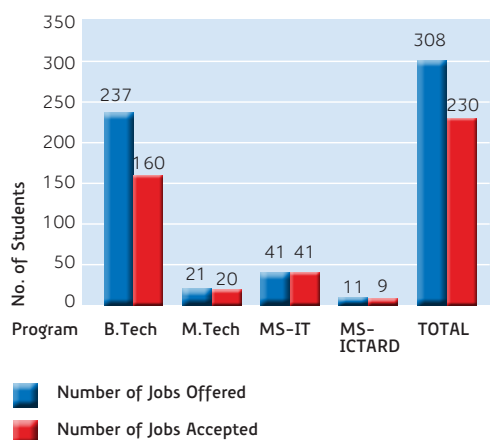
The Companies offered a total of 308 jobs – 237 to B. Tech, 21 to M. Tech. 41 to M. Sc. – IT and 11 to M.Sc. ICT-ARD students. Against the offer of 308 jobs, 230 jobs were accepted by students – 160 jobs by B. Tech, 20 by M. Tech, 41 by MSc.-IT and 9 by M. Sc. ICT-ARD batches.

The package offered ranged from ₹ 2 to ₹ 7.5 lakhs per annum with an average offer being ₹ 3.5 lakhs.

SIXTH CONVOCATION

The Sixth Convocation of the institute was held on 19th January 2010. The Chief Guest was Dr. Govind Swarup, FRS, of the Tata Institute of Fundamental Research (TIFR), an internationally renowned radio astronomer and one of the pioneers of radio astronomy. The Convocation was presided over by Shri. K. Narayan, member of the Board of Governors. The degree of M. Tech. was awarded to 36 candidates, the degree of M. Sc. to 70 candidates, the degree of M. Des. to seven candidates and the degree of B. Tech. to 214 candidates. Gold Medals for standing first in order of merit in the respective programs were awarded as follows:

B Tech (ICT) 2005   P. Sai Teja
                                 Akhil Mathur
M Tech (ICT) 2007   Subhash Chandra Roy
M Sc (IT) 2007   Aparna Krishnaprakash Singhal
M Sc (ICT-ARD) 2007 Chirag Bhensdadia

Students receiving gold medals from the chief guest Dr. Govind Swarup

B.Tech. 2005 batch students with faculty

All graduating students with faculty

M.Tech. 2007 batch students with faculty

RESEARCH AND DEVELOPMENT

The year 2009-10 was a particularly good year for externally sponsored projects. During this year, total external funding for sponsored projects crossed ₹ two crores. The major portion of this funding was a grant amounting to ₹ 150 lakhs, awarded by Dept. of IT (Govt. of India) for expansion of the incubation center which was started in 2007. In addition, over 50 lakhs of external funding was awarded for faculty-led projects in various areas. The Institute signed MoUs with Space Application Centre (SAC), Ahmedabad and Ericsson Pvt. Ltd. Many exchange visits were undertaken by the faculty and the project staff as part of the ongoing collaborative sponsored projects with international partners in Japan and France.

Entrepreneurship and Incubation Center

The Center for Entrepreneurship and Incubation (CEID) was started in 2007 as a launch pad for students and faculty who wish to turn their technical inventiveness into successful businesses. The first incubatee of CEID was www.tempostand.com, a music portal promoted by students of B.Tech. 2003 batch. Ever since the success of tempostand.com, a sense of excitement has prevailed in the student community about starting out on their own after graduation. The centre already has an unfurnished space of about 1350 square feet in the CEP building. As the next step, a fully furnished facility with ICT resources will be set up. The centre will house work-spaces for 4 start-up ventures, 2 staff offices, and common facilities. It will have its own high-end dedicated server with backup facilities and provide wireless LAN connectivity. Direct financial assistance will be provided to start-ups from the funding sanctioned by DIT under the Technology Incubation and Development of Entrepreneurship (TIDE).

New Sponsored Projects

Four faculty-led sponsored projects were initiated during the year 2009-10, one of which has an international research partner from Spain.

Dr. Mehul Raval (PI) was awarded a grant by Board of Research in Nuclear Sciences for a project entitled *Securing biometric data using data hiding techniques*. The project is in collaboration with College of Engineering, Pune. The project duration is 3 years (2010-2013).

Drs. Manik Lal Das (PI) and Anish Mathuria (Co-PI) were awarded a grant by DST for a project entitled *Internet of Things*. The project is in collaboration with University of Malaga, Spain. The project duration is 3 years (2010-2013).

Dr. Laxminarayana Pillutla was awarded a grant by DST for a project entitled *Wireless Telemedicine using Body Area Sensor Networks and Heterogeneous Access Networks*. The project is funded under the fast track scheme of science and engineering research council division of DST. The project duration is 3 years (2010-2013).

Drs. Prabhat Ranjan (PI) and Rahul Dubey (Co-PI) were awarded a grant by BRFST for a project entitled *Sensor Network Testbed for Tokamak Environment*. The project is in collaboration with Institute of Plasma Research, Ahmedabad. The project duration is 2 years (2010-2012).

Ongoing Sponsored Projects

Drs. Deepak Ghodgaonkar (PI) and Sanjeev Gupta (Co-PI) have continued work on a ISRO-sponsored project entitled *Analysis of Radiation from Multidevice High Gain Amplifier and Interaction of Active MMIC with Package/Housing – Theory, Analysis and Measurement*.

Drs. Anish Mathuria (PI) and Manik Lal Das (Co-PI) have continued work on a DST-sponsored project entitled *Security Proofs and Multidisciplinary Evaluation for Dynamic Hierarchical Key Assignment Schemes*.

Drs. Vishvajit Pandya and Madhumita Mazumdar have continued work on a ESRC-sponsored project entitled *Integrated Histories of Andaman Islands*.

Drs. Chetan Parikh (PI) and Dipankar Nagchoudhuri (Co-PI) have continued work on a IFCPAR-sponsored project entitled *Robust Ultra-low-Power-gate MOSFET Design of Analog, Digital and SRAM Memory Circuits*.

Dr. Prabhat Ranjan has continued work on a National Trust-funded project entitled *Finger/Wrist mounted Universal Remote Control for CP Patient*. Also he continued his work on a PRL-sponsored project entitled *Prototype Earth Model for Wireless Sensor Nodes for Detection of Water on Moon / Water sensing systems based on Tuned Diode Laser for Planetary Mission*.

Consultancy Projects

Dr. Binita Desai worked on a consultancy assignment from TOONSKOOL, Bangalore in the area of animation.

Dr. Radha Parikh worked on a consultancy assignment from Vidya Mandir Trust, Palanpur in the area of special education.

MoUs

Two MoUs were signed in the year 2009-2010.

- An MoU was signed between DA-IICT and Space Applications Center (SAC), Ahmedabad in January 2010. DA-IICT and SAC will conduct joint research projects in areas of mutual interest. SAC will also sponsor suitable candidates to the PhD program at DA-IICT.

- An MoU was signed between DA-IICT and Ericsson India Ltd in September 2009. Under the MoU, Ericsson will offer a certification program to the students who have completed the sixth semester of their B.Tech (ICT) program.

International Sponsored Project Visits

Prof. Chetan Parikh visited Institut Superieur d'Electronique de Paris (ISEP), France, for two weeks, as part of the sponsored project, *Robust ultra-low-power double-gate MOSFET design of analog, digital and SRAM circuits*.

The following visits were undertaken as part of the DST-JST sponsored project, *Security Proofs and Multidisciplinary Evaluation for Dynamic Hierarchical Key Assignment Schemes*.

- Mr. Murali Medisetty (Project Assistant) visited University of Tokyo, Japan, from June 15–July 15, 2010. He delivered a progress seminar at the Second Joint Workshop of the Japan–India Projects held at the National Institute of Advanced Industrial Science and Technology (AIST), Tokyo on July 8, 2010.

- Prof. Kanta Matsuura (PI, Japan) visited DA-IICT from March 13–16, 2010.

- Prof. Anish Mathuria (PI, India) visited University of Tokyo, Japan, from February 20–27, 2010.

- Mr. Naveen Kumar (Research Associate) visited University of Tokyo, Japan, from January 27–March 11, 2010.

Student Exchange Programs / Local Collaboration

DA-IICT welcomes students from other institutions to carry out internships or project work under the guidance of our faculty. Most of the trainees arrive during the summer semester when it is usually possible to provide hostel facilities as well as use of the laboratories and resource centre.

During the summer semester 2009-10, DA-IICT offered a course on "Processor Architecture" jointly with IIT, Gandhinagar. Prof. D. Nagchoudhuri coordinated the course with inputs from Prof. R. N. Biswas (former faculty member) and Dr. Kaushik Saha of ST Microelectronics.

Prof. B. N. Hiremath visited the following Non-Governmental organizations to identify potential areas for collaboration.

1. N M Sadguru Water and Development Foundation in Dahod, March 07, 2010.
2. Gramin Vikas Trust in Dahod, March 6-7, 2010.
3. Agha Khan Rural Support Program – India (AKRSP-I): in Netrang, Narmada District, March 5-6, 2010.
4. DHRUVA – Bharatiya Agro-Industries Foundation in Lacchakadi Village, Vanasda Taluk in Navsari Districts, March 3-4, 2010.
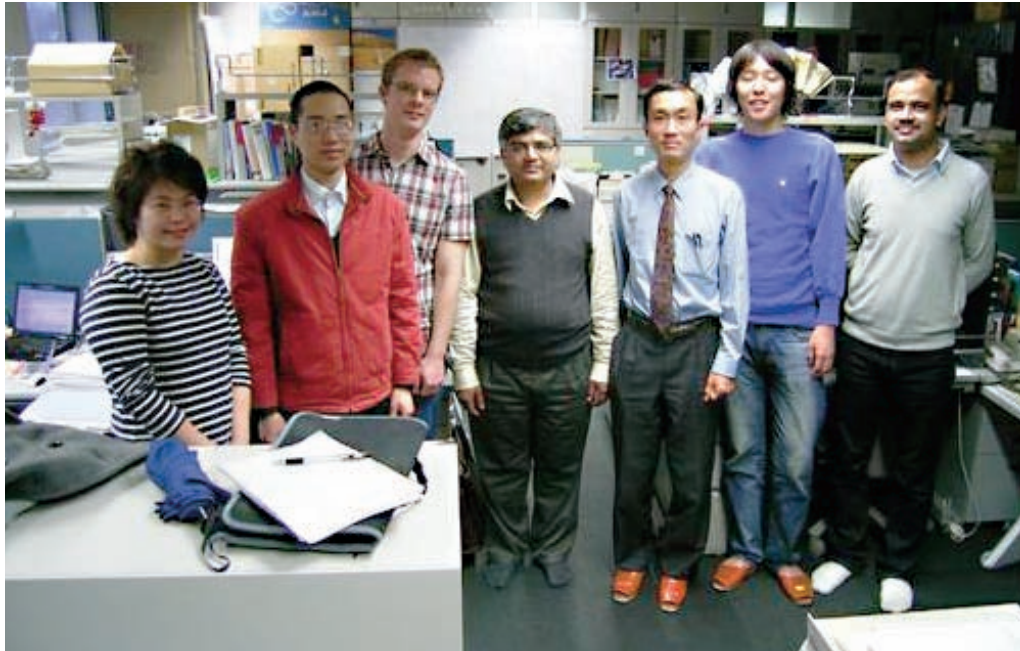
Prof. Anish Mathuria with co-researchers at University of Tokyo, Japan

Students carrying out experiments
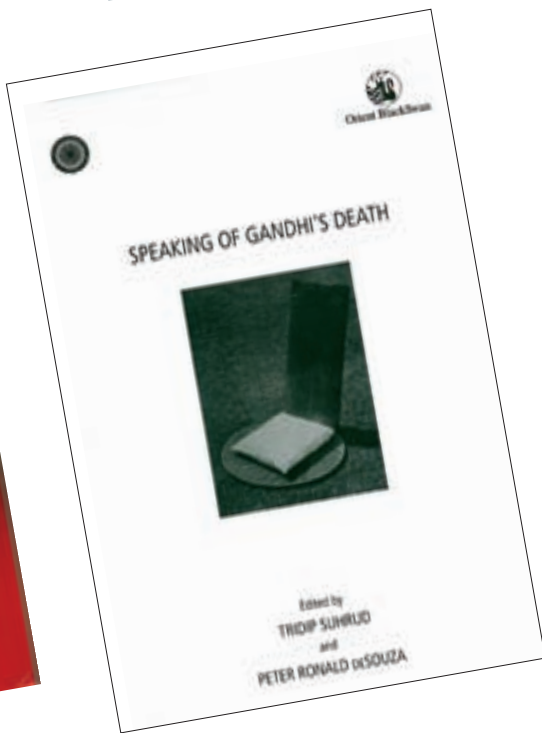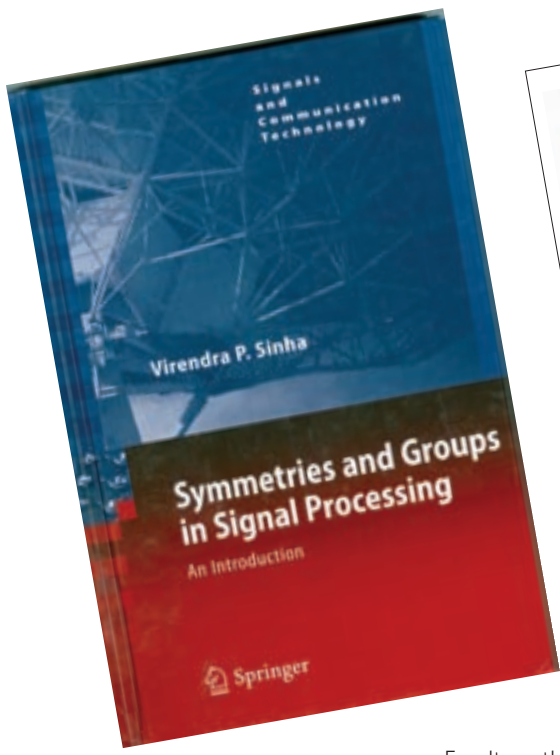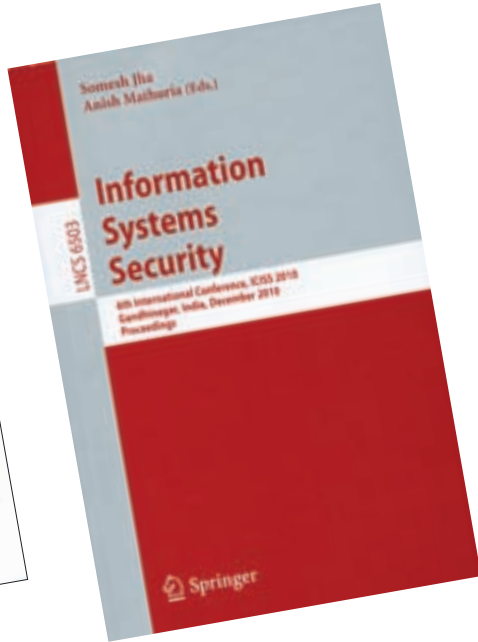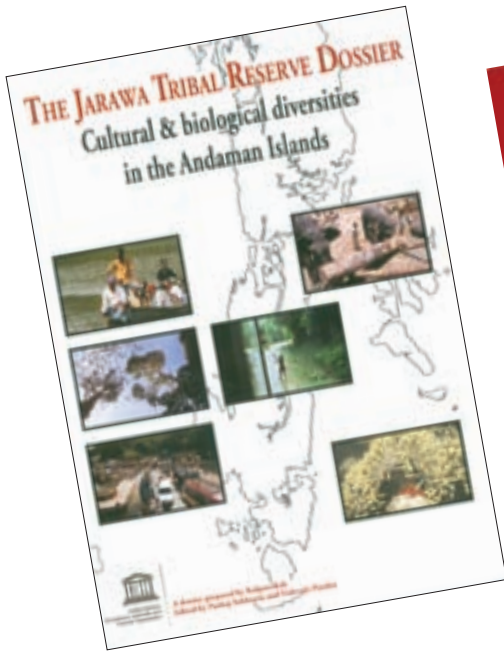
Faculty authored books

BOOKS AND RESEARCH PUBLICATIONS

Publications reflect faculty and staff interests and their research initiatives. A majority of the publications have student co-authors, indicating a strong faculty commitment to train and mentor both postgraduate and undergraduate students in research. The publications listed here are those that appeared in peer-reviewed journals and conferences.

In 2009–2010, the faculty and staff published 5 books, 12 chapters in books, One patent, and 73 papers in journals and conferences. In addition, over 70 ar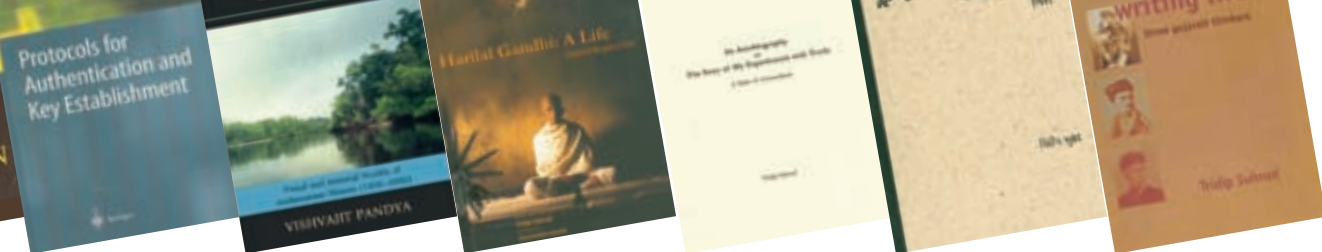ticles of general interest were published in newspapers and magazines (which are not listed here). Students published 2 papers of their own, or with outside collaborators. (In the list below, faculty member and staff names are listed in **bold letters**, and students are listed in italics).

BOOKS

1. **Sinha, Virendra P.** *Symmetries and Groups in Signal Processing*, New York: Springer, 2010. ISBN: 9789048194339.

EDITED AND TRANSLATED BOOKS

1. **Devy, G. N.** (Ed). *Indian Literary Criticism: Theory and Interpretation*, Revised Edition, Delhi: Orient Blackswan, 2010.
2. Jha, Somesh and **Mathuria, Anish** (Eds.). *Information Systems Security,* (LNCS vol. 6503), Berlin: Springer, 2010.
3. Sekhsaria, Pankaj and **Pandya, Vishvajit** (Eds.). *The Jarwa Tribal Reserve Dossier: Cultural and Biological Diversities in the Andaman Islands*, New Delhi: UNESCO, 2010.
4. deSouza, Peter Ronald and **Suhrud, Tridip** (Eds.). *Speaking of Gandhi's Death*, New Delhi: Orient Blackswan, 2010. ISBN: 9788125040385.

BOOK CHAPTERS

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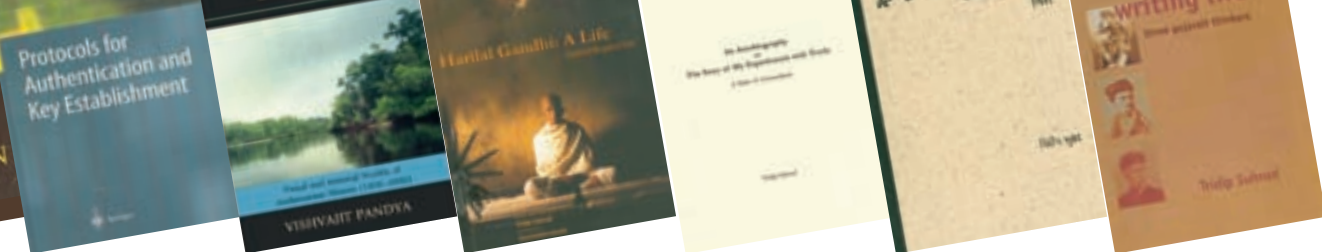
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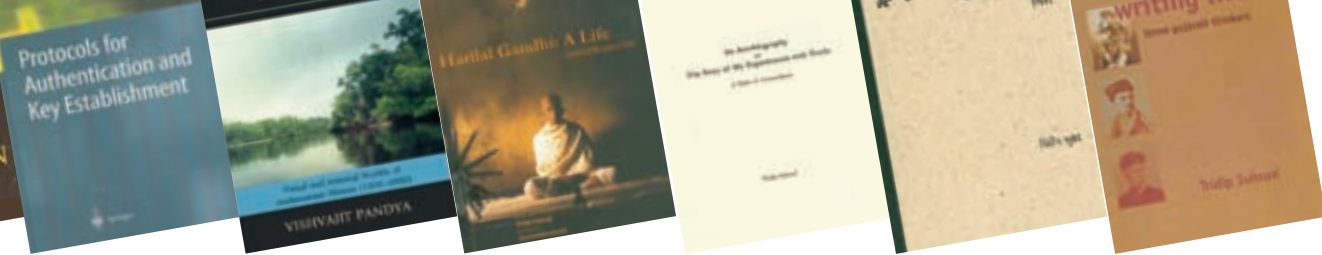
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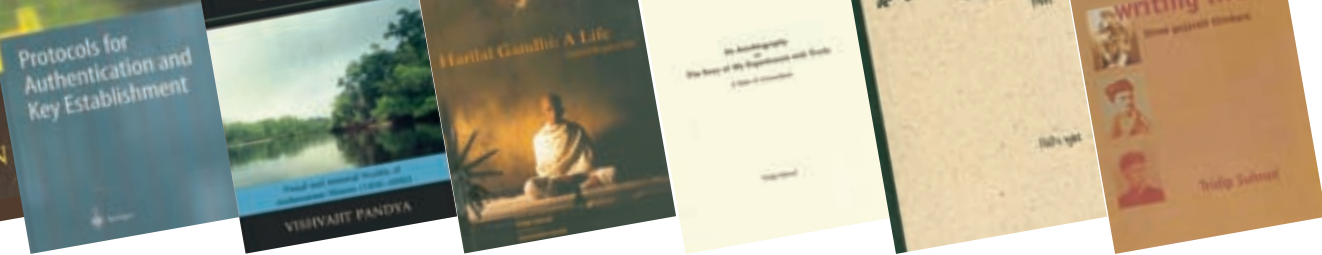
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45. **Venkataraman, Hrishikesh**; Krishnamurthy, Aarthy; Kalyampudi, Poornachand; McManis, Jennifer and Muntean, Gabriel-Miro. "Clustered architecture for adaptive multimedia streaming in WiMAX-based cellular networks" in *Proceedings of World Congress on Engineering and Computer Science (WCECS)*, Berkeley, USA, Oct. 22-24, 2009, pp. 753-758.

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STUDENT PUBLICATIONS

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2. *Goswami, Vivek* and Acharya, Y.B. "Method for reliability estimation of COTS components based software systems," in *Proceedings of the 20th IEEE International Symposium on Software Reliability Engineering (ISSRE 2009)*, Mysuru, IN, Nov. 16-19, 2009, pp. 1-4.

FACULTY AND STAFF: AWARDS AND PROFESSIONAL ACTIVITIES

AWARDS

Prof. Tridip Suhrud

Sahitya Akademy Award by Central Sahitya Akademy, New Delhi for his translation of 'Harilal Gandhi: A life' for the year 2010.

Prof. Hrishikesh Venkataraman

Best Paper Award for "Quality-controlled prioritized adaptive multimedia streaming for WiMAX-based cellular networks," World Congress on Engineering and Computer Science (WCECS), Berkeley, USA, October 20-24, 2009.

HONOURS

Prof. Mehul S. Raval

Elected to the Grade of Senior Member, Computer Society of India (CSI).

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Advisory Member, IIT Gandhingar English Language Laboratory.

Prof. Mehul S. Raval

Branch Counsellor, IEEE DA-IICT Student Branch.

Student Activity Chair, IEEE Gujarat Section.

Member, Board of Studies, Electronics and Computer Engineering, Veer Narmad South Gujarat University, Surat, Gujarat

Prof. S. C. Sahasrabudhe

   Chairman, National Board of Accreditation (NBA) Committee on new accreditation procedures for Engineering Colleges.

   Member, Finance Committee, IIT Gandhinagar.

   Member, sonar and Signal Behavior Board of Naval Research Board, New Delhi.

   Member, Working Group on 'Technology Development for Indian Languages", DIT, New Delhi.

Prof. Girja Sharan

   Chairman, Research Committee, Gujarat Energy Development Agency, Gandhinagar.

   Trustee, Sadguru Water and Development Foundation, Dahod, Gujarat.

   Chairman, Sadashiv Saligram Heritage Foundation, Ahmedabad.

Prof. Tridip Suhrud

   Member, Standing Committee, Sabarmati Ashram Memorial and Preservation Trust, Ahmedabad.

   Honorary Secretary, Darshak Itihas Nidhi, Vadodara, Gujarat

   Chair, Group of Advisors, C. N. Vidyavihar, Ahmedabad

   Member, Board of Advisors, Adivasi Academy, Tejgadh, Gujarat

   Series Editor, Gandhi Studies for Orient Black Swan.

Prof. Shiv Visvanathan

   Member, Board of Management, CEPT University, Ahmedabad.

   Member, Task Force H, Committee on Union State Relations, Delhi.

FELLOWSHIPS/VISITING SCHOLAR

Prof. Sanjay Chaudhary

   Visitng Research Scholar, Kno.e.sis Research Center, Wright State University, Dayton, OH, USA, during June 30 – Oct 15, 2010.

Prof. Suman K. Mitra

   Distinguished Visiting Professor Fellowship, Center of Advance Studies, Warsaw University of Technology, Warsaw, Poland, March–April, 2010.

Prof. Jaideep Mulherkar

   Visiting Scientist, Indian Statistical Institute, New Delhi, May–July 2010.

Prof. Tridip Suhrud

   Visiting Scholar, Indian Institute of Advanced Study (IIAS), Shimla, May–July 2010, also coordinated course on "Winter School on Life and Thought of Gandhi" at IIAS, December 01–15, 2010.

Prof. Shiv Visvanathan

   Visiting Professor, University of Maastricht, June 01 – July 17, 2010.

JOURNAL EDITORSHIPS

Prof. Suman K. Mitra
Associate Editor, *International Journal of Image and Graphics (IJIG)*, (World Scientific).

Prof. Hemant A. Patil
Editorial Board Member, *Engineering Letters (IAENG)*.

Prof. Manjunath V. Joshi
Editorial Advisory Board, *The Open Cybernetics and Systemics Journal* (Bentham Open).

Prof. Hrishikesh Venkataraman
Editorial Board Member, *International Arabic Journal of e-Technology (IAJeT)*, (Arab Open University, Jordan).

Prof. Shiv Visvanathan
Editorial Board, *Global Environmental Politics* (MIT Press).

Editorial Board, *International Political Sociology* (Blackwell).

Editorial Advisory Board, *Journal of Creative Communication* (SAGE).

Editorial Review Board, *Consumption Market and Cultures* (Routledge).

Editorial Advisory Board, *International Journal of Gandhian Studies* (James Madison University).

REVIEWING

Journal Paper Reviewing

Prof. Ashok T. Amin
Discrete Applied Mathematics (Elsevier).

Prof. Minal Bhise
International Journal of Software Engineering and Knowledge Engineering (IJSEKE), (World Scientific).

Knowledge and Information Systems (KAIS), (Springer).

Prof. Vijaykumar Chakka
IET Communications (IET).

Advances in Bioinformatics (Hindawi).

Prof. Sanjay Chaudhary
Future Generation Computer Systems (Elsevier).

Prof. Manik Lal Das
Computer Communications (Elsevier).

IEEE Transactions on Wireless Communications (IEEE).

IET Information Security (IET).

Prof. Srikrishnan Divakaran
Discrete Applied Mathematics (Elsevier)

Prof. Rahul Dubey

Journal of Circuits, Systems and Computers (JCSC) (World Scientific).

Prof. Deepak Ghodgaonkar

IEEE Transactions on Antennas and Propagation (AP) (IEEE).

IEEE Transactions on Instrumentation and Measurement (IM) (IEEE).

IEEE Transactions on Microwave Theory and Techniques (MTT) (IEEE).

Prof. Ranendu Ghosh

Journal of Geomatics (Indian Society of Geomatics, Ahmedabad).

Prof. Manish K. Gupta

Designs, Codes and Cryptography (Springer).

Discrete Mathematics (Elsevier).

Prof. Sanjeev Gupta

Indian Journal of Physics (IACS).

Iranian Journal of Electrical and Computer Engineering (IJECE), (ACECR).

Journal of the Indian Institute of Science (Jl of IISc), (IISc.).

Prof. Manjunath V. Joshi

IEEE Transactions on Image Processing (TIP) (IEEE).

IEEE Transactions on Geoscience and Remote Sensing (TGRS) (IEEE).

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) (IEEE).

Prof. Hemant A. Patil

International Journal of Speech Technology (IJST) (Springer).

Prof. Mehul S.Raval

International Journal on Image and Graphics (World Scientific).

National Journal on System and Information Technology (SRIMCA).

Telecommunication Systems Journal (Springer).

Prof. Girja Sharan

Desalination (Elsevier).

Energy (Elsevier).

International Journal for Service Learning in Engineering (IJSLE), (Penn Sylvania State University).

Journal of Construction in Developing Countries (Universiti Sains Malaysia).

Prof. Sanjay Srivastava

EURASIP Journal on Wireless Communications and Networking (EURASIP).

IEEE Transactions on Aerospace and Electronic Systems (TAES) (IEEE).

Prof. Hrishikesh Venkataraman

ACM Multimedia Systems Journal (ACM).

IEEE Transactions on Broadcasting (IEEE Broadcasting Society) (IEEE).

IEEE Transactions on Mobile Computing (TMC) (IEEE).

IEEE Transactions on Vehicular Technology (TVT) (IEEE).

Coference Paper Reviewing

Prof. Minal Bhise

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

Prof. Vijaykumar Chakka

Fourth National Conference on Current Trends in Technology (NUCONE 2009), Nirma University, Ahmedabad, IN, November 25-27, 2009.

Prof. Manik Lal Das

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

Prof. Deepak Ghodgaonkar

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

Prof. Sanjeev Gupta

Fourth National Conference on Current Trends in Technology (NUCONE 2009), Nirma University, Ahmedabad, IN, November 25 - 27, 2009.

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

Prof. Manjunath V. Joshi

IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2010), Honolulu, Hawaii, July 25-30, 2010.

Prof. Hemant A. Patil

International Conference on Signal Processing and Communications, (SPCOM 2010), IISc., Bangalore, IN, July 18-21, 2010.

Prof. Prabhat Ranjan

IEEE Wireless Communications and Networking Conference (WCNC 2010), Sydney, Australia, April 18-21, 2010.

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

Prof. Subhajit Sen

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

Prof. Sanjay Srivastava

Sixteenth National Conference on Communications, (NCC 2010), IIT Madras, Chennai, IN, January 29-31, 2010.

Second International Conference on Communication Systems and Networks (COMSNETS 2010), Bangalore, IN, January 05-09, 2010.

Prof. Hrishikesh Venkataraman

IEEE 70th Vehicular Technology Conference: VTC2009-Fall, Anchorage, Alaska, USA, September 20–23, 2009.

IEEE 71st Vehicular Technology Conference: VTC2010-Spring, Taipei, Taiwan, May 16–19, 2010.

20th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2009), Tokyo, Japan, September 16-19, 2009.

INVITED LECTURES/TALKS/COURSES

Prof. Ashok T. Amin

"Technology, Society, and Individual," Navgujarat College of Computer Applications, Ahmedabad, IN, February 25, 2010.

Prof. Asim Banerjee

"Project Risk Management," 2-day Certification Course on Project Management, Cambay Resort, Gandhinagar, IN, April 10, 2010.

"Project Scope Management," 2-day Certification Course on Project Management, Cambay Resort, Gandhinagar, IN, April 09, 2010.

"Mathematical Morphology in Digital Image Processing," STTP on Current Trends in Image Processing, LDRP College, Gandhingar, IN, December 02, 2009.

Prof. Vijaykumar Chakka

"Parametric Estimation and Its Application in Communication System," Nirma University, Ahmedabad, IN, March 06, 2010.

Prof. Ganesh Devy

"Mother Tongue Education—Policy Initiatives," Central Institute of Indian Languages, Mysore, IN, July 16, 2010.

"Alternate Development Paradigms," International Conference of Development Agencies, Dannone Forum, Paris, July 04, 2010.

"Amnesia, Aphasia and the Post-Colonial Imagination," Anna Rutherford Memorial Lecture, International Association for Commonwealth Literature and Language Studies', University of Nicosia, Cyprus, June 09, 2010.

"Translation Theory in Indian Tradition," Anuvad Suvidha Kendra, Mumbai, IN, May 07, 2010.

"The Colonial Imagination and the Making of the Adivasis," The Eighth Pablo Neruda Lecture, Centre for Developing Countries Research, Delhi University, IN, April 24, 2010.

"Modern Interpretations of the Mahabharata," Indian Institute of Advanced Study, Shimla, IN, April 14, 2010.

"Media in Cyberspace," National Institute of Media, Communication and Journalism, Ahmedabad, IN, April 7, 2010.

"Amnesia, Aphasia and Knowledge," Faculty Lecture, Indian Institute of Technology, Bombay, March 13, 2010.

"Towards a People's Linguistic Survey of India," Bharat Bhasha Confluence, Baroda, March 10, 2010.

"Threatened Languages," TEDx Mumbai Lecture, Mumbai, IN, March 04, 2010.

"Cultural Cartographies in India," Cultural Centre, Visvabharati, Shanitiniketan, IN, February 23, 2010.

"Folklore and Performance Traditions in India," Folklore and Performance Seminar, Department of Comparative Literature, Jadavpur University, Kolkata, IN, January 12, 2010.

"Towards an Inclusive Education in India," Silver Jubilee Lecture, IGNOU, Delhi, IN, December 22, 2009.

"J. Krishnamurty on Education," Krishnamurty Foundation Seminar on 'J. Krishnamurty's Contribution to Philosophy of Education', Baroda, IN, December 18, 2009.

"Science, Myth and Society," Valedictory Lecture, Institute of Rural Management and Administration, IRMA, Anand, IN, December 16, 2009.

"Towards a National Policy for Tribal Development," National Centre for Advocacy, Delhi, IN, December 15, 2009.

Prof. Rahul Dubey

"Design of Modern Digital Systems," AD Patel Institute of Technology (ADIT), Vallabh Vidyanagar.

Prof. Manish K. Gupta

"Mathematics of Natural Information Processing," in Scope of Research in Applied Mathematics, Nirma University, Ahmedabad, IN, April 17, 2010.

"Academic Systems in USA," Indo-American Education Society, USIEF Satellite Center, Ahmedabad, IN, July 04, 2010.

Prof. Sanjeev Gupta

"Wireless System Design," Nirma University, Ahmedabad, IN, March 30, 2010.

"Research Methodologies," One Day Seminar on "Research in Engineering: Perspectives and Methodologies, sponsored by GUJCOST, Sankalchand Patel College of Engineering, Visnagar, Gujarat, IN, December 10, 2009.

Prof. Manjunath V. Joshi

Taught a course on "Communication Systems," at Indian Institute of Technology (IITGN) Gandhinagar, IN, July–November, 2010.

"Computer Vision and Applications," Shri Sant Gajanan Maharaj College of Engineering (SSGMCE), Shegaon, Maharashtra, IN, September 10, 2009.

'Image Processing, Computer Vision and Applications' A D Patel Institute of Technology, New Vallabh Vidyanagar, Gujarat, September 07, 2009.

Dr. T. S. Kumbar

"Searching Beyond Google," Library Development Program, Ahmedabad University, Ahmedabad, IN, January 30, 2010.

"ETD Initiatives in India: Some recent developments," Workshop on Library Automation (IRTPLA Program), INFLIBNET and Hemchandracharya North Gujarat University, Patan, IN, January 06, 2010.

"Essential Competencies for Library and Information Professionals," Digital Library : Opportunities and Challenges, Department of Library & Information Science, Sardar Patel University, Vallabh Vidyanagar, IN, December 31, 2009.

Recent Developments in the Area of Electronic Theses and Dissertations in India. UGC Refresher Course, Gujarat University, Ahmedabad, IN, October 31, 2009.

"Future Libraries and Librarians: What Our Users Think," One Day Seminar on Future Libraries and Librarians, Special Library Association, USA and Ahmedabad Management Association, Ahmedabad, IN, October 10, 2009.

"Scholarly Information Sources for Research in Engineering," Electrical Research & Development Association (ERDA), Vadodara, IN, September 26, 2009.

Prof. Anish Mathuria

"Building an Automatic Security Protocol Generator," National Workshop on Cryptology 2009 – under India Mathematics Year, SVNIT, Surat, IN, August 7-9, 2009.

Prof. Madhumita Mazumdar

"Science and the Making of a New Nationalist Masculinity in Colonial India," SNDT University Mumbai, IN, February 17, 2010.

"The Legacies of Colonial Landscaping in the Andaman Islands," University of Warwick, Department of Sociology, UK, May 11, 2010.

Prof. Suman K. Mitra

"Statistical Pattern Recognition," Warsaw University of Technology, Warsaw, Poland March–April, 2010.

Series Lectures on "Video and Image Analysis," Institute of Radio Electronics, Warsaw University of Technology, Warsaw, Poland, March–April, 2010.

Prof. Rahul Muthu

"Graph Theory and its Applications," One Day Workshop on Applied Mathematics, Nirma University, Ahmedabad IN, April 17, 2010.

Prof. Dipankar Nagchoudhuri

"CMOS Analog Layout," 1 of 11 planned lectures recorded in NPTEL Lectures series IIT Bombay, Mumbai, IN, July 21-22, 2010.

Taught a Course for B.Tech. at Indian Institute of Technology (IITGN) Gandhinagar, IN, August to December 2009.

Prof. Vishvjit Pandya

"Between Place and Nation–"Rhizomatic" trails on the Andamanese landscape," Department of Sociology, University of Warwick, UK, May 11, 2010.

"Between Photographs and "Fuzzygraphs": Scoping the Andamanese Landscape," Seminar on Spaces of Knowledge Making in the Eighteenth and Nineteenth Centuries," Department Of English, University of Warwick, UK, May 07, 2010.

"Negotiating Clothing, Nakedness and Marginality: The PTG's of the Andaman Islands," National Seminar on "Identity at the Margins," M. S. University, Baroda, IN, March 19-20, 2010.

Prof. Hemant A. Patil

"Recent Advances in Image Processing," V. V. P. Engineering College, Rajkot, IN, April 10, 2010.

"Wavelet Signal Processing," G. H. Raisoni College of Engineering, Nagpur, IN, February 01, 2010.

"Wavelet Signal Processing" Tutorial Speaker, Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

"Signal Processing and Wavelets," STTP on Signal Processing and Wavelets during, Ramrao Adik Institute of Technology (RAIT), Navi Mumbai, IN, October 03-05, 2009.

Prof. Laxminarayana Pillutla

"Performance of Transmission Control Protocol (TCP) under Dynamic Spectrum Access," SVNIT, Surat, IN, March 03, 2010.

Prof. Prabhat Ranjan

"Technological Trends in Planetary Exploration and Possible Impact on Chandrayaan Mission," SAMEER, IIT Bombay Campus, Mumbai, IN, March 5, 2010.

"Emerging Technologies for Planetary Exploration," National Space Science Symposium, 2010, Rajkot, IN, February 24, 2010.

"Wireless Sensor Network for Planetary Science Studies," 10th PLANEX Workshop, Panjab University, Chandigarh, IN, February 1-5, 2010.

"Applications of Wireless Sensor Network to Wildlife Research," Fifth IEEE Conference on Wireless Communication and Sensor Networks, Allahabad, IN, December 15-19, 2009.

"Wireless Sensor Networks and Its Open Issues," STTP on Computer Networks, Ganpat University, Mehsana, IN, November 13, 2009.

"Resource Constrained Embedded System Development," Workshop on Embedded Systems, C. U. Shah College of Engineering and Technology, Surendranagar, IN, September 24, 2009.

"Development of Wireless Sensor Network Technology for Wildlife Research," ARS-XXIII, Wildlife Institute of India, Dehradun, IN, September 20, 2009.

"Lunar Seismic Sensor Network Development," PLANEX Seminar, PRL, Thaltej Campus, Ahmedabad, IN, August 21, 2009.

"Sensor Network Applications to Wildlife and Planetary Exploration," University of California, Davis, California (USA), IN, August 11, 2009.

Prof. Mehul S. Raval

"Introduction to Image Processing," Seminar on Image Processing Using Matlab, LDRP, Gandhinagar, IN, July 08, 2010.

"Digital Image Forensics: Some Applications," Summer School on Image Processing, Parul Institute of Engineering and Technology, Vaghodiya, Vadodara IN, May 01, 2010.

"Introduction to Image Processing using Java," CEP on OOPs and Java, DA-IICT, Gandhinagar, IN, April 08, 2010.

Forensics in Digital Images, GUJCOST Seminar on Image Processing, VVP Engineering College, Rajkot, IN, April 10, 2010.

"Algorithms for Digital Image Forensics," Seminar on Image and Signal Processing, Gandhinagar Institute of Technology, Gandhinagar, IN, March 13, 2010.

"Image Segmentation," Workshop on Image Processing, Sarvajanik College of Engineering and Technology, Surat, IN, October 03, 2009.

"Image Enhancement in Remote Sensing," National Training Program on Digital Image Processing with Remote Sensing perspective, Department of Electronics & Communication

Engineering, Changa Institute of Technology, Changa, Gujarat, IN, October 09, 2009.

"Algorithms for Digital Data Hiding," National Conference on 'Emerging trends in Information, Electronics & Communication, Parul Institute of Technology, Vaghodiya, Vadodara, IN, September 12, 2009.

"Compressed Domain Data Hiding Techniques," IET National conference on Signal and Image Processing Applications (NCSIPA 2009), Pune, IN, September 19-20, 2009.

"Digital watermarking in JPEG Images," IEEE Introduction Session, Dharmsinh Desai University, Nadiad, IN, September 07, 2009.

Prof. Girja Sharan

Taught 15 Session course on "Systems Modelling and Simulation," Adani Institute of Infrastructure Management, Ahmedabad, IN, December 15, 2009 – January 25, 2010.

"Dew Condensers: From Incidental Discovery of Possibility to a Market Product," Keynote address at 3rd IIMA Doctoral Colloquium, IIM Ahmedabad, IN, January 08-09, 2010.

Prof. Sanjay Srivastava

"Applications of Wireless Ad Hoc Networks - Design and Implementation," Fourth National Conference on Current Trends in Technology (NUCONE 2009), Nirma University, Ahmedabad, IN, November 25-27, 2009.

Prof. P. Sumathi

"MATLAB and Simulink for Control Systems," One-Day Workshop on MATLAB', DA-IICT, Gandhinagar, IN, March 14, 2010.

Prof. V. Sunitha

"Graph Algorithms for Ad Hoc Networks," Two Day workshop on Ad Hoc Networks: Design, Applications, and Models, IEEE Gujarat Section and Students Branch, DA-IICT, Gandhinagar, IN, October 2-3, 2009.

Prof. Hrishikesh Venkataraman

"Multimedia Transmission for Improving Digital Experience," Edinburgh Napier University, Scotland, UK, May 25, 2010.

"Multihop Vehicular Networks and Transportation Systems," International Student Exchange Programs (ISEP), France, May 06, 2010.

"Adaptive Multimedia Streaming in Wireless Networks," National University of Ireland (NUI), Maynooth, Ireland, March 13, 2010.

"Quality-Oriented Prioritized Multimedia Transmission in Wireless Devices," FUNLAB, University of Washington, Seattle, USA, October 18, 2009.

Prof. Shiv Visvanathan

"A Seminar Without Anecdotes," Conference on the 50th Anniversary of Seminar Magazine, Indian Institute of Advanced Study, Shimla, October 25-28, 2009.

"March of the Languages," Bhasha Conference on Language, Baroda, March 8-9, 2010.

"History and Memory," "The Politics of Memory," Indian Institute of Advanced Study, Shimla.

"Celebrating Bollywood," Filmhius Lumierd, Masstricht June16, 2010.

"The Conversation of Democracies" Public Lecture, University of Masstricht, June 22, 2010.

CONFERENCE PROGRAM COMMITTEE

Prof. Asim Banerjee

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

Second National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG 2010), LNMIIT, Jaipur, IN, January 15–17, 2010.

Sixteenth National Conference on Communications, (NCC 2010), IIT Madras, Chennai, IN, January 29-31, 2010.

Prof. Minal Bhise

International Conference on Software Engineering Theory and Practice (SETP 2010), Orlando, USA, July 12–14, 2010.

International Conference on Enterprise Information Systems (ICEIS 2010), Funchal, Madeira–Portugal, June 8–12, 2010.

International Conference on Semantic E-Business and Enterprise Computing, (SEEC 2009), IN, November 04–06, 2009.

Prof. Vijaykumar Chakka

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

Prof. Sanjay Chaudhary

7th IEEE 2010 International Conference on Services Computing (SCC 2010), Miami, USA, July 5-10, 2010.

6th International Conference on `Social and Organizational Informatics and Cybernetics: SOIC 2010', Orlando, Florida, USA, June 29 –July 2, 2010.

Asia Modeling Symposium 2010, Kota Kinabalu, Borneo, Malasia, May 26-28, 2010.

12th International Conference on Computer Modelling and Simulation (UKSim2010), Cambridge University (Emmanuel College), England, March 24–26, 2010.

1st International Conference on Intelligent Systems, Modelling and Simulation (ISMS 2010), Liverpool, UK, January 27-29, 2010.

WWW 2011 Warm Up Workshop, Hyderabad, June 20-21, 2010.

The First WWW 2011 Warm Up Workshop, University of Calcutta, IN, January 07, 2010.

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

IEEE Semantic Web Services in Practice Workshop (SWSIP 2009), co-located with IEEE Asia-Pacific Services Computing Conference 2009, Biopolis, Singapore, December 7-11, 2009.

Fifth World Congress on Services (SERVICES 2009) Part II, Bangalore, IN, September 21-25, 2009.

Second International Workshop on Dynamic and Declarative Business Processes (DDBP 2009), in conjunction with the 13th IEEE International EDOC Conference (EDOC 2009), Auckland, New Zealand, September 01, 2009.

Second International Conference on Contemporary Computing, Noida, IN, August 17-19, 2009.

Prof. Manik Lal Das

International Conference on Information Science and Applications (ICISA 2010), Seoul, Korea, April 21-23, 2010.

National Conference on Mobile and Pervasive Computing (CoMPC-10), Chennai, IN, January 28-19, 2010.

Prof. Manish K. Gupta

ACM Compute 2010 Conference, Bangalore, IN, January 22-23, 2010.

Prof. Sanjeev Gupta

National Conference on Future Trends in Information and Communication Technology (FTICT), Charotar Institute of Technology, Charusat, Changa, IN, August 07-08, 2009.

Prof. Prasenjit Majumder

ACM-SIGIR 2010, UniMail, Geneva, Switzerland, July 19-23, 2010.

Prof. Anish Mathuria

5th International Conference on Information Systems Security (ICISS 2009), Kolkata, December 14-18, 2009.

Prof. Suman K. Mitra

National Conference on Computer Vision pattern Recognition and Image Processing (NCVPRIPG-2010), LNMIIT, Jaipur, IN, January 15-17, 2010 (Program Chair).

Prof. Hemant A. Patil

Workshop on Image and Speech Processing (WISP), IIIT Hyderabad, IN, December 19, 2009.

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

4th Indian International Conference on Artificial Inteligence (IICAI 2009), Tumkur, IN, December 16-18, 2009.

Prof. Mehul S. Raval

Sixth IEEE India Annual Conference (INDICON 2009), Gandhinagar, IN, December 18-20, 2009.

IET National Conference on Signal and Image Processing Applications (NCSIPA 2009), Pune, IN, September 19-20, 2009.

ACADEMIC EVENTS

CONFERENCES/SEMINARS/WORKSHOPS

In addition to teaching and research, the Institute is also involved in organizing and hosting a number of professional events and activities such as conferences, seminars, workshops which serve as a platform for promoting interactions with wider academic and research community in India and abroad. The details of such events held at the Institute during the reporting year are given here.

The Institute hosted three major conferences and workshops in the academic year 2009–2010, INDICON 2009, FIRE 2010 and Formal Methods Update Meeting 2010. All these three events attracted strong participation from industry and academia, from India and other countries. The INDICON conference is an annual event of IEEE India Council and addresses all topics within IEEE scope. This event was organized in collaboration with IEEE Gujarat Section at DA-IICT from 18-20th December, 2009. The FIRE workshop is a biannual event of the Forum for Information Retrieval Evaluation and addresses topics related to Indian language information searching, retrieval and extraction. FIRE aims at developing a database of words in Indian languages through cross-lingual document retrieval and also developing technologies that could retrieve information in several local languages, so that government schemes in rural areas could be better implemented. Fire was organized in collaboration with Indian Statistical Institute, Culcutta, Information Retrieval Society of India and IEEE Gujarat Section from 19–21 February, 2010. The Formal Methods Update Meeting is an annual workshop held in leading academic institutions within India where speakers volunteer to present the latest developments in Formal Methods. This event was held at the Institute from 15–17 July, 2010.

Dr. Anil Roy was the program co-chair of INDICON 2009, Dr. Prasenjit Roy was the overall co-coordinator of FIRE 2010 and Profs. Rahul Muthu, Srikrishnan Divakaran, Sunitha V. and Mr. Ratnik Gandhi were the organizers of Formal Methods Update Meeting 2010.

Besides the above mentioned major events, Institute also hosted following national level workshops which equally attracted large number of participants from academic institutions and industries.

Object-oriented Programming and Java
DA-IICT, 5th April, 2010

One-Day Workshop on MATLAB
DA-IICT, 14th March, 2010

i.fest – Celebrating 125 years of IEEE
DA-IICT and IEEE DA-IICT Student Branch, 1–2nd November, 2009

IEEEXtreme Programming
DA-IICT and IEEE DA-IICT Student Branch, 25th October, 2009.

Two day workshop on Ad Hoc Networks Design, Applications and Models
DA-IICT and IEEE DA-IICT Student Branch, 2–3rd October, 2009.

SPECIAL LECTURES

Institute arranged over 15 invited lecture by the distiguished personalities both from India & abroad. The complete list of lectures delivered is given in the **Annexure 3**.

VISITORS

Dr. Thomas George (Ex JPL MEMS Group Head) Director of Technology, Development, Vialogy Corporation, USA, visited on 20th August, 2009.

Dr. Ali M. S. Zalzala of Hikma Group Ltd. with his team members (from Vodafone Foundation) visited on 8th July, 2010.

The following group of students along with their faculty members visited Resource Centre during the year as a part of their academic requirement.

- A group of 25 students from the Department of Library & Information Science, Gauhati University, Assam visited on 30th October, 2009.
- A group of 49 students from the Department of Library & Information Science, Bhavnagar University, Bhavnagar visited on 18th December, 2009.
- A group of 11 students from the Department of Library & Information Science, Gujarat Vidyapeeth, Ahmedabad visited on 9th April, 2010.

Technical Session During Formal Methods

Inauguration Session of Indicon 2009

STUDENTS: ACTIVITIES AND ACHIEVEMENTS

ACTIVITIES

DA-IICT being a residential campus for undergraduate students, they actively participated in extra curricular and co-curricular activities along with their academic pursuits. The activities included sports, cultural and other events happening throughout the year. They took part in diversity of international and national level competitions and won prizes in various events. Their enthusiasm and active participation in various events organized by other institutions has brought recognition to DA-IICT as a serious contender among the top engineering institutions in the country. The following are some highlights:

Cultural Events

Our cultural committee organized highly successful, and popular cultural events on campus. The cultural events during the year included music nite, dance nite, drama nite, sufi nite, garba nite, kavi sammelan, etc. Students also celebrated Teachers' Day, Janmashtami, sangeet sandhya, Vinayaka Chaturthi, rangoli competition, Ram Leela and Dushera, Diwali, Lohri/Makar Sankranti/ Pongal, Id, Holi, Ugadi, and a Hasya-Kavi Sammelan.

Synapse 2010

Synapse is the biggest students' Techno-Cultural annual festival held in DA-IICT. It is not just the entertainment or the culture that enriches Synapse, but the very pull of the challenges that tempt the brilliant of the brains in the country to participate that makes Synapse special. Synapse-2010 held on 5-7th February, 2010, saw participation from different colleges across the country, thus helping the festival evolve further as a national-level student event. Several hundred students participated in the festival. The plethora of technical and cultural events that Synapse-2010 showcased enthralled audiences of all kinds – from those interested in the arts, to the geeks who enjoy life in front of a computer screen.

Sports

Sports culture in DA-IICT is gaining popularity. The number of sports activities conducted through out the year is increasing. The pride we feel looking back into the past of DA-IICT sports and its sportsmen makes us emphatically hopeful of its brighter and shinier future, a future, that will be full of achievements by individuals and teams representing DA-IICT.

In the past few years, DA-IICT sports have ventured into few newer arenas. It has tried out few new formats of various games, conducted its own sports festival and has also continued to participate in various university level competitions.

Annual sports festival 'CONCOURS' is one huge sports extravaganza. Colleges from neighboring districts in Gujarat are invited to DA-IICT for a three day sports fest. The fest includes sports like cricket, football, basket-ball, volley-ball, TT, badminton, carom, chess, athletics etc. DA-IICT students performed well in this tournament.

Apart from all these, DA-IICT has rich history of participation in sports' meet of other colleges. Following are some of the recent achievements of DA-IICT students in various sports.

- Winners of Concours (2009–2010) in Basket ball , Badminton (Boys and Girls) , Table Tennis (Girls) , Volley ball , Chess and Carom.

- Runners up in Football and TT (boys) in Concours 2009–10.

- Winners of Petro Cup (2009–2010) in Football, Basketball, Table Tennis (Girls), Chess. Runners up in Volley ball.

- 2nd Runners up in Volley ball in MIT Pune (2008–2009).

- Runners up in Lawn Tennis and Badminton (Girls) in Udghosh IIT Kanpur 2010.

Two of our students, Arindam Bhattacharjee of 2003 batch and Gaurav Sharma of 2005 batch went on a mountaineering expedition to Friendship Peak (Himalayas) which is at an altitude of 17, 500 feet, as part of a 25 member team organized by Adventure Sports Association of India. While on the peak, Arindam and Gaurav were proud enough to unfurl the DA-IICT banner.

Clubs

Various student clubs were active during the year, and organized their own events, for student groups ranging from a few dozens, to a few hundreds. Notable among the clubs were, the film club, the DA-IICT theatre group, the press club, the Aryans, the programming club, the quiz club, and the electronics hobby club.

Left
Arindam and Gaurav at Friendship Peak (Himalayas)

Below
Winning teams of DA-IICT students

ACHIEVEMENTS

Prizes

Funding for "nextR TV Remote (Cordless TV enabled Smart Remote)"

Members of IEEE Student Branch, Setu Gupta & Dorav Kumar received 100 percent funding for their project proposal "nextR TV Remote (Cordless TV enabled Smart Remote)" The project was selected from a host of internationally invited entries and was finally chosen as the only one to receive 100 percent grant of US $1257.00 from IEEE Student Activity Committee.

Google's Summer of Code 2010

Following three students all from B.Tech. 2008 batch were selected for prestigious Google Summer of Code 2010.

1. Nikhil Marathe – KDE – Amarok and UPnP integration
2. Aditya Bhatt – KDE – Face recognition and tagging in Digikam
3. Sai Dinesh – KDE – SyncML support in Akonadi (mobile phone synchronization)

Out of the 11 Indians selected for KDE, 3 to be from DA–IICT is a great achievement.

Ishani Parikh receiving the award   Students receiving imagine cup award

Google India Winner of Women in Engineering Award 2010

Ishani Parekh B.Tech. 2008 batch received Women in Engineering Award 2010 in March 2010. The winners received an award of ₹ 1.00 lakh.

Microsoft Imagine Cup 2010

Four of our students were qualified for the 'MultiPoint Mouse Local Innovation Award (MMLIA) National Finals of Innovate Imagine Cup India contest organized by Mircosoft. They are Sanchit Gupta, Anubhuti Jain, Anshul Chaurasia and Ishani Prekh. The first three students were from B.Tech 2006 batch and Ishani belongs to B.Tech 2008 batch.

Ms. Shailee Thaker of B.Tech 2007 batch has won the 'Innovate4Women Award of the Microsoft Imagine Cup'.

Senior Research Fellow

Mr. Deepak B. Hiremath, a graduate of 2007–2009 Batch of M. Sc. ICT-ARD Program was selected as a Senior Research Fellow at the International Crop Research Institute for Semi–Arid Tropics, Hyderabad, for one year.

Internships

Kishan Patel had a sponsored summer internship at Carnegie Mellon University (CMU), USA during May–July 2010. He worked under the Profs. Matthew Kam and Derek Lomas on the project playpower (http://www.playpower.org).

ALUMNI ACHIEVEMENTS

An Alumni Association is testimonial of an institute coming of age. DA-IICT has thus matured as a responsible institute through the formation of its Alumni Association during the course of 2010. To promote and enhance the effective communications between the Institute and its alumni, Director of DA-IICT constituted an ad-hoc committee to look into the matters related to alumni activities. Since its inception, the Alumni Association has structured the interaction with the alumni through our Alumni website http://alumni.daiict.ac.in. The committee is working towards its goal of coordinating and promoting programs that instill goodwill and pride, and provide opportunities for professional growth and social interaction. The committee has also facilitated the planning of the first ever DA-IICT 'Alumni Day' which was held on 19th December, 2010. This was the inaugural official gathering of the DA-IICT Alumni.

Our alumni have made us proud in a short time by their achievements in various fields. Following are some of their achievements.

- Mohit Jain is pursuing Master's at University of Toronto and has received Wolfond Fellowship 2009 of CA $5600.00.

- Ankit Jain has been awarded the best employee award in BSS Department for year 2009 on 30th September, 2009 at Reliance Communications, Mumbai.

- Ravi Kiran Atluri (B. Tech. 2004) was given the First Prize in the category – "Excellence in Projects" at organization level during the Annual Excellence Awards, 2009 by Infosys.

- Atul Sethi (B.Tech 2002) was awarded 'Swiss Government Scholarship' of CHF 17,280 to pursue M. Sc. in Computational Biology and Bioinformatics at ETH Zurich, Switzerland. Year: 2008 – 09. He was also awarded 'la Caixa' Fellowship worth of 121,000.00 Euros to pursue Ph.D. in Systems Biology at Center for Genomic Regulation in Barcelona, Spain. Year: 2010-14

- Sumit Dagar (B.Tech. 2004) has achieved the following:
  - Speaker: Space-x, Vienna, 2010.
  - Award: "Pride of National Institute of Design", 2009.
  - Award: Second Prize – USID Design Challenge, 2009.
  - Award: World Finalist – Imagine Cup Short Film Competition, Cairo, 2009.

- Naveen Garg (B.Tech 2003) was recognized with 'Microsoft Gold Star Award' for his extraordinary individual contribution, in June 2010. This award included an appreciation letter from the General Manager of Microsoft Global Delivery.

- Abhishek Ballaney was awarded the following awards for the work done at NXP from MindTree:
  - 'Team of the Quarter' award for releasing 1st DTV product with Dolby MS10 Multi–stream decoder on TV543 SoC, from NXP Semiconductors India, 5th Nov. 2009.
  - Part of the 1st audio team in the world to successfully port, optimize, test & certify Dolby MS10 Multi–stream decoder on TV543 SoC, from NXP Semiconductors India, 31st August, 2009.
- Mudit Mittal (B.Tech. 2005) is currently pursuing Master's in HCI Design from Indiana University, Bloomington was awarded 'Best Employee of Year 2008' while he was working at Human Factors International, in 2009.

- Tarun Chawla (B.Tech. 2005) has just finished his PhD "summa cum laude" from Telecom ParisTech in microelectronics on the topic 'Process Variations in Digital Circuits'.

Alumni at the first meeting

PEOPLE

FACULTY

As of January 2011, the full-time faculty included 48 regular faculty members and 6 visiting faculty members. The institute also had 24 adjunct faculty members who taught specialized courses to the various programs during the academic year. Complete list is available as **Annexure 4.**

New Faculty
Five new faculty members joined the Institute during the year 2009-10.

Dr. Aditya Tatu joined on 07th July, 2010 as assistant professor. He was previously doctoral student in Image Analysis at University of Copenhagen, Denmark.

Dr. Mazad Zaveri joined on 14th June, 2010 as assistant professor. He was previously doctoral student in Electrical and Computer Engineering at Portland State University, Oregon, USA.

Dr. Ranendu Ghosh joined on 11th May, 2010 as associate professor. He was previously with Space Application Centre (ISRO), Ahmedabad.

Dr. Samrat Mondal joined on 17th December 2009 as assistant professor. He was previously doctoral student at Indian Institute of Technology, Kharagpur.

Dr. P. Sumathi joined on 03rd November, 2009 as assistant professor. She was previously Lecturer at St. Joseph College, Chennai.

Faculty Resignations
Dr. Sushanta Kumar Mandal, assistant professor, left the Institute on 01st July, 2010.

STAFF

Promotions
Dr. T. S. Kumbar was appointed as Librarian (w.e.f. 1/04/2010)

New Staff
Two new staff members joined the Institute during the year 2009-10.

Mr. Nimesh Patel joined on 03rd August, 2009 as System Engineer.
Mr. Rajesh Patel joined on 09th November, 2009 as Estate Engineer.

Staff Resignations
Mr. Sanjay Singh, Electrical Engineer, left the Institute on 24th September, 2009.

Project Staff
Ms. Firoja Sheikh joined on 11th November, 2009 as Technical Assistant on the BRFST-sponsored project (Supervisor: Prof. Prabhat Ranjan).

Mr. Kiran Patel joined on 24st November, 2009 as Technical Assistant on the PRL-sponsored project (Supervisor: Prof. Prabhat Ranjan).

Mr. Ashish Sarvaiya joined on 2nd January, 2010 as Jr. Research Fellow on ISRO-sponsored project (Supervisor: Prof. Deepak Ghodgaonkar).

Mr. Milind Shah left on 31st January, 2010, after completing his assignment as Jr Research Fellow on ISRO-sponsored project (Supervisor: Prof. Sanjeev Gupta).

Mr. Ishan Shah joined on 7th April, 2010 as Research Engineer on the National Trust-sponsored project (Supervisor: Prof. Prabhat Ranjan).

Mr. Rohit Grover, Research Engineer on PRL-sponsored project resigned w.e.f. 10th March 2010.

Ms. Juhi Ranjan joined on 3rd May, 2010 as Research Engineer on the PRL-sponsored project (Supervisor: Prof. Prabhat Ranjan).

Mr. Hiren Shah joined on 10th May, 2010 as Research Engineer on the National Trust-sponsored project (Supervisor: Prof. Prabhat Ranjan).

Mr. Abhishek Borkar joined on 17th May, 2010 as Research Engineer on the IPR-sponsored project (Supervisor: Prof. Prabhat Ranjan).

Mr. Ishan Shah resigned as Research Engineer w.e.f 31st May, 2010.

Mr. Khaja Ahmed Shaikh completed his assignment as Research Engineer on project sponsored by Institute (Supervisor: Prof. Dipankar Nagchoudhuri).

Mr. Sainath Nambiar joined on 1st June, 2010 as Research Engineer on BRFST-sponsored project (Supervisor: Prof. Prabhat Ranjan).

Ms. Neelima Chhotwani joined on 1st June, 2010 as Research Engineer on the National Trust-sponsored project (Supervisor: Prof. Prabhat Ranjan).

Ms. Neelima Chhotwani resigned as Research Engineer w.e.f. 11th July, 2010.

Mr. Ketul Sutaria resigned as Sr. Research Fellow on Indo-French co-operative project w.e.f. 28th July, 2010.

Mr. Murali Medisetty left on 31st July, 2010, after completing his assignment as Project Assistant on Indo-Japanese co-operative project.

Mr. Yagna Srinath joined on 2nd August, 2010 as Project Assistant on Indo-Japanese co-operative project sponsored by DST (Supervisor: Prof. Anish Mathuria).

Mr. Khaja Ahmed Shaikh joined on 5th August, 2010 as Jr Research Fellow on Indo-French co-operative project sponsored by IFCPAR (Supervisor: Prof. Chetan Parikh).

Mr. Anil Kumar Mundra joined on 18th August, 2010 as Jr Research Fellow on Indo-Japanese co-operative project sponsored by DST (Supervisor: Prof. Anish Mathuria).

Ms. Sarita Agrawal joined on 25th August, 2010 as Sr Research Fellow on Indo-Spanish co-operative project sponsored by DST (Supervisor: Prof. Manik Lal Das).

RESOURCE CENTRE

The Resource Centre (RC), being a major information service unit, continued to expand its collection, both in print and digital form, and design and deliver innovative services in support of teaching, learning, research and scholarly activities of the Institute. With its pro-active approach, the RC strives to make the best use of latest information technologies to disseminate information to its end users. Some of the significant activities and services carried out during the year of this report are reported here.

Print and Audio Visual Collection

The RC collection includes books, conference proceedings, reference books, CDs, VCDs, DVDs etc. Table 6 presents the additions during the academic year 2009-2010.

Table 6: New Collection Added

Collection Type	Added in 2009-10	Total as on 31 July 2010
Books	2428	24932
Bound Volumes of Journals	332	1518
Theses and Dissertations	53	239
Audio Visual Resources	568	3309
Total	3381	29998

Students using RC resources

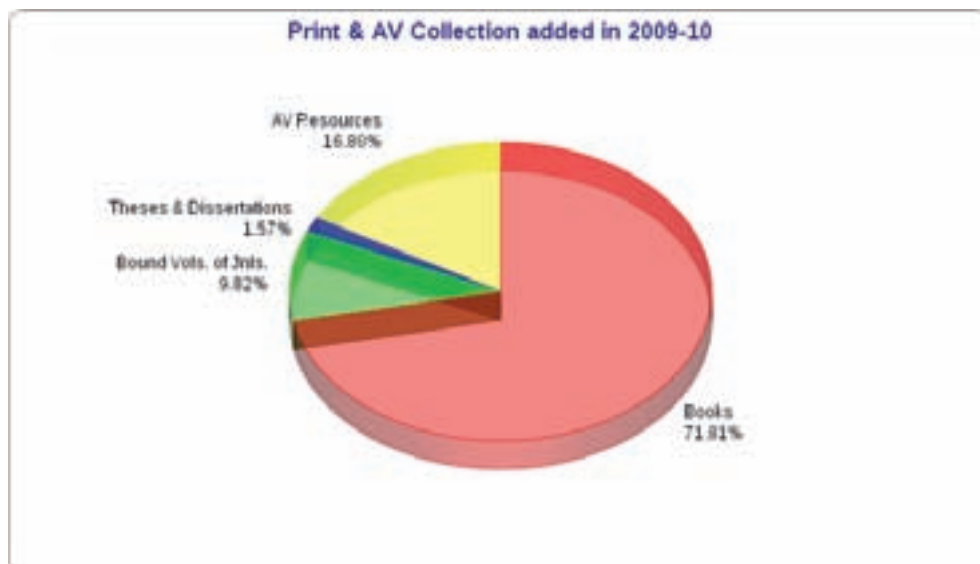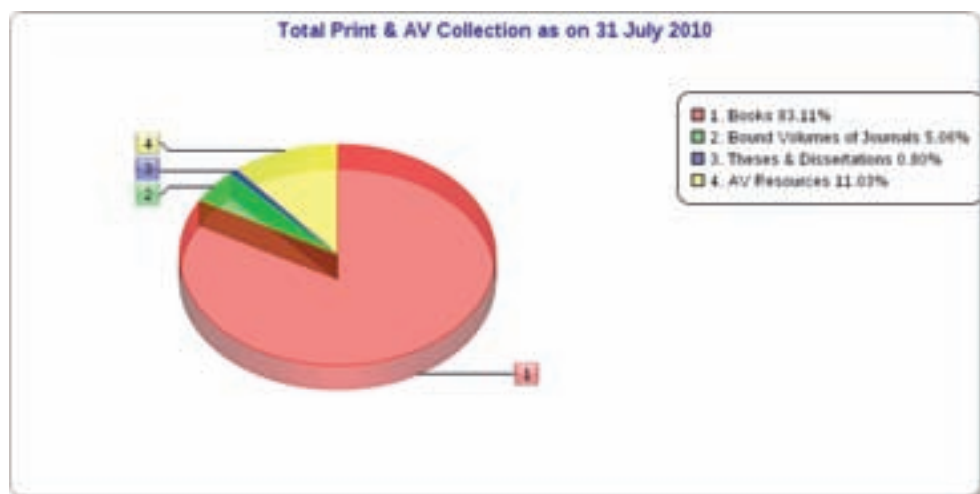Figure 4: New Collection Added

Figure 5: Total Collection

Three new journals in the emerging areas of research were added to meet the requirements of faculty members in addition to renewing the existing subscriptions.

Digital Resources

The RC has subscribed to two set of new digital resources viz., American Institute of Physics/ American Physical Society E-Journal collection, covering 38 journals and IndiaStat.com,- a India-specific socio-economic statistical information database. The first one is subscribed through UGC-Infonet Digital Library Consortium and other was directly from the publisher. This is in addition to renewing all existing 12 major e-resources.

Circulation Services

During 2009-10, 25,306 documents were issued to users, and 25,141 documents were returned. These documents included books, reference books, current and bound volumes of journals and audio – visual materials and were mainly circulated among the faculty, students and staff members of the Institute. As compared to previous years, the number of reading materials circulated remained more or less the same.

Resource Sharing

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 and INFLIBNET library networks. During the reporting period, the RC borrowed 57 books and lent 12 books. It also received 287 and delivered 230 research papers. There is a marked improvement in this activity, as the number of resources shared is increasing steadily.

Institutional Membership

The RC renewed the membership of 12 professional bodies, institutions and consortia and availed the benefits of participation in professional programs and access to various online resources offered by these bodies. The RC is a member of Ahmedabad Library Network (ADINET), American Society of Agricultural and Biological Engineers (ASABE), Computer Society of India, Indian National Digital Library in Engineering Science and Technology Consortium (INDEST), International Telecommunication Union (ITU), UGC-Infonet Digital Library Consortium, USENIX: The Advanced Computing Systems Association, among others.

B. Tech. Project Reports

The RC has been maintaining a collection of all Ph. D. theses, M. Tech. dissertations and M. Des. projects (both print and digital formats). Efforts are being made to collect, organize and provide access to all the B. Tech. project reports of the last three batches. These reports are now available in both print and 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 RC website as well as Techpedia site for wider access.

Research Information

To promote and support the Institute's research undertakings, two new information services viz. "Call for Research Proposals" and "Research Funding Sources" have been introduced this year. The RC is tracking and providing updated information (through its website) about new call for research proposals and funding agencies details and communicating it to the faculty. The faculty has found this service useful in identifying potential projects for funding.

Access to Special Lectures

During 2009-2010, the RC has made rigorous effort to collect, organize and provide access to the information relating to all special lectures held so far in the Institute. These include a collection of Power Point presentations and video recordings of over 150 lectures delivered by prominent persons. The list with links to ppts and video recordings where possible, is now made available through RC website.

Reference and Information Services

To promote the effective use of resources available, the RC has created and delivered many new services during the reporting period. The following are some of the services provided:

- Introduced 'Know Your Author', a new bi-weekly service where important books by and on prominent and popular authors were identified and displayed. So far, 37 authors were covered under this service.
- Introduced "You May Like to Borrow", a new service through which the attention of users is drawn to important collection of the RC resources and encouraged users to borrow these resources.
- Set up a 'Table of Content Service' for the high impact journals that are not subscribed by the RC but are of interest to faculty members and research scholars in the Institute.
- Compiled and updated 20+ subject bibliographies listing useful resources on various topics of interest to DA-IICT Community.
- List of "Special Issues of Journals" is being compiled and posted on RC website
- A-Z List of E-Journals providing direct online link to over 5000 titles has been created and posted on RC website to provide easy access to subscribed journals.

New Infrastructure

The following infrastructure was added during the year.

- A Blue Ray Disc Player (SONY) with cordless headphones has been added to supplement the use of educational DVD collection within the RC premises.

- The entire area of the RC has been Wi-Fi enabled by putting three access points. With this, students have Intranet and Internet access to online resources for their studies.

RC Blog @ DA-IICT

- To promote the interaction with users and keep them informed about the RC resources and services, a blog was created and launched in November 2009. This is increasingly becoming popular among our user community and helping the RC as yet another tool to reach out to its users. So far, over 100 postings have been done on this blog.

Library Orientation and Information Literacy Programs

A detailed orientation program for the entrants to various programs was held from 21st -23rd July, 2010 to familiarize with the RC collection, facilities and services. In addition, two sessions on "Information Sources for Doing a Literature Survey" for the 2009 batch of M. Tech. students was held in July 2010. A separate session for M. Sc. ICT-ARD 2008 batch students was also conducted to guide them in literature search in support of their internship.

RC Internships

As part of its regular Internship program for fresh library science graduates, the RC supported three M. L. I. Sc. graduates in August 2009 for one year and offered stipend. Also, five students, who were undergoing M. L. I. Sc. program, at Gujarat University were also trained during May 2010 as a partial requirement of their curriculum.

Staff Training

For efficient delivery of services, domain-centric staff training is needed to upgrade their knowledge and skills. During 2009-2010, the following staff members from the RC attended the workshops/seminars.

- A. Rajakumar attended a three days intensive workshop on INDEST–AICTE Workshop on "Use and Management of E-resources" at IIT Kharagpur, West Bengal, January 13-15, 2010.
- T. S. Kumbar, B. Suresh, Prasanna Kumar, Saurabh K. Prajapati, Rajakumar, A. attended a seminar on "Information Literacy and Changing Landscape of Libraries" Organized by ADINET, INFLIBNET & AMA at Ahmedabad, Gujarat, August 29, 2009.
- T. S. Kumbar, B. Suresh, Prasanna Kumar, Saurabh K. Prajapati, Rajakumar, A. attended a seminar on "Future Libraries and Librarians" organised by Special Library Association (SLA), USA, and Ahmedabad Management Association (AMA), Ahmedabad, October 10, 2009.

Students selecting books

INFRASTRUCTURE

DA-IICT has built state-of-the-art IT infrastructure and computing and communication resources supporting its academic and research activities. The campus has three lecture theatres with modern audio and video presentation systems. The classrooms and tutorial rooms are equipped with latest audio-visual aids. The laboratory building houses teaching and research laboratories for electronics, communications, computers and networks. Other major infrastructural facilities include the faculty building complex, administrative block, sports and cultural complex. Utilities and services such as the cafeteria, food courts, ATM, medical centre, campus shop, telephone kiosk, reprography facility, open-air theatre are all located within the campus. Being a fully residential campus, it has two Halls of Residence for students, one for men and the other for women.

In physical infrastructure, apart from installing an additional transformer of 1000 KVA, two major civil works have been initiated. These major civil works include i) a sewage pipe line connecting the STP plant with the main common drainage line of the government and ii) a compound wall to replace the existing chain fencing boundary. A budgetary provision of about ₹ 175.00 lakhs was made for these civil works initiated during the year.

Development of ICT as well as physical infrastructure is a continuous process. In the year 2009-10, the Institute added ICT resources worth ₹ 71.00 lakhs. The major ICT and laboratory installations acquired during the period are enlisted in Table 7.

Table 7: ICT Infrastructure added in 2009-10

Items	Quantity
Desktop PC (Core 2 Duo3 GHz)	130
High (End Workstation (Dell Precision T5500)	01
Server (Intel Xeon 4C E5530 80W 2.4GHz	02
Laptop (Intel Core 2 Duo 2.2GHz, 2GB, 160GB	04
Server (Mac Pro Two 2.26GHz Quad-Core Intel Xeon, 6GB, 640GB with extra memory 8x2 GB, 3x1TB, RAID & WiFi card)	01
List of major lab resources procured during the year.	
National Instruments Academic site license	01
Function Generator (10MHz Caddo 4065)	15
Xbee base	30
EPSON LCD Projector (EMP EB825 with 3500 Lumens)	01
DLP Projector (with 1024x768 resolution,2500 lumens)	01
Wireless Access Point (Ruckus Flex 2942)	01
Linksys Wireless Adapter (WMP54G)	65

ANNEXURE 1

MANAGEMENT

Academic Council

1	**Prof. S. C. Sahasrabudhe** Chairman	Director DA–IICT, Gandhinagar
2	**Shri. Suresh Rangachar**	President Reliance Communications Limited Mumbai
3	**Prof. Surendra Prasad**	Director Indian Institute of Technology New Delhi
4	**Dr. R. R. Navalgund**	Director Space Application Centre (ISRO) Ahmedabad
5	**Shri. K. Narayan**	Management Consultant Reliance ADAG, Mumbai
6	**Prof. Samaresh Chatterji**	Dean, Academic Programs DA–IICT, Gandhinagar
7	**Prof. V. P. Sinha**	Professor DA–IICT, Gandhinagar
8	**Prof. Ganesh Devy**	Professor DA–IICT, Gandhinagar
9	**Prof. Ashok Amin**	Professor DA–IICT, Gandhinagar
10	**Shri. P. K. Chopra** Secretary	Executive Registrar DA–IICT, Gandhinagar

Finance Committee

1	**Prof. S. C. Sahasrabudhe** Chairman	Director DA–IICT, Gandhinagar
2	**Shri. K. Narayan**	Management Consultant Reliance ADAG, Mumbai
3	**Shri. Surendra Pipara**	Reliance ADAG, Reliance Centre, Mumbai
4	**Prof. Samaresh Chatterji**	Dean, Academic Programs DA–IICT, Gandhinagar
5	**Shri. P. K. Chopra** Secretary	Executive Registrar DA–IICT, Gandhinagar

Institute Officials

Director
Prof. S. C. Sahasrabudhe

Deans

Academic Programs
Prof. Samaresh Chatterji

Research and Development
Prof. Anish Mathuria

Students
Prof. Manjunath Joshi

Executive Registrar
Shri. P. K. Chopra

Librarian
Dr. T. S. Kumbar

ANNEXURE 2

THESES AND DISSERTATIONS

M.Tech.

Communication Systems

1. Dhoot, Vivek. Radiation analysis of microstrip active (amplifier) and passive (antenna) structures; x, 59 p.; 2010. (Supervisor: Gupta, Sanjeev).
2. Nema, Swati. State space based channel modeling; viii, 71 p.; 2010. (Supervisor: Chakka, Vijaykumar).
3. Panarwala, Riyazahmed A. Broadband spectrum estimation using cascaded integrator comb filter; x, 47 p.; 2010. (Supervisor: Chakka, Vijaykumar).
4. Rathore, Hitesh. Channel estimation in OFDM systems; ix, 55 p.; 2010. (Supervisor: Joshi, Manjunath V.).
5. Shah, Milind. Investigation on multi-band fractal antennas for satellite applications; xiii, 85 p.; 2010. (Supervisor: Gupta, Sanjeev).
6. Shivakrishna, D. Oblique projection operator; vii, 46 p.; 2010. (Supervisor: Chakka, Vijaykumar).
7. Shiyani, Bhavin R. Transmultiplexer design using different filters; x, 55 p.; 2010. (Supervisor: Chakka, Vijaykumar).

Computer Networks

1. Agarwal, Navneet. Ant colony optimization in routing algorithms of mobile ad hoc networks; ix, 61 p.; 2010. (Supervisors: Srivastava, Sanjay and Sunitha, V.).
2. Akhani, Janki. Negotiation for resource allocation on infrastructure as a service cloud; ix, 45 p.; 2010. (Supervisors: Chaudhary, Sanjay and Divakaran, Srikrishnan).
3. Dhumal, Neha. Bidding strategies for dynamic spectrum allocation; vii, 50 p.; 2010. (Supervisor: Srivastava, Sanjay).
4. Kulkarni, Rucha. Robust surface coverage using deterministic grid based deployment in wireless sensor networks; xi, 57 p.; 2010. (Supervisor: Srivastava, Sanjay).
5. Khakhkhar, Sandip. Bidirectional service composition; xii, 53 p.; 2010. (Supervisor: Chaudhary, Sanjay).
6. Nathani, Amit. Resource allocation on infrastructure as a service cloud using policies; ix, 60 p.; 2010. (Supervisors: Chaudhary, Sanjay and Divakaran, Srikrishnan).
7. Rajput, Nitin Singh. Game theory based strategies for cooperation in ad hoc wireless networks; xiv, 65 p.; 2010. (Supervisors: Srivastava, Sanjay and Divakaran, Srikrishnan).
8. Sharma, Nisha. Design of digital accelerometer based seismic sensor node; x, 59 p.; 2010. (Supervisor: Ranjan, Prabhat).

Machine Intelligence

1. Chawla, Charu. Moment based image segmentation; xi, 60 p.; 2010. (Supervisor: Mitra, Suman K.).
2. Kansara, Bena. Eye localization in video: a hybrid approach; xi, 39 p.; 2010. (Supervisor: Mitra, Suman K.).
3. Khatri, Nilay. Depth from Defocus; x; 52 p.; 2010. (Supervisor: Banerjee, Asim)
4. Nahar, Sonam. Disparity estimation by stereo using particle swarm optimization and graph cuts; x, 53 p.; 2010. (Supervisor: Joshi, Manjunath V.).

5. Pandya, Sweta A. Object segmentation in still camera videos; ix, 25 p.; 2010. (Supervisor: Mitra, Suman K.).
6. Phophalia, Ashish. Classification of 3D volume data using finite mixture models; x, 48 p. 2010. (Supervisor: Mitra, Suman K.).
7. Shripat, Abhishek Kumar. Multiresolution fusion of satellite image and super-resolution of hyper-spectral images; x, 46 p.; 2010. (Supervisor: Joshi, Manjunath V.).
8. Gupta, Akchya Kumar. Robust and secure watermarking scheme based on singular values replacement; viii; 52 p.; 2010. (Supervisor: Raval, Mehul S.).

VLSI and Embedded Systems

1. Chasta, Neeraj Kumar. Design of the high speed, high accuracy and low power current comparators; ix, 61 p.; 2010. (Supervisor: Parikh, Chetan).
2. Dwivedi, Varun Kumar. High speed sample and hold circuit design; x, 38 p.; 2010. (Supervisor: Parikh, Chetan).
3. Gandhi, Nikunj. High-performance low-voltage current mirror design; x, 42 p.; 2010. (Supervisor: Parikh, Chetan).
4. Kumar, N. Rakesh. Auto tuning circuit for continuous time filters; x, 36 p.; 2010. (Supervisor: Sen, Subhajit).
5. Mishra, Ashwini Kumar. Design of row decoder for redundant memory cell; xi, 50 p.; 2010. (Supervisor: Nagchoudhuri, Dipankar).
6. Parekh, Devang Tarunkumar. Implementation of high speed serial communication blocks; x, 39 p.; 2010. (Supervisor: Dubey, Rahul).
7. Patel, Amit. Realization of FPGA-based digital controller; ix, 34 p.; 2010. (Supervisor: Dubey, Rahul).
8. Patel, Birenkumar. Transaction based verification of discrete wavelet transform IP core using wishbone transactor; ix, 62 p.; 2010. (Supervisor: Dubey, Rahul).
9. Sandeep, Akula. Test methodology for prediction of analog performance parameters; x, 51 p.; 2010. (Supervisor: Nagchoudhuri, Dipankar).
10. Sheikh, Parveen. High speed, low offset voltage CMOS compurator; 53 p.; 2010 (Supervisor: Parikh, Chetan).
11. Singh, Harsh Verdhan. Adaptive analog line driver using digital tuning; x, 54 p.; 2010. (Supervisor: Sen, Subhajit).
12. Nahar, Pinki. Column decoder for memory redundant cell array; x, 45 p.; 2010. (Supervisor: Nagchoudhuri, Dipankar).

ANNEXURE 3

SPECIAL LECTURES

The Institute regularly invites experts from academic institutions and industry to deliver lectures on cutting edge areas in engineering and technology. The following 15 special lectures were held during the academic year 2009–10.

Voice-based Social Media for Rural India
Mr. Neil Patel, Ph. D. Student, Dept. of Computer Science, Stanford University, Palo Alto, California, 23rd July, 2010.

Mathematical Modelling of Infectious Diseases: Epidemic Models with Treatment
Prof. Mini Ghosh, Assistant Professor, School of Mathematics and Computer Application, Thapar University, Patiala, 7th July, 2010.

Intelligent Visualization in Digital Game Environments
Dr. Arnav Jhala, Assistant Professor, Baskin School of Engineering, University of California, Santa Cruz, 13th May, 2010.

Power-Efficient Fault Tolerant Micro Architecture for Chip Multiprocessors
Prof. Virendra Singh, IISc. Bangalore, 23rd April, 2010.

Software Development: From Instruction to Interaction
Prof. Subhajit Datta, IBM Research, Bangalore, 5th April, 2010.

Data Interoperability and Integration
Prof. N. L. Sarda, Dept. of CSE, IIT Bombay, Mumbai, 31st March, 2010.

Economic Implications of Light-Weight Security Mechanisms
Prof. Kanta Matsuura, University of Tokyo, Japan, 15 March, 2010.

Free/Open Source Software (FOSS) in Education
Dr. Mandar Mitra, ISI, Kolkata, 23rd February, 2010.

Role of Identity in Network and Information Systems
Prof. R. K. Shyamasundar, Sr. Professor, Computer Science, TIFR, Mumbai, 5th February, 2010.

Joy of Algorithms
Prof. C. Pandu Rangan, IIT Madras, Chennai, 29th January, 2010.

Genesis of WiFi and its Applications
Mr. Vic Hayes, TU Delft, former Chairperson of the IEEE 802.11 Standards Workgroup, 25th January, 2010.

Radio Waves and the Universe: From Big Bang to Black Holes
Prof. Govind Swarup, former Director, NCRA, Tata Institute of Fundamental Research, (TIFR), Pune, 20th January, 2010.

Fault Pairs based Dictionary Method for Analog Fault Diagnosis
Prof. Vishnu Prasad, Faculty of Engineering and Technology, Multimedia University, Melaka, Malaysia, 6th January, 2010.

Games and Computation
Prof. R. Ramanujam, Institute of Mathematical Sciences, Chennai, 6th November, 2009.

Understanding and Improving the GNU Compiler Collection
Prof. Uday P. Khedker, Dept. of CSE, IIT Bombay, Mumbai, 2nd September, 2009.

FACULTY LISTING WITH AREAS OF INTEREST (As of January 2011)

Regular Faculty

Name of the Faculty	Areas
Amin, Ashok	Graph algorithms, network reliability, program complexity, models of diagnosable systems
Banerjee, Asim	Pattern recognition, medical imaging, image processing, digital signal processing, speech coding, software engineering, software quality assurance and project management
Bhise, Minal	Semantic web, distributed databases, software system analysis and design
Chatterji, Samaresh	Algebra, discrete mathematics, computer simulation and applications
Chaudhary, Sanjay	Distributed computing, service oriented architecture and ICT applications in agriculture
Das, Manik Lal	Information security, cryptography, system design and analysis
Desai, Binita	Animation, communication design and multimedia
Devy, Ganesh	Comparative literature and cultural studies
Divakaran, Srikrishnan	Design and analysis of algorithms for problems in bioinformatics, machine scheduling and distributed systems
Dubey, Rahul	Design and prototyping of digital systems, factory automation
Dutta, Gautam	Quantum computers, signal processing, image processing, particle physics
Ghodgaonkar, Deepak	RF and microwave engineering, microwave sensors, microwave instrumentation, microwave characterization of composite materials, biomedical applications of microwaves, electromagnetic imaging of complex dielectric bodies and wireless data communications
Ghosh Ranendu	Satellite remote sensing, GIS, satellite communication applications for rural development, sustainable agriculture system
Gupta, Manish K.	Information processing in biology, bio-molecular (DNA, 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/microwave applications
Hiremath, B. N.	Sustainable rural livelihoods, food and livelihood security at household level, participatory approaches, rural development, natural resources and environmental economics, research methodology, e-governance
Jani, Preetida V.	Wireless and Cellular communication and end to end Networking, Security, data/image processing
Joshi, Manjunath V.	Computer vision, image processing, super-resolution, restoration, signal processing, digital communication

Majumder, Prasenjit	Information retrieval, natural language processing, digital libraries
Mathuria, Anish	Computer security
Mazumdar, Madhumita	Social history of science, technology and medicine in India, cultures of communication and media
Mitra, Suman Kumar	Image processing, pattern recognition, fractal, Bayesian network and digital image watermarking
Mondal, Samrat	System security, database system, formal verification
Mulherkar, Jaideep	Mathematical physics, quantum computation and information
Muthu, Rahul	Graph theory and algorithms
Nagchoudhuri, Dipankar	VLSI design, CMOS circuits and technology, biomedical signal processing, chip design
Pandya, Abhinay	Statistical natural language processing, biomedical informatics, machine learning
Pandya, Vishvajit	Material culture, design and communication culture, visual anthropology, rituals and history with specific reference to colonialism
Parikh, Alka	Rural development and related issues like agriculture, poverty, unemployment and wages, rural finance, environment and development, disaster management
Parikh, Chetan D.	Analog and mixed-signal VLSI design & synthesis, semiconductor device simulation/modelling, ICT & rural development
Parikh, Radha	Communication, value education, constructivist approach to teaching & learning, technology in education (e-learning)
Patil, Hemant	Speaker recognition and wavelet signal processing
Pillutla, Laxminarayana	Statistical signal processing, information theory, game theory, non-linear optimization, wireless sensor networks, cognitive radio, cross layer design of wireless networks.
Ranjan, Prabhat	Wireless sensor network, robotics and embedded systems, nuclear fusion, linux operating system
Raut, Manoj Kumar	Combining decision procedures, theorem proving, knowledge representation and reasoning, logic
Raval, Mehul S.	Digital image processing, digital watermarking
Roy, Anil	Fibre optics and optical communication, quantum optics, nanotechnology, semiconductor devices
Sahasrabudhe, S. C.	Communications, signal and image processing and microprocessor applications
Sen, Subhajit	Analog and RF microelectronic circuit design, signal conditioning and data-acquisition for sensor applications, frequency synthesis, low-power circuits for instrumentation and biomedical applications, energy harvesting techniques, non-linear analysis of electronic circuits
Sinha, V. P.	Digital signal and image processing, theory of communication, discrete mathematics and logic, modern fourier theory

Srivastava, Sanjay	Computer networks: protocol modelling, simulation
Suhrud, Tridip	Life and thought of Mahatma Gandhi, 19th century social and literary thought
Sunitha, V.	Algorithms, discrete mathematics, graph theory, parallel & distributed computing, theoretical computer science, interconnection networks
Tiwari, Mukesh	Statistical physics, non-linear dynamics, quantum transport, surface science
Venkataraman, Hrishikesh	Baseband and cross-layer design for next generation wireless system architecture
Vijaykumar, C.	Digital signal processing, estimation theory, wireless communications, speech processing
Visvanathan, Shiv	Sociology of science and technology, violence and globalisation, corruption, sociology of disasters, culture and communication, futures
Zaveri, Mazad	Cortex-inspired computational models: artificial and spiking neural networks, associative memories, intelligent signal-processing, bayesian inference, hierarchical & modular models of the mammalian cortex. neuromorphic hardware - circuits and architectures: digital & mixed-signal VLSI, nano-architectures, hybrid nanotechnology – CMOS/L, architecture performance/price assessment, hardware design-space exploration.

Visiting Faculty

| Name of the Faculty	Areas
Jat, Pokhar Mal	Databases, software design and semantic web
Sarkar, Aditi Nath	Literature, religion, cultural history; south asian civilization studies
Sethuraman, S.	Systems theory, cognitive ergonomics, game design, interaction design, design for the elderly.
Sharan, Girja	Modeling of agricultural and biological systems, technology for arid areas, earth-tube-heat-exchanger, greenhouse, dew harvest condensers, radiation-cooling.
Sumathi, P.	Control and signal processing techniques, adaptive identification algorithms, phase locking schemes, ultrasonic signal processing and instrumentation,
Tatu, Aditya	Applications of differential geometry (shapes, curve evolutions etc.) image features, continuous optimization

Adjunct Faculty

The following faculty members were associated with the teaching work during the academic year 2009–2010.

Name of the Faculty	Areas
Banerjee, Nandini	Economics, management, organizational behavior
Bhargava, Naval K.	Marketing, finance
Dasgupta, Arup Ranjan	Remote sensing, GIS
Doctor, Khushru F.	Information systems technology, project management
Dumra, Vinod S.	Business management
Gandhi, Nandini	Design
Gopalan, Ravi	ICT enabled rural services, development using ICT
Jha, Sunita	Biochemistry & biotechnology
Joshi, Pranav P.	Project management
Krishnamurthi, G.	Management and agribusiness
Krishnamurthi, Sujatha	Management and agribusiness
Laliwala, Zakir	Distributed computing
Misra, H. K.	Systems approaches to sustainable development
Pandey, Ajay	Business finance
Patel, Madhukant	Remote sensing, GIS
Raje, Nitin	Image processing, GIS
Raval, Nikhil	Strategy and finance
Shah, Chintan	Object–oriented analysis & design
Siganporia, Harmony	Indian writing in English, technical communication
Suchak, Nilesh	Business finance
Thakker, Rajesh	Analog CMOS IC design
Tripathy, Subhransu	Governance and non–farm information systems
Trivedi, Jigish	Database management and administration
Yagnik, Jignasu	Strategic management, problem solving techniques
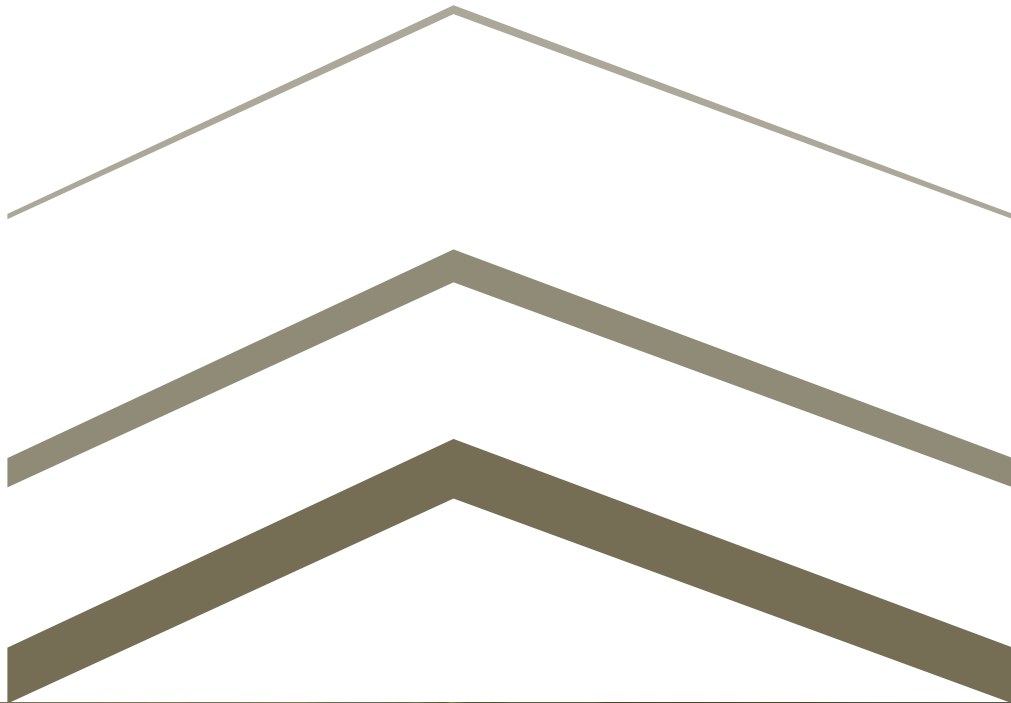
Annual Report Committee
Prof. Samaresh Chatterji |Shri. P. K. Chopra | Prof. B. N. Hiremath | Prof. M. V. Joshi | Dr. T. S. Kumbar | Prof. Anish Mathuria

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