



# ANNUAL REPORT 2018 2019

August 2018 – July 2019



**Dhirubhai Ambani**  
**Institute of Information and Communication Technology**

Near Indroda Circle, Gandhinagar, Gujarat, India 382 007.  
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**Shri. Dhirubhai Hirachand Ambani**

(28th December, 1932 – 6th July, 2002)

Founder Chairman, Reliance Group  
Founder Chairman, DA-IICT





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## Board of Governors



### **President**

Shri Anil D. Ambani Chairman, Reliance ADA Group, Mumbai

### **Members**

Prof. R. Natarajan	Former Chairman, All India Council for Technical Education and former Director, Indian Institute of Technology Madras, Chennai
Prof. B. S. Sonde	Former Professor, Indian Institute of Science, Bengaluru and former Vice Chancellor, Goa University
Prof. D. Narasimha Reddy	Director, CR Rao Advanced Institute of Mathematics, Statistics and Computer Science, Hyderabad
Prof. K.S. Dasgupta	Director, DA-IICT, Gandhinagar
Smt. Anju Sharma	Principal Secretary, Department of Higher and Technical Education, Government of Gujarat, Gandhinagar
Shri Hareet Shukla	Secretary, Department of Science and Technology, Government of Gujarat, Gandhinagar
Shri Suresh Rangachar	Dhirubhai Ambani Institute of Information and Communication Technology Society, Mumbai
Shri Dharmendra Bhandari	Dhirubhai Ambani Institute of Information and Communication Technology Society, Mumbai
Shri Manikantan Iyer	Reliance Communications Limited, Mumbai
Shri Punit Garg	Reliance Communications Limited, Mumbai
Shri N. K. Mangla	Reliance Communications Limited, Mumbai
Shri Gurdeep Singh	Reliance Communications Limited, Mumbai
Shri Shrenik Vaishnav	Reliance Communications Limited, Mumbai
Prof. Suman K Mitra	Dean (Academic Programs), DA-IICT, Gandhinagar
Prof. Sanjeev Gupta	Dean (Research & Development), DA-IICT, Gandhinagar

### **Secretary**

Shri Soman Nair Executive Registrar, DA-IICT, Gandhinagar



## Director's Page



I am pleased to present, in the next pages, the report on our performance and achievements during the academic year 2018-19. We have significant achievements to be proud of. The faculty began their work on developing curricula to launch the M.Sc (Data Science) and B.Tech (Mathematics and Computing) programs from the academic year 2020-21. The growing reputation of faculty in providing innovative and practical solutions to technology issues has been receiving steady attention of the State and National Government Agencies. This is resulting in a surge in sponsorship of research projects. There has been a steady increase in the number of Industry Recruiters visiting the campus to recruit our students which authenticates that our graduates are well accepted by the Industry. The majority of the campus infrastructure development activities initiated in the previous years were completed during the reporting year.

The faculty, staff and students work tirelessly to ensure that the Institute enhances its academic and research vigor and I am thankful to them. I am grateful to the members of the Governing Body and Reliance ADA Group for their guidance in managing the Institute. I would like to record our grateful appreciation to the State and Central Governments, Alumni and Recruiters for their unstinted support.

K.S.Dasgupta  
Director



## About the Institute

### THE INSTITUTE

Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), Gandhinagar was founded in 2001 by the renowned visionary Industrialist, Shri Dhirubhai Hirachand Ambani, with a vision 'to help build a knowledge-led society founded on intellectual competitiveness for global leadership.' DA-IICT is managed by a Board of Governors chaired by Shri Anil Ambani, Chairman, Reliance ADA Group with visionaries and leaders from academia, government and industry.

DA-IICT is established as a Society under the Societies Registration Act, 1860 and Bombay Public Trust Act, 1950. An Act of the Gujarat State Legislature in 2003 conferred upon DA-IICT the status of a University. The University Grants Commission has included DA-IICT in the list of Universities maintained under Section 2(f) of the UGC Act, 1956. In 2009, DA-IICT is a member of the Association of Indian Universities (AIU).

DA-IICT is envisioned to be a leader in higher learning and research in Information and Communication Technology and allied domains. To support this,

right from the beginning, the Institute has attracted the best faculty with Doctorate from prominent institutions across the world having exceptional research credentials.

DA-IICT offers two undergraduate and six post graduate programs including a doctoral program. The undergraduate programs are B.Tech in Information and Communication Technology (ICT) and B.Tech (Hons.) in ICT with Computational Science as minor. The postgraduate programs are M.Tech (Information and Communication Technology), M.Tech (Computer Science) with specializations in Information Security and Data Sciences, M.Tech (Electronics and Communication Engineering) with specialization in Wireless Communication and Embedded Systems, M.Sc (Information Technology), M.Des (Communication Design) and Doctoral Program in Technology and Humanities. Launched from the academic year 2019-20, M.Tech (Computer Science) and M.Tech (Electronics and Communication Engineering) are jointly conducted with the Indian Institute of Technology, Jammu and C.R. Rao Advanced Institute of Mathematics, Statistics and Computer Science, Hyderabad respectively.





It has been planned to design and launch an M.Sc Program in Data Science and a B.Tech Program in Mathematics and Computing from the Academic Year 2020-21.

The Alumni of the Institute consist of over 5500 ICT engineers, design professionals, agriculture and rural development professionals and doctoral scholars. They have carved a name for themselves in technical, managerial and research domains in major Indian and International technology corporations and institutions. They are spread across the world and have achieved numerous feats as technologists, managers, researchers and entrepreneurs.

DA-IICT designs and offer continuing education programs to upgrade the skills of researchers, academicians and professionals in industries, public and government organizations. These programs are knowledge sharing and they are in the forms of hands on training.

The Institute houses a Government of India funded Incubation Center to promote innovation and entrepreneurship culture among the DA-IICT

Community. The Government of Gujarat has been supporting and funding start-ups under the Incubation Center.

DA-IICT has collaborations with industry, teaching and research institutions in India and abroad for faculty exchange, joint research, and guidance of masters, doctoral and post-doctoral scholars.

DA-IICT is spread over 50 acres of land in Gandhinagar, Capital City of Gujarat. The campus is carefully planned and designed. The full green coverage on the campus with trees, lawns and bushes bearing exotic flowers surrounding the buildings and pathways instills environment awareness among students and enrich their learning. The landscape was planned and developed in a manner that the rainwater seeps into and recharges the campus wells. The recycled water is used to irrigate campus garden and lawns. The campus is also abode for various species of birds and many rare birds are spotted on the campus.



## Academic Programs

The Institute offers eight teaching programs -- two undergraduate and six post graduate programs including a doctoral program. The feature of the academic programs are that they are interdisciplinary, have an effective combination of core and elective courses in ICT, basic sciences, humanities, arts, design, social sciences, management and project-based flexible learning and internships in rural, industrial and research environments. In the case of M.Tech Programs, there are specializations and dissertation modules. The curricula of the programs

are periodically reviewed by the chosen Committees with external experts from academia and industry and vetted by the Board of Studies and finally approved by the Academic Council. The Review Committees take feedback from experts from academia, industry, alumni and employers on curriculum revision or induction to ensure that the curriculum is update and will effectively prepare the students to abreast with the latest technological and research skills required by their employers. The details on the academic programs offered are given in Table 1.

**Table 1: Academic Programs**

Sr. No.	Programs	Commencement	Duration (Years)	Annual Intake*
1	B.Tech (ICT)	2001	4	288
2	B.Tech (Honours) in ICT with minor in Computational Science	2013	4	72
3	M.Tech (ICT)	2002	2	64
4	M.Tech (CSE) with specialization in Information Security and M.Tech (CSE) with specialization in Data Science	2019	2	40
5	M.Tech (E&CE) with specialization in Wireless Communication and Embedded Systems	2019	2	18
6	M.Sc (Information Technology)	2002	2	120
7	M.Des (Communication Design)	2004	2	20
8	PhD	2002	3-5	10-20

\*Inclusive of NRI/Foreign Students. Exclusive of supernumerary seats filled in by the Admission Committee for Professional Courses, Government of Gujarat.

### ADMISSIONS FOR 2019-20 BATCHES

The preparations for 2019-20 admissions began in March 2019 with the release of advertisements in regional/national dailies covering the entire country. The admissions were also announced at the web site of the Institute and by means of posters, brochures and social networks. The process of online filling in applications was open from 12th April 2019. The

admissions and counseling were carried out by using an online system.

The admissions to 50% seats of the B.Tech Programs were carried out by the Admission Committee for Professional Courses (ACPC), Government of Gujarat and the other 50% were managed by the Institute. The Indian Institute of Technology, Jammu, carried



out the admissions to the M.Tech (CS) Program with specializations in Information Security and Data Sciences. The Institute handled the admissions to all other postgraduate programs.

## Undergraduate Programs

### B.Tech (ICT) and B.Tech (ICT) Honours with Computational Science as Minor

The B.Tech programs have 360 seats, including 54 seats for Non-Resident Indians, Foreign Nationals and Persons of Indian Origin. Out of them, 180 seats were filled in by ACPC following their eligibility

criteria, procedures and rules on admissions. The admissions to the other 126 seats were filled in by the Institute based on the All India Rank of Joint Entrance Examination Main 2019 (JEE Main 2019). The admissions to the 54 seats offered to Non-Resident Indians, Foreign Nationals and Persons of Indian Origin were carried out on the basis of the Scholastic Aptitude Test (SAT) or JEE Main 2019 score. The Institute follows the guidelines for admission of reserved category students. The starting and closing JEE merit ranks of the students admitted are given in **Table 2**.

**Table 2: JEE Merit Ranks of Students**

Rank	Category	B.Tech (ICT)	B.Tech (Honours) (CS)
Best JEE Main Rank	All India (Gen)	2416	3057
Lowest JEE Main Rank	All India (Gen)	12372	7936

## PG Admissions

**M.Tech (ICT):** For 2019-20 batch admission, the Institute reintroduced four specializations, namely, Communication and Signal Processing, Machine Learning, Software Systems and VLSI and Embedded Systems. The admissions to the program were based on valid Graduate Aptitude Test in Engineering (GATE) score and in selected cases by an additional test and interview conducted by the Institute. Sixty four students were admitted to the program.

**M. Tech (EC):** CR Rao Advanced Institute of Mathematics, Statistics and Computer Science (CR Rao AIMSCS), Hyderabad and DA-IICT have jointly designed the M. Tech (EC) program with specialization in Wireless Communication and Embedded Systems. The students were admitted based on the GATE score and in some cases, by an additional test and interview conducted by DA-IICT. The students study their first two semesters at

DA-IICT and they have an option to pursue their third and the fourth semester studies either at DA-IICT or at CR Rao AIMSCS based on their research interest. In the academic year 2019-20, twenty students were offered admission.

**M. Tech (CS&E):** Indian Institute of Technology, Jammu (IIT Jammu) and DA-ICT with the support of RC Bose Center, Indian Statistical Institute, Kolkata have designed the M. Tech (Computer Science & Engineering) program with Specialization in (i) Data Sciences and (ii) Information Security to address the mounting need of skilled professionals in these areas. The students are admitted by IIT Jammu following their admission procedures. The students study their first semester at IIT Jammu and the second semester at DA-IICT. They can choose their third and fourth semester studies at any of the three Institutes depending on the nature and need of their dissertation or project. In the academic year

**Table 3: Students Admitted to PG Programs**

Programs	Application Received	Admission Offered
M.Tech (ICT)	422	70
M.Tech (EC)	25	20
M.Tech (CSE)*		26
M.Sc (IT)	624	120
M.Des (CD)	34	22
PhD	103	12

\* Admission by IIT Jammu

2019-20, twenty six students were admitted to the program -- 16 for specialization in Data Sciences and 10 for Information Security. IIT Jammu confers the Degree to the successful students.

**M.Sc (IT):** The students were selected through an entrance test conducted by the Institute at selected centers in the country. The final merit list was prepared on the basis of the aggregate score in the test. One hundred and twenty students were admitted.

**M.Des (Communication):** The students admitted to the program were shortlisted through a Design Aptitude Test (DAT) conducted by the Institute. The final selection was based on the combined scores attained in DAT, interview and the Statement of Purpose (SOP) submitted online along with the admission application. The candidates with a valid CEED score were directly called for the interview. Twenty five applicants were called for entrance test/interview, 22 were offered admission and 13 have joined the program.

**PhD:** The admission to the program was through DA-IICT entrance test/CPI obtained in M.Tech Degree awarded by DA-IICT, CSIR/UGC-NET qualification,

or GATE score. Out of 68 applicants, 36 candidates were called for interview on clearing the admission test. Twelve candidates were offered admission and 7 have joined the program.

**Table 3** shows the number of students admitted at the end of the admission process.

## ORIENTATION

The orientation for the undergraduate students was held from 31st July 2019 to 3rd August 2019 and for post graduate students from 24th to 27th July 2019. The program is designed to provide an overview of the whole realm of Institute life, from academics to extra-curricular and social activities to the newly admitted students and integrate them into the Institute community. The sessions conducted covered genesis and mission of the Institute, academic policies and procedures, student activities, and other aspects of campus life. The senior student volunteers conducted special sessions on campus and hostel life. One of the sessions during the orientation was held for parents, and the parents met faculty, staff and senior students. The orientation acquainted the students and parents the course structure, evaluation system, grading, academic regulations, campus and infrastructure facilities.



The uniqueness of the undergraduate orientation program was that a boot camp was organized with a variety of activities to prepare the students for the transition to academic life at the Institute.

## **FINANCIAL SUPPORT**

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

### **Reliance Merit Scholarships**

Reliance ADA Group, as part of their Corporate Social Responsibility, has instituted ten merit scholarships in an academic year for students of B.Tech (ICT) program. The scholarship is equal to the full tuition fee for the duration in which the scholarship is awarded. During the academic year 2018-19, 18 B.Tech students of all batches together have received the Scholarship.

### **DA-IICT Merit Scholarship**

The Merit Scholarships are awarded to the top five students admitted to the B.Tech program having an All India Rank not exceeding 5000 in the JEE Main Examination. During the academic year 2018-19, in autumn semester 14 and in winter semester 15 students were awarded the Merit Scholarships.

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

The Merit-Cum-Means Scholarships are awarded to five students in each semester based on their academic performance and whose parent(s)/guardian (s) annual income is up to Rs. 3.00 lakh. Twenty students have received the scholarship during the academic year 2018-19.

### **Assistantships**

The Institute offers full-time teaching assistantships with monthly fellowship/scholarship to PhD Scholars and M.Tech (ICT) students. The eligible B.Tech (ICT) students are also offered half-time teaching assistantships in their final year studies. During the

reporting year, 15 PhD Scholars, 60 M.Tech and 22 B.Tech students received assistantships.

### **TCS Research Fellowship**

The TCS Foundation engaged in promoting and funding projects and/or programs, relating to Corporate Social Responsibility (CSR), has instituted Research Scholar Program at the Institute to promote scientific research in the area of technology. This prestigious program provides attractive doctoral fellowships and contingency grants to full-time students pursuing PhD programs in areas of Computer Engineering, Computer Science, Information Systems, Information Technology and Software Engineering. Over and above fellowship, the Scholars are eligible to receive support for paper presentation in one International refereed conference held outside India, and two National/International refereed conferences held in India, during the Scholar's tenure.

Ms. Jainisha Sankhavara and Mr. Prashant Mansukhbhai Domadiya, 2015-16 batch PhD Scholars, continued to be the recipients of the Fellowship in the academic year 2018-19.

### **TCS Student Award**

DA-IICT is one of the Institutions selected by TCS for the 'TCS-100 Best' high-ranking engineering institute student award scheme. The 'TCS 100 Best' is to enhance student's attention towards academics through healthy competition.

### **Chief Minister Scholarship Scheme and Mukhyamantri Yuva Swavlamban Yojana (MYSY), Government of Gujarat**

The Government of Gujarat has designated DA-IICT as one of the Institutions to guide the undergraduate students in preparation and submission of applications for the Chief Minister Scholarship and MYSY. The Registrar's Office guides and assist students from DA-IICT as well as students from other Institutions to apply for the 'Mukhyamantri Yuva

Swavlamban Yojana (MYSY).’ The Scheme provides financial help to bright and needy undergraduate students whose parents’ annual income is up to Rs.6.00 lakh. Three hundred twenty six B.Tech students have received the scholarship during the reporting year.

## THESES

### Master’s Theses

The M.Tech (ICT) curriculum includes Software Systems, Machine Learning, VLSI and Embedded Systems and Communication and Signal Processing specialization tracks. After their second semester studies, the students pursue two semesters of research under the guidance of a faculty advisor and submit a master’s thesis in order to obtain the degree specializing in the respective track. The students of M.Sc (IT), M.Sc (ICT-ARD) and M.Des (CD) programs work full time on projects during their fourth semester at DA-IICT or at leading organizations. The list of theses and project reports completed during the year is given in **Annexure 2**.

## INSTITUTIONAL COLLABORATION AND STUDENT EXCHANGE PROGRAMS

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

- **Indian Navy:** To admit eligible candidates sponsored by the Navy for M Tech and other advanced courses including PhD, joint research and development and training.
- **Space Application Centre, Indian Space Research Organisation:** To carry out joint activities which will include research projects; doctoral studies of SAC officers at DA-IICT, the internship of PG students at SAC, training of SAC officials, visit of faculty to SAC and SAC scientists to DA-IICT for research and academic pursuits, joint workshops and conferences.
- **Reliance Communications Limited:** To institute the Research Chair to lead research and education in Computational Science and setting up of a Computational Science Laboratory at DA-IICT.
- **Tata Consultancy Services:** To nominate suitable full-time PhD candidates of DA-IICT for the TCS Research Scholar Program.
- **eiTRA-eInfochips Institute of Training Research and Academics Limited, Ahmedabad:** To train and upgrade the skills of eiTRA employees, conduct lectures for academic programs offered by Ganpat University, provide consultancy and guidance for technological research and project execution, facilitate DA-IICT students to carry out their internship and project work at eiTRA-eInfochips and jointly offer continuing education programs.
- **Ericsson India Private Limited:** To impart training to the B.Tech students who have completed their sixth semester of studies at DA-IICT and consider employment of the certified students with Ericsson India.
- **Ramakrishna Sarada Sevashram, Bastar:** To sponsor eligible candidates for PhD studies at DA-IICT, develop and support joint research programs and conduct specialized courses.
- **University of Antwerp, Belgium:** To exchange faculty and students and for scientific co-operation.
- **Indian Institute of Technology, Gandhinagar:** To collaborate on teaching and research and exchange of scientific and academic personnel.
- **International Crops Research Institute for the Semi-Arid Tropics, Hyderabad:** To participate in teaching, training and research; explore external funding opportunities for research, exchange and host students and scholars for research and degree programmes by each other and exchange scientific materials and publications.
- **Institut Supérieur D'Electronique De Paris, France:** For exchange of faculty, students and joint research.



- **University of Dayton, USA:** To develop academic exchange and co-operation in teaching and research for the advancement and dissemination of learning.
- **University of Evora (Universidade de Evora), Portugal:** For academic exchange, collaboration in teaching, research and exchange of scientific materials and publications, for advancement and dissemination of learning. Under the provisions of the MoU, DA-IICT is one of the Asian University Partners with the University of Evora in the Erasmus Mundus Fellowship Program of the European Commission.
- **University of Hildesheim (Stiftung Universität Hildesheim), Hildesheim, Germany:** For academic and research collaboration, exchange of faculty, staff and students and exchange of academic information, scholarly information, materials and publications.
- **University of Swaziland (UoS), Swaziland:** For academic exchange, research and faculty development of UoS for the advancement and dissemination of learning.
- **Indian Statistical Institute:** For the visit of faculty to participate in joint teaching, research, and conferences; visit of students to each other Institutes for short term courses, internships or mini projects; prepare, as necessary, additional working programs detailing specific norms and contents of co-operation and to exchange scientific materials and publications.
- **INFLIBNET Centre, Inter-University Centre of the University Grants Commission:** To participate in the digitization of theses and dissertations and building-up of a digital repository and to promote, share and host DA-IICT's electronic theses and dissertations in 'Shodhganga.'
- **Entrepreneurial Development Institute of India:** To collaborate in mutually selected projects with a view to share expertise for tackling problems relating to ICT, entrepreneurship, socio-economic development etc., involving the exchange of personnel, organization of joint conferences, teaching and training programs.
- **Springer Science+Business Media Singapore Pte Ltd :** To publish jointly books and individual titles authored by faculty, researchers and doctoral scholars of DA-IICT following the Springer's norms of copyrights and editing and market them worldwide through Springer's network.
- **ICICI Bank:** To participate at the ICICI Trinity Program. The Program encourages and promotes students' talent to bring forth new ideas and innovations which can be applied in the banking/finance industry and help in their commercialization. The Program supports final year UG/PG students of five students team. In the case of PhD Scholars, single Scholar can seek support.
- **Bennett University, Noida:** To collaborate with Leadingindia.ai, one of the largest nationwide initiatives on skilling and research in Deep Learning and Artificial Intelligence Technologies. This project has the potential to change the landscape of Artificial Intelligence research in India.
- **Indian Institute of Technology Jammu, Jammu:** For academic and research collaboration, particularly, to design and offer teaching programs leading to Degrees, guide students on internships, thesis and jointly engage in research, organize conferences, workshops, seminars and other dissemination activities and exchange of faculty, staff and students.
- **Universiti Teknologi Mara, Malaysia:** To jointly engage in research, exchange of students for periods of study and/or research, joint guidance of students on projects and theses, exchange of faculty and staff and organize joint seminars, conferences and meetings on research issues.



## Continuing Education Program

DA-IICT designs and offers continuing education programs (CEP) focussing in the areas of Information and Communication Technology to professionals, faculty and researchers in Colleges and Universities. Over the past years, several programs have been designed and conducted for IT Companies, Indian Air Force, Indian Navy, INS Valsura, Space Application Centre and Food & Agriculture Organization of the United Nations.

In June 2018, the Center for Entrepreneurship Development, Department of Industries and Mines, Government of Gujarat selected DA-IICT as an 'Anchor Institute' in the specialization area of Information and Communication Technology. The objective of the Anchor Institute Program (AIP) is to achieve the ultimate goal of making students of Gujarat 'industry

ready' through well-trained faculty members of Gujarat based Engineering Colleges. The program is of five year duration. The following Engineering Colleges and University have been selected as 'Nodal Institutes' to partner in the program:

1. Government Engineering College, Modasa
2. Government Engineering College, Bhavnagar
3. Chandubhai S. Patel Institute of Technology, Changa
4. Sarvajanik College of Engineering and Technology, Surat
5. Marwadi University, Rajkot

During the reporting year, the Institute has trained 138 faculty members of Engineering Colleges in Gujarat in industry relevant skills under the program.





The following training programs were conducted:

**Table 4: Training Programs**

Programme	Sponsor/ Coordinator	Period	No. of Participants
Service Oriented Architecture (SOA) with Cloud Technology	AIP	Nov 19 to 23, 2018	9
VLSI Front end Design Flow using Cadence Tools	AIP	Nov 19 to 23, 2018	16
Analysis and Design of Algorithm	AIP	Nov 26 to 30, 2018	12
Digital Signal Processing	AIP	Nov 26 to 30, 2018	7
A practical approach to learn Computer Networks	AIP	Dec 3 to 7, 2018	25
Selected Topics in Operating Systems	AIP	Dec 3 to 7, 2018	8
Device Modeling and Circuit Simulation for Integrated Circuit Designs	AIP	Dec 10 to 14, 2018	6
Selected Topics in Operating Systems	AIP	May 13 to 17, 2019	8
Digital and Analog Communication Systems	AIP	May 13 to 17, 2019	8
Image Processing using VLSI Architectures	AIP	May 20 to 24, 2019	5
Multicore Processor Architecture & Parallel Programming	AIP	May 20 to 24, 2019	7
Data Structures	AIP	May 27 to 31, 2019	8
Innovations in teaching Software Engineering & Programming Courses	AIP	June 3 to 7, 2019	6
Advanced .NET and C#	AIP	June 10 to 14, 2019	5
Real-time and Embedded Systems	AIP	June 10 to 14, 2019	8
Analytics in Agriculture	World Bank, ICAR	June 10, 2019 to July 19, 2019	35

### **Analytics in Agriculture**

A six week certification course on Analytics in Agriculture was conducted in collaboration with Amnex Infotechnologies, Ahmedabad for UG students of Junagadh Agriculture University from June 10, 2019 to July 19, 2019. The course was supported under the National Agricultural Higher Education Project - Institutional Development Plan (IDP) for Junagadh Agriculture University (JAU) funded by World Bank through Indian Council of Agricultural Research.

A total of 35 students, 21 from the College of Agriculture and 14 from College of Agricultural Engineering & Technology participated in the course. The course content was divided into two modules – two weeks

refresher module followed by four weeks domain module. In each module three topics were covered and they were Fundamentals of Analytics, Python Programming and Linear Algebra in the first module and Crop Inventory and Condition Assessment, Soil and Weather in the second module. In the last week, the participants were assigned a mini project on the topics of their interest.

At the end of the course, Amnex Infotechnologies made a placement drive for the participants. Subsequently, 5 students each were selected for placement and internship. Four of them have joined the Company in August 2019 and another four have joined for internship from January 2020.

## Placements & Internships

### PLACEMENTS

DA-IICT has been one of the most preferred Institutes by Companies looking to add bright young talent to their workforce. A good number of students have been recruited with attractive packages by leading Companies like Microsoft, Amazon, Zomato, Goldman Sachs, LinkedIn, Sprinklr, Flock, OYO and Phillips. The 2018-19 placement season saw recruiters from various domains of industries offering job profiles like Software Engineer, R&D Engineer, Business Technology Analyst, Data Scientist, Site Reliability Engineer, ASIC Design Engineer and Business Intelligence Consultants. More than 150 Companies participated in campus placement for the batch graduating in 2018-19. The Companies

visited DA-IICT and offered summer internships to the pre-final year students through the campus placement process include Endurance International Group, Verse Innovation Private Limited (Dailyhunt), Media.net, Morgan Stanley, OpsHub Technologies Pvt. Ltd. and MAQ Software. Apart from the regular placement activities, the Placement Cell initiated the process of tying up a group of current students with Alumni of the Institute to mentor and prepare them for the campus placement process. The Placement Cell also started with assessments and interview preparation for pre-final year students to enable them to get internships and final job offers in the companies that participate in the campus placement.

**Table 5: Placement Status**

Placement 2018-19	B.Tech	M.Tech	M.Sc(IT)	M.Sc(ICT)ARD	M.Des(CD)
Students opting for campus placement	197	54	90	03	02
Students opting out of campus placement	77	7	00	00	07
Total	274	61	90	03	09

Details	B.Tech	M.Tech	M.Sc(IT)	M.Sc(ICT)ARD	M.Des(CD)
Total Placed	197	50	65	01	02

The average annual salary package was Rs. 10.16 lakh. The highest salary package touched Rs. 39.30 lakh per annum.

### RURAL INTERNSHIPS

The B.Tech 2017-18 Batch comprising 320 students, were placed in 31 Non-Governmental Organizations located in 10 states for Rural Internship. The Internship period was from 01 to 28 December, 2018. They were involved in activities such as conducting

campus on health awareness, education for the girl child, harmful effects of tobacco, surveys on women's health, occupations, wages and incomes of villagers, their hardships, and so on. Some of the outcomes of these activities included possible technological solutions, namely conversion of paper-based records to digital using platforms such as MS Office Suite and creating mobile apps. The students made group-wise poster presentations that were evaluated.



Non-Governmental Organisations hosted students for Rural Internship	
1	Ajeet Rural Development Foundation
2	Akshaya Patra
3	Apna Ghar Ashram
4	Aryasamaj, Visavadar
5	Blind People's Association
6	Bolbala Charitable trust
7	Educare India
8	ESI Sughad
9	GKSM Trust, Kamrej
10	GKSM Trust, Vyara
11	Gramin Sewa Ashram, Himachal Pradesh
12	HiFEED, Dehradun
13	Incredible Himachal Pradesh
14	Ishwar Gram Vikas Trust, Patan
15	J.V Naria, Jamnagar
16	Kasturba Sevashram
17	Parvatiya Jan Kalyan Sansthan
18	People's Welfare Society, Junagadh
19	PNR Society
20	Pratibha Foundation
21	Rajasthan Mahila Kalyan Mandal Sanstha, Ajmer
22	Seven Sisters Development Assistance (SeSTA)
23	Shiv Shiksha Samita Ranoli
24	Shree Mateshwari Vikas Seva Samiti
25	SUTRA
26	Tagore Society for Rural Development, West Bengal
27	Tara Sansthan, Udaipur
28	UETS, AP
29	Vanvasi Kalyan Ashram, Ahmedabad
30	VRTI, Bhavnagar
31	Yuva Unstoppable

## RESEARCH/ INDUSTRIAL INTERNSHIPS

After the completion of foundation courses, the B.Tech students go through a 6-8 weeks Industrial or Research Internship. They have a choice of taking an industrial internship or a research internship depending on their career goals. This internship is scheduled in the summer vacation falling after the sixth semester. In the final semester, the students take up a Project titled as B.Tech Project (BTP) in which they demonstrate their ability to utilize the concepts and skills they have learnt during their studies at the Institute and their creative and design abilities. The students may take a split BTP starting in seventh semester and concluding in the eighth semester.

The students took internships across Industry, Research and Development Laboratories and Institutions including DA-IICT.

On completion of internships, the students made their presentations and it was observed that through research and industrial internships, they could get excellent exposure to research and development and/or industrial applications of broad areas of ICT.

### Organisations hosted students for Summer Internships - (off-campus through Placement Section)

Sr. No.	Name of the organizations/ Institution	No. of students
1	Amazon Development Center India Pvt. Ltd	12
2	Dailyhunt (Verse Innovation Pvt. Ltd)	3
3	Deutsche Bank	11
4	Endurance International Group	1
5	Fintech Global Pvt. Ltd	4
6	Goldman Sachs	2
7	Kristal.ai	2
8	MAQ Software Pvt. Ltd	9
9	Microsoft India Pvt. Ltd	4
10	Morgan Stanley Advantage Service Pvt. Ltd	5
11	Multi Commodity of India Limited	3
12	OpsHub Technologies Pvt. Ltd	6
13	Pivoting Softwares Pvt. Ltd (Griddle)	3
14	Sprinklr India Pvt. Ltd	14
15	Syntax Studio	3
16	VISA	1





### Organisations hosted students for Industrial Internships -

Sr. No.	Name of the Organization	No. of Students
1	Almashines Technologies Pvt. Ltd	1
2	Amadeus Labs	6
3	Amazon Development Center India Pvt. Ltd.	21
4	ANI Technologies (Ola Cabs)	2
5	APTTUS	1
6	Arm Embedded Technologies Ltd	4
7	AssetTrackr Pvt. Ltd	3
8	Cadence Design Systems	1
9	Capillary Technologies	4
10	Clarisights	3
11	Clues Network Pvt. Ltd.	5
12	COVIAM Technology & Services Pvt Ltd	7
13	Delhivery Pvt. Ltd	3
14	Diligencevault	1
15	Dolcera	1
16	Ecosmob Technologies Pvt. Ltd	4
17	eKutir	1
18	EmpowerED	3
19	Emxcel Travel Solutions Pvt. Ltd	13
20	Endurance International Group	1
21	Evolutionary Systems Pvt. Ltd	2
22	FactSet System India Pvt. Ltd	8
23	FeasOpt.AI	2
24	Fintech Global Center (ADSOM GlobalTech)	8
25	Fractal Analytics	3
26	Futures First Info Services Pvt. Ltd	4
27	GE Digital	3
28	Goldman Sachs	11
29	Handzap Software Pvt. Ltd	1
30	Hansa Cequity	4
31	Indusa Infotech Services Pvt. Ltd	2
32	InFoCusp Innovations Pvt. Ltd	2
33	InMobi Technologies Pvt Ltd	1
34	Innovaccer Analytics Pvt. Ltd	1
35	Intello Labs Pvt. Ltd	5
36	Interviewbit Software Services LLP	1
37	Juniper Networks India Pvt. Ltd	8
38	Kristal.ai (O2O Software services Pvt. Ltd)	3

39	Kuliza Technologies Pvt. Ltd	4
40	MAQ Software	11
41	Microsoft	2
42	Mindarray Systems Pvt. Ltd	3
43	MindsArray Technologies Pvt. Ltd	4
44	Morgan Stanley Advantage Services Pvt. Ltd	10
45	Nagarro Software Pvt. Ltd	6
46	Namekart Pvt. Ltd	1
47	OpenXcell Technolabs Pvt. Ltd	2
48	OpsHub Technologies Pvt. Ltd	11
49	Pivoting Softwares Pvt. Ltd (Gridle)	2
50	Playpower Labs	2
51	Plexus Professionals Network Pvt. Ltd (PlexusMD)	3
52	PoshaQ	2
53	Postdot Technologies Pvt. Ltd	6
54	Promact Infotech Pvt. Ltd	4
55	PropTiger	11
56	Qualcomm (Only for women)	3
57	Rapidops Solutions Pvt. Ltd	4
58	Raychem RPG	1
59	Rishabh Software	3
60	rtCamp Solution Pvt. Ltd.	3
61	Saba Software India Pvt. Ltd	3
62	Samsung R&D Institute India, Noida	13
63	Searce Logistics LLP	5
64	Social Pilot Solutions LLP	4
65	SoluLab Inc	6
66	Sophos Technologies Pvt. Ltd	4
67	Sprinklr India Pvt. Ltd	30
68	Think & Learn Pvt. Ltd	1
69	Treebo Hotels	3
70	Paix Technology Pvt. Ltd	4
71	Vedantu Innovations Pvt. Ltd	2
72	Vehant Technologies Pvt. Ltd	2
73	Verse Innovation Pvt. Ltd	6
74	VISA (For Women)	1
75	Volansys Technologies Pvt. Ltd	1
76	Vuclip Inc	8
77	Whatfix	2
78	Wishbook	1
79	Xilinx India Technology Services Pvt. Ltd	2
80	Zapr Media Labs	4
81	Zeus Systems Pvt. Ltd	3

## Fifteenth Convocation

The fifteenth annual convocation of the Institute was held on 12th January, 2019. The Degrees were awarded to the students of fourteenth batch of B.Tech (ICT), second batch of B.Tech (Honours) in ICT with minor in Computational Science, fifteenth batch of M.Tech (ICT) and M.Sc (IT), fourteenth batch of M.Sc (ICT-ARD), eleventh batch of M.Des (CD) and 11 PhD Scholars numbering 465 students. The following students were awarded President's Gold Medal for scholastic performance:

Sr. No.	Name	Program
1	Akshat Dua	B.Tech(ICT)
2	Damle Omkar Vishwesh	B.Tech(Honours) ICT with Minor CS
3	Lokesh Kumar	M.Tech(ICT)
4	Tapkir Prasad Anil	M.Sc (IT)
5	Ashwani Tanwar	M.Sc(ICT-ARD)
6	Shah Shailaja Shalinbhai	M.Des(CD)

Shri Kiran Karnik, former President of the National Association of Software and Service Companies (NASSCOM) and an independent Policy and Strategy Analyst was the Chief Guest for the Convocation. He began his address by congratulating the graduating students on their achievements and advised them to be indebted to their parents and guardians who have nurtured and supported them throughout their studies. He reminded the audience that the world is rapidly changing, driven by technology -- new technologies inciting fast economic and social change. He cited the example of mobile phone that has become inseparable part of people's lives with its numerous applications. Another example is the rapidly growing digitization of organizations and processes that have made things simpler and quicker and brought in a new level of transparency in citizen-government interactions. Also the near instantaneous information access through online has become routine, simpler and transparent. He highlighted that the confluence of electronics, computer software and artificial intelligence has led



to multidimensional technological developments. One of them, Robots is now carrying out many functions in factories and the list of what they can do – often quicker, better and cheaper than humans is growing by the day. He cited that equally rapid developments are taking place in biology, genetics and healthcare. The developments in gene editing, splicing and modifying hold promise for preventing genetic disorders. Like genetics, neuro-technology is another domain that is resulting in a number of devices based on brain-computer interface and

implants that augment human capabilities. He forewarned that far stretched research in these areas could result in manipulating them and therefore, in all these innovations ethical questions should assume greater importance. He advised the graduating class to continue learning, innovate, become a problem solver rather than a wielder of technological tools, attain soft skills, do what they are passionate about, be compassionate to disadvantaged and uphold professional ethics, integrity and values.





## Research and Development (Sponsored Projects and Entrepreneurship)

DA-IICT has been a research-led University since its inception in 2001. Ever since it was founded, the Institute has had a vibrant research environment. This has brought dynamism to all academic activities. It stands for a confluence of several interrelated disciplines, from technology and basic sciences to humanities and social sciences catering to both academia and industry. The Institute aims to encourage basic, applied and developing research conducted both by students and members of faculty alike. The Institute's encouragement clearly reflects in the policies the Institute has formulated for research activities and professional development. Although the needs of faculty are as diverse as the disciplines they represent, they, however, share the common goal of building their capacities to generate new ideas and ways of understanding the society.

DA-IICT's infrastructure, ranging from various well-equipped laboratories, specialized equipment, campus-wide networking, high-speed internet access and subscription to hundreds of print and online journals matches the general expectations of inter-disciplinary research. The faculty are encouraged to seek out the latest opportunities for research collaboration and funding. Partnerships

with industry are a priority. Besides, all efforts to participate in bilateral, international and multi-institutional research aimed at solving critical problems are duly supported. In this challenging fiscal climate, when the traditional individual research grant has become increasingly competitive, multi-institutional grants can be an important source of funding for research.

The faculty, students, and research staff are active in research in several academic disciplines, including but not limited to computer science, electronics and communication, mathematics, physics, agriculture and rural development, humanities, and social sciences. They have been regularly publishing their research work in leading refereed journals and conferences. Over the last decade, a large number of sponsored projects have been initiated by faculty, including international projects.

### SPONSORED PROJECTS

In the year 2018-19, the Institute received grants for 5 new sponsored projects. Sixteen projects were in different stages of progress and 3 projects were completed.

**Table 6: New Projects**

Title of the Sponsored Project	Sponsoring Agency	Investigators
Using Mobile Sensing Mechanism to Access Smart Phone Addiction and Its Negative Impact on Students	ICSSR	Prof. Alka Parikh Prof. P.S. Kalyan Sasidhar
Development of Graph Algorithms for Control of Complex Networks with Applications in Computational Biology	DST-SERB	Prof. V. Sunitha
Design and Simulation of Beamforming Algorithms and Baseband Technologies for SATCOM	ISRO/DoS	Prof. Yash Vasavada Prof. Rajib Lochan Das
Multiscale and Simulation of Complex Plasma Dynamics during High Power Millimeter Wave Breakdown	DST-SERB	Prof. Bhaskar Chaudhary
Design and Field Training Testing of an Energy Autonomous Internet of Things Enabled Cattle Estrus Detection Device Targetted for Resource Constrained Regions	DST-SERB	Prof. Biswajit Mishra Prof. P.S. Kalyan Sasidhar



**Table 7: On-going Projects**

Title of the Sponsored Project	Sponsoring Agency	Investigators
Development of Microwave Absorbers (Carbonyl Iron filled Silicon Rubber Sheets) in 1 to 8 GHz range	ISRO/DoS	Prof. Deepak Ghodgaonkar Prof. Sanjeev Gupta
Desertification and Land Degradation: Monitoring, Vulnerability Assessment and Combating Plans	ISRO/DoS	Prof. Ranendu Ghosh Prof. Suman K. Mitra
Imprint - A platform for Crosslingual and Multilingual Event Monitoring in Indian Languages	MHRD	Prof. Prasenjit Majumder Prof. Suman K. Mitra
UCMA: A Toolset to Automatically Analyse Functional Requirements Specified in the Use Cases	SERB/DST	Prof. Saurabh Tiwari
Detection of Heavy Metal Pollution in Vegetation and Characterization of Soil Clay Minerals using AVIRIS-NG Data	ISRO/DoS	Prof. Ranendu Ghosh Prof. P.S. Kalyan Sasidhar
Kinetic Modelling of Large size Negative Ion Sources for Fusion Application using Emerging Parallel Processing Computer Architectures	BRNS	Prof. Bhaskar Chaudhury Prof. Mukesh Tiwari
Study of Privacy, Accountability and Ownership in IoT	IFCPAR	Prof. Manik Lal Das Prof. Anish Mathuria
Techno Feasibility Study on Automation of Hydroponics and Green House Cultivation	GHM	Prof. Ranendu Ghosh Prof. Rahul Dubey
Processor RTL Customization and Development of Low Power Design Flow Methodology	GUJCOST	Prof. Amit Bhatt Prof. Mazad Zaveri
Enabling Technologies for Remote Health Monitoring	GUJCOST	Prof. Biswajit Mishra Prof. Manik Lal Das
Speech based Access of Agriculture Commodity Prices and Weather Information in 12 Indian Languages/ Dialects (ASR), Consortium-Phase-II	DeitY	Prof. Hemant A Patil Prof. M.V. Joshi
Center Early Adopter - NSF/ TCPP CDER	NSF (USA)	Prof. Bhaskar Chaudhury Prof. Mukesh Tiwari
Expansion of Technology Incubation and Development of Entrepreneurs (TIDE) in the areas of Electronics and ICT	DIT	Prof. Sanjeev Gupta
Nodal Institute for Start-ups	Industries Commissionerate Govt. of Gujarat	Prof. Sanjeev Gupta
Student Start-up and Innovation	Govt. of Gujarat	Prof. Sanjeev Gupta
Anchor Institute Program	CED (Govt of Gujarat)	Prof. Amit Bhatt

**Table 8: Completed Projects**

Title of the Sponsored Project	Sponsoring Agency	Investigators
Ultra Wide Band Dielectric Resonator Antenna	ISRO/DoS	Prof. Deepak Ghodgaonkar Prof. Sanjeev Gupta
Development of Cross Lingual Information (CLIA) System (Phase-II)	DeiTY	Prof. P Majumder Prof. Suman K. Mitra
Development of Ultra Low Power and Low Voltage Time to Digital Converter(TDC) for Space Applications	ISRO/DoS	Prof. Biswajit Mishra

**Table 9: Consultancy Project**

Consulting Area	Organization	Faculty
Development of OCR Algorithms to Enhance the Accuracy of Numerical Data Recognition by the Machine	Factset Systems India Pvt. Ltd., Hyderabad	Prof. M V Joshi

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

DA-IICT Centre for Entrepreneurship and Incubation was established in 2011 to promote innovation and entrepreneurship culture among the community. DCEI is supported by the Ministry of Electronics and Information Technology, Government of India to nurture and develop business ideas based on the latest and emerging technology. The DCEI has also been recognized by the Government of Gujarat as a Nodal Institution to promote and nurture entrepreneurship among young technologists in the state. DCEI has incubated the following start-ups since its inception:

1. AlmaConnect Solutions Private Limited - creates a network for educational institutions and tracks its alumni members.
2. Playpower Labs Private Limited - develops game curriculum for school students and data analytics for companies involved in the field of education.
3. Appbin Labs Private Limited - successfully developed a product 'Developer Hub' which provides complete database services for rapid application development.
4. Kamkaaj Solutions Private Limited - engaged in developing a job aggregator that aggregates jobs that are posted on different job boards/

portals and empowers job-seekers with the features of searching and analyzing jobs.

5. Corygbee Private Limited – a faculty-led startup, is an online research collaboration platform for researchers, students, and research funding agencies.
6. Innorruptiontech Solution Private Limited – a hyper local job market place for blue collar and entry level segment.
7. Yoctosehns Technologies Private Limited - a through monitoring of cattle at a low cost. It helps in estrus detection with a simple user interface.

Following are the proposals accepted and supported under Student Start-up and Innovation Policy (SSIP) in 2018-19 :

1. Generic Approach Based Accident Detection and Notification System for Motor Vehicles.
2. Smart Travel Bag.
3. Energy Harvesting Using IOT.

DCEI undertook the following main activities under SSIP :

1. HackInfinity (Hackathon).
2. 10X Challenge.
3. Entrepreneurship talk by Mr. Aslam Charania, Mastermind Training and Consultancy Services Pvt. Ltd.
4. Tic-Tech-Toe'18.



## Workshops, Special Lectures and Visitors

### SEMINARS/CONFERENCES/WORKSHOPS ORGANIZED

The Institute regularly organizes conferences, seminars and workshops for promoting interactions

with wider academic and research communities.

The conferences and workshops organised during 2018-19 are listed in **Table 10**:

**Table 10: Conferences, Seminars, and Workshops Organised**

Title	Dates	Sponsoring Agency
Summer School on Speech Production (S4P-2018)	9-11 September 2018	DA-IICT, APSIPA
Tenth Forum for Information Retrieval Evaluation (FIRE)	6-9 December 2018	DA-IICT, ACM-SIGIR, Google, Microsoft, Rygbee Inc., USA
Winter School on 5G Communications	7-8 December 2018	DA-IICT, SAC ISRO, and IEEE ComSoc and Signal Processing Chapters of Gujarat Section
Indradhanush Workshop in Entrepreneurship	9-10 February 2019	DA-IICT, DCEI
Research Connect Workshop	27-29 March 2019	DA-IICT, British Council
Workshop on Deep Learning	29-31 March 2019	DA-IICT, Bennett University
Summer School on Speaker Recognition and Diarization	6-10 July 2019	DA-IICT, ISCA, DE Gruyter, Reliance Communications, APSIPA



## VISITORS AND SPECIAL LECTURES

The Institute welcomes visitors from various organizations. Their visits help the faculty and students to explore collaboration, funding and

professional development opportunities. It regularly invites speakers from academic institutions and industry experts to deliver special lectures. Below is a list of visitors during 2018-19:

**Table 11: Visitors**

Visitor and Affiliation	Date
Prof. Virendra Singh, IIT Bombay	27 August, 2018
Prof. Jayanta Mukherjee, IIT Bombay	27 August, 2018
Prof. Vijaykumar Chakka, Shiv Nadar University, NOIDA	27 August, 2018
Prof. Usha Mehta, Nirma University, Ahmedabad	27 August, 2018
Prof. Vivek Kanhangad, IIT Indore	27 August, 2018
Prof. Anirban Dasgupta, IIT, Gandhinagar	27 August, 2018
Prof. Rajagopalan A.N., IIT Madras	23 October, 2018
Prof. M. M. Nayak, IISc Bangalore	23 October, 2018
Prof. S.L. Maskara, IIT Kharagpur	23 October, 2018
Prof. Ram N. Mohapatra, University of Central Florida, USA	4 December, 2019
Shri Rajesh Behl, SAC, Ahmedabad	09 January, 2019
Prof. Thomas Mandl, Universität Hildesheim, Germany	08 March, 2019
Prof. Arbind Lal, IIT Kanpur	26 March, 2019
Prof. Tathagata Bandyopadhyay, IIM, Ahmedabad	12 April, 2019
Shri Kaushik Parekh, Space Applications Centre, Ahmedabad	26 April, 2019
Dr. Narottam Sahoo, Advisor, GUJCOST, Gujarat	01 May, 2019
Prof. Genorge Ghinea, Brunel University, UK	10 May, 2019
Dr. Ramnath Prasad, CED, Gandhinagar	02 May, 2019
Prof. Ram, IUCAA, Pune	30 May, 2019





## Faculty Publications

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

During the reporting year, the faculty published two books, edited one volume, and contributed four chapters in books and one hundred forty-six papers in journals and conferences along with nine technical papers.

### Books

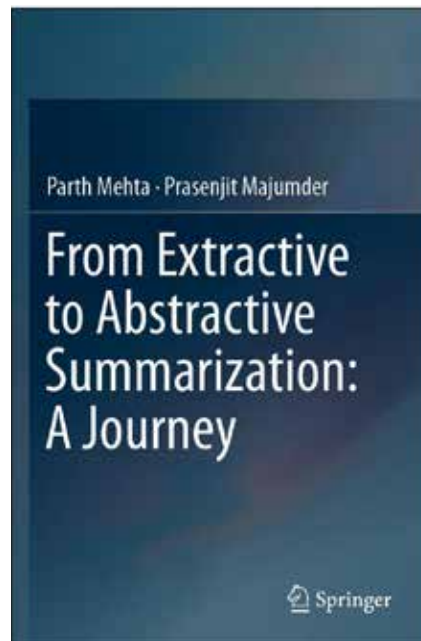
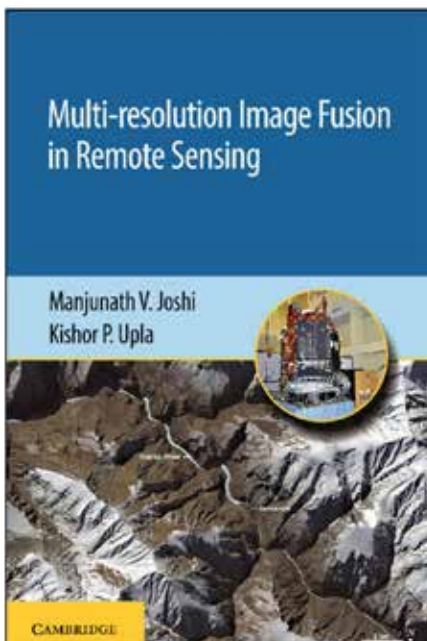
1. **Manjunath V. Joshi**, and Kishor P. Upla, "*Multi-resolution Image Fusion in Remote Sensing*," Cambridge: Cambridge University Press, 2019. ISBN: 9781108566285
2. Parth Mehta and **Prasenjit Majumder**, "*From Extractive to Abstractive Summarization: A Journey*," Springer, Singapore, 2019. doi:10.1007/978-981-13-8934-4, ISBN: 9789811389337

### Edited Books

1. **Hemant A. Patil**, Amy Neustein, and Manisha Kulshreshtha, Eds., "*Signal and Acoustic Modeling for Speech and Communication Disorders*," Series: Speech Technology and Text Mining in Medicine and Health Care 5, Amy Neustein, Ed., vol. 5, Boston, MA: De Gruyter, 2018. ISBN: 9781501502415

### Chapters in Book

1. Hardik N. Patel and **Deepak K. Ghodgaonkar**, "Application of 3D Level Set based Optimization in Microwave Breast Imaging for Cancer Detection," in *Level Set Method in Medical Imaging Segmentation*, Ayman El-Baz, Jasjit S. Suri, Eds., Singapore: Springer, Jun. 2019, pp. 23-50. doi: 10.1201/b22435-2
2. **Hemant A. Patil**, and Tanvina B. Patel, "Analysis of normal and pathological voices by novel chaotic titration method," in *Signal and Acoustic Modelling for Speech and Communication Disorders*, Hemant A. Patil, Amy Neustein and Manisha Kulshetra, Eds., Berlin: De Gruyter, Dec. 2018, pp. 87-120. doi:10.1515/9781501502415
3. S. Chris Prema and **K. S. Dasgupta**, "Multirate Systems in Cognitive Radio," in *Advances in*



*Multirate Systems*, Gordana Jovanovic Dolecek, Eds., Cham: Springer, 2018, pp. 169-197. doi: 10.1007/978-3-319-59274-9\_7

4. Shrishail S. Gajbhar and **Manjunath V. Joshi**, "Image Denoising using Tight-Frame Dual-Tree Complex Wavelet Transform," in *Machine Intelligence and Signal Processing*, M. Tanveer and Ram Bilas Pachori, Eds., Singapore: Springer, August 2018, pp. 645-656. doi:10.1007/978-981-13-0923-6\_55

### Journal Papers

1. Sumukh Bansal and **Aditya Tatu**, "Affine interpolation in a lie group framework," *ACM Transactions on Graphics*, vol. 28, no. 4, article 71, pp. 1-16, Jul. 2019. doi:10.1145/3306346.3322997
2. Nileshkumar Vaishnav and **Aditya Tatu**, "Signal processing on graphs: structure preserving maps," *IET Signal Processing*, vol. 13, no. 1, pp. 77-85, Feb. 2019. doi:10.1049/iet-spr.2018.5147
3. **Amishal Modi**, "Self-Conscious Pleasure-Seeking: Equality in Arun Kolatkar's Poetry," *International Journal of Research and Analytical Reviews*, vol. 6, no. 1, Mar. 2019.
4. Ramesh Kumar, Sharvan Kumar and **Amit Sengupta**, "An Experimental Analysis and Validation of Electrical Impedance Tomography Technique for Medical or Industrial Application," *Biomedical Engineering: Applications, Basis and Communications*, vol. 31, no. 2, pp. 1950010-1-1950010-17, 13 Mar. 2019. doi:10.4015/S1016237219500108
5. Tushar Gadhiya and **Anil K. Roy**, "Optimized Wishart Network for an Efficient Classification of Multifrequency PolSAR Data," in *IEEE Geoscience and Remote Sensing Letters*, vol. 15, no. 11, pp. 1720 - 1724, Nov. 2018. doi:10.1109/LGRS.2018.2861081
6. Naveen Kumar and **Anish Mathuria**, "Comprehensive evaluation of key management hierarchies for outsourced data," *Cybersecurity*, vol. 2, no. 2, pp. 1-17, Dec. 2019. doi:10.1186/s42400-019-0026-y
7. Usha Rani Gogoi, Mrinal Kanti Bhowmik, Debotosh Bhattacharjee and **Anjan Kumar Ghosh**, "Singular value based characterization and analysis of thermal patches for early breast abnormality detection," *Australasian Physical & Engineering Sciences in Medicine*, vol. 41, no. 4, pp. 861-879, Dec. 2018. doi: 10.1007/s13246-018-0681-4
8. **Arnab K. Ray**, Niladri Sarkar, Abhik Basu and Jayanta K. Bhattacharjee, "A theoretical prediction of rotating waves in Type-I hydraulic rev," *Physics Letters A*, vol. 382, no. 47, pp. 3399-3404, Nov. 2018. doi:10.1016/j.physleta.2018.10.0
9. Chirag I Patel, Sanjay Garg, Tanish Zaveri, **Asim Benerjee** and Ripal Patel, "Human action recognition using fusion of features for unconstrained video sequences," *Computers & Electrical Engineering*, vol. 70, pp. 284 - 301, Aug. 2018. doi:10.1016/j.compeleceng.2016.06.004
10. **Bhaskar Chaudhury**, Anurag Gupta, Henil Shah and Saumya Bhadani, "Accelerated Simulation of Microwave Breakdown in Gases on Xeon Phi based cluster- Application to Self-organized Plasma Pattern Formation," in *Computer Physics Communications*, vol. 229, pp. 20-35, Aug. 2018. doi:10.1016/j.cpc.2018.03.024
11. **Bhaskar Chaudhury**, Akshar Varma, Yashwant Keswani, Yashodhan Bhatnagar and Samarth Parikh, "Let's HPC: A web-based platform to aid parallel, distributed and high performance computing education," *Journal of Parallel and Distributed Computing*, Vol. 118, part 1, pp. 213-232, Aug. 2018. doi:10.1016/j.jpdc.2018.03.001
12. Minesh Poudel, **Bhaskar Chaudhury**, Kshitij Sharma, Pavel Yaroslavovich Tabakova and Félix Mora-Caminoc, "GPU based Computational Simulation of Aircraft Evacuation: Temporal and Spatial Analysis," *Transportation*



- Research Procedia*, vol. 29, pp. 356-365, 2018. doi:10.1016/j.trpro.2018.02.032
13. **Bhaskar Chaudhury**, Anurag Gupta, Henil Shah and Saumya Bhadani, "Accelerated simulation of microwave breakdown in gases on Xeon Phi based cluster-application to self-organized plasma pattern formation," *Computer Physics Communications*, vol. 229, pp. 20-35, Aug. 2018. doi:10.1016/j.cpc.2018.03.024
  14. Purvi Patel and **Biswajit Mishra**, "CMOS Power Management Unit Along with Load Regulation Using Switched Capacitor Converters," *Journal of Low Power Electronics*, vol. 15, no. 2, pp. 224-233, Jun. 2019. doi:10.1166/jolpe.2019.1606
  15. Neha Arora, **Biswajit Mishra** and Yash Vora, "A Low Power Wearable Device for Real-Time Electrocardiogram Monitoring and Cardiovascular Arrhythmia Detection for Resource Constrained Regions," *Journal of Low Power Electronics*, vol. 15, no. 2, Jun. 2019, pp. 234-245. doi:10.1166/jolpe.2019.1605
  16. Nupur Jain and **Biswajit Mishra**, "Light-weight configurable architecture for QRS detection," *IET Computers & Digital Techniques*, vol. 13, no. 2, pp. 70-77, Mar. 2019. doi:10.1049/iet-cdt.2018.5084
  17. Purvi Patel, **Biswajit Mishra** and Dipankar Nagchoudhuri, "A 46 nW Power Management Unit with Battery Extender for Solar Energy Harvesters Using 0.18  $\mu\text{m}$  CMOS," *Journal of Low Power Electronics*, vol. 14, no. 2, pp. 257-265, Jun. 2018. doi:10.1166/jolpe.2018.1557 [missed out in AR 2017-18]
  18. R. J. Doshi and **Deepak Ghodgaonkar**, "Improving the efficiency of solid-state power amplifier by frequency switching for satellite communication," *International Journal of Satellite Communications and Networking*, vol. 36, no. 8, pp. 1-18, Dec. 2018. doi:10.1002/sat.1254 [missed out in AR 2017-18]
  19. Ch. V. N. Rao, **Deepak K. Ghodgaonkar** and Nitesh Sharma, "GaAs MMIC Low Noise Amplifier With Integrated High-Power Absorptive Receive Protection Switch," *IEEE Microwave and Wireless Components Letters*, vol. 28, no. 12, pp. 1128 - 1130, Dec. 2018. doi:10.1109/LMWC.2018.2877148
  20. **Gautam Dutta**, Mitaxi Mehta and Praveen Pathak, "Balancing on the edge, the golden ratio, the Fibonacci sequence and their generalization," *European Journal of Physics*, vol. 39, no. 6, pp. 1-8, 3 Oct. 2018. doi:10.1088/1361-6404/aaddd0
  21. **Hemant A. Patil** and Maulik C. Madhavi, "Combining evidences from magnitude and phase information using VTEO for person recognition using humming," *Computer Speech & Language*, vol. 52, pp. 225-256, Nov. 2018. doi:10.1016/j.csl.2017.06.009
  22. Maulik C. Madhavi and **Hemant A. Patil**, "Design of mixture of GMMs for Query-by-Example Spoken Term Detection," *Computer Speech & Language*, vol. 52, pp. 41 - 55, Nov. 2018. doi: 10.1016/j.csl.2018.04.006
  23. **Madhumita Mazumdar**, "Reflecting on Chemical Education: Nilratan Dhar and the Legacy of P C Ray," *Indian Journal of History of Science*, vol. 53, no. 4, pp. T94-T99, Dec. 2018. doi:10.16943/ijhs/2018/v53i4/49531
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63. Utsav Vyas, Parth Panchal, Mayank Patel and **Minal Bhise**, “STSDb: Spatio-Temporal Sensor Database for Smart City Query Processing,” in *20th International Conference on Distributed Computing and Networking (ICDCN 2019)*, IISc Bangalore, India, 4-7 Jan. 2019, pp. 1-6. doi:10.1145/3288599.3296015
64. Mayank Patel and **Minal Bhise**, “Raw Data Processing Framework for IoT,” in *11th international Conference on Communication Systems & NETWORKS (COMSNETS)*, Bengaluru, India, 7-11 Jan. 2019, pp. 695-699.
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66. Bhumika Kalavadia, Tarushi Bhatia, Trupti Padiya, Ami Pandat and **Minal Bhise**, “Adaptive Partitioning Using Partial Replication for Sensor Data,” in *15th International Conference on Distributed Computing and Internet Technology (ICDCIT 2019)*, Bhubaneswar, India, 10-13 Jan. 2019, pp. 260-269. doi:10.1007/978-3-030-05366-6\_22
67. Sandip Modha, **Prasenjit Majumder** and Daksh Patel, “DA-LD-Hildesheim at SemEval-2019 Task 6: Tracking Offensive Content with Deep Learning using Shallow Representation,” in *Proceedings of the 13th International Workshop on Semantic Evaluation*, Minneapolis, Minnesota, USA, 6-7 Jun. 2019, pp. 577-581.
68. Sandip Modha, **Prasenjit Majumder** and Thomas Mandl, “Filtering Aggression from the Multilingual Social Media Feed,” in *Proceedings of the First Workshop on Trolling, Aggression and Cyberbullying*, Santa Fe, USA, 25 Aug. 2018, pp. 199-207.
69. Thomas Mandl, Sandip Modha, **Prasenjit Majumder**, Daksh Patel, Mohana Dave, Chintak Mandlia and Aditya Patel, “Overview of the HASOC track at FIRE 2019: Hate Speech and Offensive Content Identification in Indo-European Languages,” in *FIRE '19: Proceedings of the 11th Forum for Information Retrieval Evaluation*, Kolkata, India, 7-9 Dec. 2018, pp. 14-17.
70. **Priyanka Singh** and Hany Farid, “Robust Homomorphic Image Hashing,” in *IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*, Long Beach, California, 16-20 Jun. 2019, pp. 11-18.
71. **Puneet Bhateja**, “A theoretical framework for testing cyber-physical systems,” in *2019 6th International Conference on Control, Decision and Information Technologies (CoDIT)*, Paris, France, 23-26 Apr. 2019, pp. 818-823
72. **Shashikumara AA**, T. R. Manu, Viral Asjola, Panna Chaudhary, **Rutu Parekh** and **Manish Mankad**, “Growth and Development of Global Startup Research: A Bibliometric Analysis,” in *Librarians' day 2018 Seminar Startup India & Role of Libraries*, MICA, Ahmedabad, India, 25 Aug. 2018, pp. 71-81. ISBN: 97881937313
73. Shubham Chandra, **Sanjay Srivastava** and **Anil K. Roy**, “Public Toilet Hygiene Monitoring and Reporting System,” in *2018 IEEE SENSORS*, New Delhi, 28-31 Oct. 2018, pp. 1-4. doi:10.1109/ICSENS.2018.8589894
74. Rahul Chauhan and **Sanjeev Gupta**, “A Circular Fractal Antenna Array,” in *National Conference on Communications (NCC)*, Bangalore, India, 20-23 Feb. 2019, pp. 1-6,
75. Chirag Usdadiya, **Saurabh Tiwari** and **Asim Banerjee**, “An Empirical Study on Assessing the Quality of Use Case Metrics,” in *Proceedings of the 12th Innovations on Software Engineering*



- Conference, formerly known as India Software Engineering Conference (ISEC'19), Pune, India, 14-16 Feb. 2019, pp. 1-11. doi:10.1145/3299771.3299775
76. **Saurabh Tiwari**, Deepti Ameta and **Asim Banerjee**, "An Approach to Identify Use Case Scenarios from Textual Requirements Specification," in *Proceedings of the 12th Innovations on Software Engineering Conference, formerly known as India Software Engineering Conference (ISEC'19)*, Pune, India, 14-16 Feb. 2019, pp. 1-11. doi:10.1145/3299771.3299774
  77. Paramvir Singh, Sheikh Umar Farooq, **Saurabh Tiwari** and Ranjith Tharayil, "A Report on the Second Workshop on Emerging Software Engineering Education (WESEE 2019)," in *Proceedings of the 12th Innovations on Software Engineering Conference, formerly known as India Software Engineering Conference (ISEC'19)*, Pune, India, 14-16 Feb. 2019, pp. 1-2. doi:10.1145/3299771.3301647
  78. Jagadish Suryadevara and **Saurabh Tiwari**, "Adopting MBSE in Construction Equipment Industry: An Experience Report," *25th Asia-Pacific Software Engineering Conference (APSEC)*, Nara, Japan, 4-7 Dec. 2018, pp. 512-521
  79. Aliya Hussain, **Saurabh Tiwari**, Jagadish Suryadevara and Eduard Enoiu, "From Modeling to Test Case Generation in the Industrial Embedded System Domain," in *Software Technologies: Applications and Foundations*, Toulouse, France, 25-29 Jun. 2018, pp. 499-505. doi:10.1007/978-3-030-04771-9\_35 [missed out in AR-2017-18]
  80. **Srimanta Mandal**, Kuldeep Purohit and A. N. Rajagopalan, "Color Image Super Resolution in Real Noise," in *11th Indian Conference on Computer Vision Graphics and Image Processing ICVGIP 2018*, Hyderabad, India, 18-22 Dec. 2018, pp. 512-521.
  81. Luv Patel, Kush Patel, Purvi A Koringa and **Suman K. Mitra**, "Scene-Change Detection using Locality Preserving Projections," in *2018 IEEE Applied Signal Processing Conference (ASPCON)*, Kolkata, India, 7-9 Dec. 2018, pp. 219-223.
  82. Sujata, Maitry Trivedi and **Suman K. Mitra**, "A Modular Approach for Facial Expression Recognition using Euler Principal Component Analysis (e-PCA)," in *2018 IEEE Applied Signal Processing Conference (ASPCON)*, Kolkata, India, 7-9 Dec. 2018, pp. 204-208.
  83. **Gitam Shikkenawis** and **Suman K. Mitra**, "Variants of Locality Preserving Projection for Modular Face and Facial Expression Recognition," in *Pattern Recognition and Machine Intelligence*, Kolkata, India, 5-8 December 2017, pp. 141-147. doi:10.1007/978-3-319-69900-4\_18 [missed out in AR 2017-18]
  84. **Prashant Domadiya**, Pratik Shah and **Suman K. Mitra**, "Vector Graph Representation for Deformation Transfer Using Poisson Interpolation," in *2018 IEEE Winter Conference on Applications of Computer Vision (WACV)*, Lake Tahoe, NV, USA, 12-15 Mar. 2018, pp. 876-884. doi:10.1109/WACV.2018.00101 [missed out in AR 2017-18]
  85. **Mukesh M. Goswami** and **Suman K. Mitra**, "Printed Gujarati Character Classification Using High-Level Strokes," in *Proceedings of 2nd International Conference on Computer Vision & Image Processing*, Springer, Singapore, 05 May 2018, pp. 197-209. doi:10.1007/978-981-10-7898-9\_16 [missed out in AR 2017-18]
  86. **Purvi A. Koringa** and **Suman K. Mitra**, "Orthogonal Neighborhood Preserving Projection using L1-norm Minimization," in *Proceedings of the 6th International Conference on Pattern Recognition Applications and Methods ICPRAM*, Porto, Portugal, 2017, pp. 165-172. doi:10.5220/0006196101650172 [missed out in AR 2017-18]
  87. **Mukesh M. Goswami** and **Suman K. Mitra**, "High Level Shape Representation in Printed Gujarati Character," in *Proceedings of the 6th International Conference on Pattern*

*Recognition Applications and Methods ICPRAM*, Porto, Portugal, 2017, pp. 418-425. doi:10.5220/0006191104180425 [missed out in AR 2017-18]

88. Takshashila Pathade, Urmi Shah, **Yash Agrawal** and **Rutu Parekh**, "Preeminent Buffer Insertion Technique for Long Advanced On-Chip Graphene Interconnects," in *2018 IEEE Electrical Design of Advanced Packaging and Systems Symposium (EDAPS)*, Chandigarh, India, 16-18 Dec. 2018, pp. 1-3. doi:10.1109/EDAPS.2018.8680882
89. **Yash Agrawal**, Rajeevan Chandel, Mekala Girish and **Rutu Parekh**, "Contemporary On-chip System Modeling using FDTD in Low Power Regime," in *2018 IEEE Electrical Design of Advanced Packaging and Systems Symposium (EDAPS)*, Chandigarh, India, 16-18 Dec. 2018, pp. 1-3. doi:10.1109/EDAPS.2018.8680862
90. Pallav Borisagar, **Yash Agrawal** and **Rutu Parekh**, "Efficient Vehicle Accident Detection System using Tensorflow and Transfer Learning," in *2018 International Conference on Networking, Embedded and Wireless Systems (ICNEWS)*, Bangalore, India, 27-28 Dec. 2018, pp. 1-6.
91. Rashmit Patel, **Yash Agrawal** and **Rutu Parekh**, "A Vector File Generation Program for Simulating Single Electron Transistor based Computing System," in *2018 IEEE Electron Devices Kolkata Conference (EDKCON)*, Kolkata, India, 24-25 Nov. 2018, pp. 647-650.
92. Haritha Yeleti, Mekala Girish Kumar, Rajeevan Chandel and **Yash Agrawal**, "Transient and Crosstalk Analysis of Doped and Dielectric Inserted MLG NR Interconnects," in *2018 IEEE Electrical Design of Advanced Packaging and Systems Symposium (EDAPS)*, Chandigarh, India, 16-18 Dec. 2018, pp. 1-3. doi:10.1109/EDAPS.2018.8680856
93. **Yash Vasavada** and **P. S. Kalyan Sasidhar**, "A hierarchical cyber physical system for integrated demand side management of power usage in buildings," in *2017 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, Bhubaneswar, India, 17-20 Dec. 2017, pp. 1-6. doi:10.1109/ANTS.2017.8384144 [missed out in AR 2017-18]
94. **Yash Vasavada** and Jeffrey H. Reed, "Amplitude and Phase Calibration of Antenna Arrays," in *2017 IEEE MTT-S International Microwave and RF Conference (IMaRC)*, Ahmedabad, India, 11-13 Dec. 2017, pp. 1-5. doi:10.1109/IMaRC.2017.8449721 [missed out in AR 2017-18]
95. **Yash Vasavada**, D. Arur, C. Ravishankar and C. Barnett, "User location determination using delay and Doppler measurements in LEO satellite systems," in *MILCOM 2017 - 2017 IEEE Military Communications Conference (MILCOM)*, Baltimore, MD, USA, 23-25 Oct. 2017, pp. 325-330. doi:10.1109/MILCOM.2017.8170797 [missed out in AR 2017-18]
96. **Yash Vasavada**, C. Ravishankar, J. Corrigan, G. Zakaria and X. Huang, "Determination of locations of calibration earth stations for ground based beam forming in satellite systems," in *MILCOM 2017 - 2017 IEEE Military Communications Conference (MILCOM)*,



Baltimore, MD, USA, 23-25 Oct. 2017, pp. 331-336. doi:10.1109/MILCOM.2017.8170795 [missed out in AR 2017-18]

97. **Yash Vasavada**, P. Amirshahi, B. F. Beidas, D. Roos Y. Antia and L. Lee, "Strongly orthogonal sequences and their application to calibration and pointing of satellite beam former," in *2017 International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, Udupi, India, 13-16 Sept. 2017, pp. 812-817. doi: 10.1109/ICACCI.2017.8125942 [missed out in AR 2017-18]
98. **Yash Vasavada** and C. Prakash, "An iterative message passing approach for compressive spectrum sensing," in *2017 International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, Udupi, India, 13-16 Sept. 2017, pp. 161-167. doi: 10.1109/ICACCI.2017.8125834 [missed out in AR 2017-18]

### Book Reviews

1. **Bharani Kollipara** (rev.) "The quotidian revolution: vernacularization, religion and the premodern public sphere in India," book review in *South Asian History and Culture*, vol. 9, no. 4, pp. 458-460, Oct 2018. doi: 10.1080/19472498.2018.1535551
2. **Bharani Kollipara**, "Anders Odenstedt: Gadamer on Tradition: Historical Context and the Limits of Reflection," book review in *Journal of Human Studies*, vol. 41, no. 1, pp. 157-164, 20 February 2018. doi: 10.1007/s10746-018-9459-7 [missed out in AR 2017-18]

### Technical Papers

1. Shalin Shah and **Manish K. Gupta**, "DNA-based chemical compiler," *arXiv*, 14 Aug 2018. arXiv ID:1808.04790
2. **Manoj K. Raut**, "An Algorithm for Computing Prime Implicates in Modal Logic," *arXiv*, 12 Nov. 2018. arXiv ID: 1811.04566
3. Atrayee Deb, Saloni Dalal and **Manik Lal Das**, "DigiLock: User-controlled and Server-aware Digital Locker System," *arXiv*, 19 Oct 2018. arXiv ID: 1810.08464
4. Parth Mehta and **Prasenjit Majumder**, "Exploiting local and global performance of candidate systems for aggregation of summarization techniques," *arXiv*, 7 Sep. 2018. arXiv ID: 1809.02343
5. Maitreya Patel, Anery Patel and **Ranendu Ghosh**, "Precipitation Nowcasting: Leveraging bidirectional LSTM and 1D CNN," *arXiv*, 24 Oct. 2018, arXiv ID: 1810.10485
6. Abhin Kakkad, Harsh Vasoya and **Arnab K. Ray**, "Regularities in stock markets," *arXiv*, 30 Jun. 2019. arXiv ID:1907.00371
7. **Arnab K. Ray**, "Dissipation and tunnelling at the sonic horizon of Bondi accretion," *arXiv*, 11 Mar. 2019. arXiv ID:1903.04137
8. Amay Agrawal, Dixita Limbachiya, Ravikumar M., Taslimarif Saiyed and **Manish K. Gupta**, "BacSoft: A Tool to Archive Data on Bacteria," *arXiv*, 05 Mar. 2019. arXiv ID:1903.01902
9. Krishna Gopal Benerjee, and **Manish K. Gupta**, "On Universally Good Flower Codes," in *Proc. of Sequences and their Applications (SETA 2018)*, *arXiv*, 01-06 Oct. 2018, arXiv ID:1805.0814.



## Awards and Professional Activities

The faculty and staff continued to be actively involved in international, national, state and local level professional activities and made significant contributions at all levels. They also received fellowships and presented a large number of invited talks all over the country and abroad. Below is a listing of the major recognitions and activities of the faculty and staff of the Institute:

### HONORARY WORK/POSITIONS HELD ON PROFESSIONAL BODIES

#### Alka Parikh

- Board of Trustees, Utthan, Ahmedabad

#### Aditya Tatu

- Member, Technical Advisory Committee - Science, Technology and Innovation, GUJCOST

#### Anish Mathuria

- Member, Faculty Selection Committee, Indian Institute of Information Technology Vadodara (IIIT-V)

#### Anjan Kumar Ghosh

- Member, Executive Committee, Optical Society of India

#### Bhaskar Chaudhury

- Life Member, Plasma Science Society of India
- Honorary Member, Data for Modeling Plasmas
- Member, Division of Plasma Physics - Association of Asia Pacific Physical Societies

#### Deepak Ghodgaonkar

- Fellow, The Institution of Engineers, Malaysia
- Life Fellow, Institution of Electronics and Telecommunication Engineers, India
- Senior Member, Institute of Electrical and Electronics Engineers, USA

#### Hemant A. Patil

- Member, Project Review Steering Group, Ministry of Electronics and Information Technology (MeitY)'s consortia projects, Government of India
- Member, Academic Advisory Committee Board, Chhotubhai Gopalbhai Patel Institute of Technology, Bardoli, Gujarat
- Member, Board of Studies, G.H.Raisoni Institute of Engineering & Management, Jalgaon, Maharashtra
- Member, Research Progress Committee, Nirma University, Ahmedabad
- Member, External expert, IQAC, Nirma University, Ahmedabad
- Member, International Speech Communication Association

- Member, Asia-Pacific Signal and Information Processing Association
- Member, IEEE
- Member, IEEE Signal Processing Society
- Affiliate member, IEEE Speech and Language Technical Committee
- Member, IEEE Circuits and Systems Society, USA
- Member, International Association for Engineers
- Life member, System Society of India

#### K. S. Dasgupta

- Expert Member, Annual Review meeting, Community Science Centres Programs & Activities in Gujarat, Gujarat Council on Science and Technology

#### Manik Lal Das

- Senior Member, Institute of Electrical and Electronics Engineers (IEEE)
- Life Member, Cryptology Research Society of India

#### Manish K Gupta

- Member, 2018 STEM Policy Committee, Education Department, Government of Gujarat
- Member, Local Project Advisory Committee, DST project "Indicators on Entrepreneurship in Science & Technology, Technology Business incubators and Technology Startups"
- Member, Entrepreneurship Development Institute of India, Ahmedabad
- Member, Technical Advisory Committee, Gujarat State Biotechnology Mission, Department of Science and Technology, Government of Gujarat
- University Coordinator, Gujarat State Student Startup and Innovation Policy, Education Department, Government of Gujarat
- Member, Gujarat State Level Implementation Committee, Start-up/Innovation, Industries Commissionerate, Government of Gujarat
- Chairman, Screening Committee, Gujarat Government Nodal Institute for start-ups, DA-IICT, Gandhinagar
- Member, Due-Diligence & Project Mentoring, Indo-Spain Industrial R&D Project of Global Innovation & Technology Alliance (GITA), A joint venture of Technology Development Board, Department of Science and Technology and Confederation of Indian Industry
- Member, Executive Council, Academy of Discrete Mathematics and Applications
- Senior member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, American Mathematical Society Member, Doctoral Committee, Pandit Deendayal Petroleum University, Gandhinagar

**Manish Khare**

- Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, IEEE Signal Processing Society

**Sanjeev Gupta**

- Member, Governing Council, Gujarat Industrial Research and Development Agency (GIRDA), Vadodara
- Member, Board of Governors, Gandhinagar Engineering College (GEC), Gandhinagar
- Vice Chairperson, Research Council, IIIT Vadodara
- Member, Committee for Government of Gujarat approved DA-IICT as Nodal Institute under its Start-up / Innovation Scheme
- External Expert, SAC Promotion Interview Committee (Scientist-SB to Scientist-SC and Scientist –SC to Scientist-SD), Space Applications Centre (SAC), Department of Space, Government of India, Ahmedabad
- External Expert, IPR Promotion Interview Committee of Scientists, Institute of Plasma Research (IPR), Department of Atomic Energy, Government of India, Ahmedabad
- Member, Advisory Committee for PG Research Center for Mobile Computing and Wireless Technologies, Gujarat Technological University (GTU), Ahmedabad
- Member, Vision Committee for guidance on various issues in RF and Microwave Engineering in order to strengthen the future paths in various disciplines of Science and Technology, Institute of Plasma Research (IPR), Gandhinagar
- Coordinator, Cooperation with SAC under the MoU for cooperation in research and academic activities, Space Applications Centre, ISRO Ahmedabad, Department of Space, Government of India

**Saurabh Tiwari**

- Member, Association for Computing Machinery (ACM)

**Srimanta Mandal**

- Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, Executive Committee, IEEE Signal Processing Society (Members at Large)

**Suman Kumar Mitra**

- Senior Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, Association for Computing Machinery (ACM)

- Life member, Indian Science Congress Association (ISCA)
- Life member, Indian Unit of Pattern Recognition and Artificial Intelligence (IUPRAI): An affiliated body of International Association of Pattern Recognition (IAPR)
- Member, Information Retrieval Society of India (IRSI)

**Sunitha Vadivel Murugan**

- Professional Member, Association for Computing Machinery (ACM)
- Life Member, Academy of Discrete Mathematics and Applications (ADMA)
- Member, Board of Studies - Department of Mathematics, Pandit Deendayal Petroleum University, Gandhinagar

**Tapas Kumar Maiti**

- Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, IEEE Robotics and Automation Society
- Life Member, The Institute of Engineers

**FELLOWSHIPS/VISITING SCHOLARSHIP****Yash Agrawal**

- Received Grant for research visit and prospective collaboration with Technical University of Munich (TUM), Germany

**JOURNAL EDITORSHIP****Anish Mathuria**

- Associate Editor, Sadhana, Indian Academy of Sciences

**Bhaskar Chaudhury**

- Guest Editor, Special Issue "Finite Difference Methods: Recent Developments and Applications in Computational Science," Journal of Computational Science, Elsevier

**Hemant A. Patil**

- Member, Editorial Board, Engineering Letters, International Association of Engineers

**Manik Lal Das**

- Associate Editor, IEEE Transactions on Dependable and Secure Computing, IEEE

**Manish K Gupta**

- Associate Editor, Journal of Applied Mathematics and Computation, Springer
- Associate Editor, AIMS Electronics and Electrical Engineering, AIMS Press



### Manish Khare

- Member, Editorial Board, Journal of Advanced Computing and Communication Technologies (JACOTECH), Fifth Direction IT Consulting Pvt. Ltd.

### Prasenjit Majumder

- Associate Editor, ACM Transactions on Asian and Low-Resource Language Information Processing, Association for Computing Machinery (ACM)
- Issue Editor, SN Computer Science Journal, Springer Nature

### Sanjeev Gupta

- Member, Editorial Board, International Journal on Science and Technology
- Member, Editorial Board, International Journal of Engineering and Technology Management

### Suman Kumar Mitra

- Associate Editor, International Journal on Image and Graphics (IJIG), World Scientific Press
- Associate Editor, IET Image Processing, IET

### Yash Agrawal

- Member, Editorial Board, Journal of Electronic Research and Application (JERA), Bio-Byword Scientific Publishing
- Member, Editorial Board, Frontiers of Mechatronical Engineering (FME), EnPress Publisher
- Member, Editorial Board, Signal and Information Processing, Whoice Publishing Pte. Ltd.

## REVIEWING OF BOOK/JOURNAL/ CONFERENCE PAPERS

### Book/Book Chapter Reviewing

#### Madhumita Mazumdar

- Madhumita Mazumdar, Review of *Meat, Mercy, Morality: Animals and Humanitarianism in Colonial Bengal, 1850-1920*, by Samiparna Samanta, Oxford University Press, February 2019
- Madhumita Mazumdar, Review of *Relational Lives: Subjectivities and "History" across Asia, Africa, and Europe*, edited by Heike Liebau and Nils Riecken, Palgrave Macmillan, May 2019

#### Manish K Gupta

- Manish K Gupta, Review of *Polar codes : a non-trivial approach to channel coding*, by Gazi O., Computing Reviews, 7 March 2019, Review #: CR146462
- Manish K Gupta, Review of *Cybercryptography : applicable cryptography for cyberspace security*, by Yan S., Computing Reviews, 3 May 2019, Review #: CR146559

### Journal Paper Reviewing

#### Anish Mathuria

- International Journal of Information Security, Springer

#### Anjan Kumar Ghosh

- Optical Engineering, SPIE
- Applied Optics, The Optical Society
- IEEE Sensors Journal, IEEE
- IET Optoelectronics, IET

#### Bhaskar Chaudhury

- Physics of Plasmas, American Institute of Physics
- IEEE Transactions on Plasma Science, IEEE
- Journal of Physics D: Applied Physics, Institute of Physics
- IEEE Transactions on Microwave Theory and Techniques, IEEE
- Journal of Electromagnetic Waves and Applications, Taylor & Francis
- European Physical Journal: Applied Physics, EDP Sciences
- Journal of Applied Physics, American Institute of Physics
- Plasma Sources Science and Technology, Institute of Physics
- Journal of Parallel and Distributed Computing, Elsevier

#### Deepak Ghodgaonkar

- IEEE Transactions on Instrumentation and Measurement, IEEE
- IEEE Transactions on Microwave Theory and Techniques, IEEE
- IEEE Transactions on Antennas and Propagation, IEEE

#### Jaideep Mulherkar

- Quantum Information Processing, Springer
- Advanced Quantum Technologies, Wiley

#### Hemant A. Patil

- IEEE Transactions on Information Forensics and Security, IEEE
- Computer Speech and Language, Elsevier

#### Kalyan Sasidhar

- IEEE Transactions in Measurement and Instrumentation, IEEE

#### Manik Lal Das

- IEEE Transactions on Services and Computing, IEEE
- IEEE Systems Journal, IEEE
- IEEE Transactions on Cloud Computing, IEEE

#### Manish K Gupta

- Mathematical Reviews, American Mathematical Society

**Manish Khare**

- Pattern Recognition Letters, *Elsevier*
- IEEE Access, *IEEE*
- IEEE Signal Processing Letters, *IEEE*
- IEEE Transaction on Image Processing, *IEEE*
- KSII Transactions on Internet and Information Systems, Korea Society for Internet Information
- The Imaging Science Journal, *Taylor & Francis*
- SPIE Electronic Imaging Journal, *SPIE*
- IET Image Processing, *IET Publication*
- Information Sciences, *Elsevier*
- Journal of Healthcare Engineering, *Hindawi*
- Signal Image and Video Processing, *Springer*
- IET Computer Vision, *IET Publication*
- Journal of Medical Imaging and Health Informatics, *American Scientific Publisher*
- International Journal on Computational Vision and Robotics, *Inderscience Publication*
- Mobile Information Systems, *Hindawi*

**Nabin Kumar Sahu**

- Journal of Applied Mathematics and Computing, *Springer*
- Asian European Journal of Mathematics, *World Scientific*

**Puneet Bhateja**

- Mobile Networks and Applications, *Springer*

**Sanjeev Gupta**

- Journal of Electromagnetic Waves and

Applications, *Taylor & Francis*

- Progress in Electromagnetic Research (PIER), *The Electromagnetics Academy*
- International Journal of Applied Electromagnetics and Mechanics, *IOS Press*
- IET Circuits, Devices and Systems Journal, *IET Publishing*
- Indian Journal of Physics, *Springer Science+Business Media*
- Journal of the Indian Institute of Science, *Springer*
- Journal of Biomedical Research, *Nanjing Medical University*
- Iranian Journal of Electrical and Computer Engineering, *Iranian Research Institute for Electrical Engineering*
- International Journal on Science and Technology
- ICTACT Journal of Communication Technology, *ICTACT*
- ADIT Journal of Engineering, *A. D. Patel Institute of Technology*

**Saurabh Tiwari**

- IEEE Access: the Multidisciplinary Open Access Journal, *IEEE*
- IET Software Journal, *IET Publishing*

**Srimanta Mandal**

- IEEE Transactions on Image Processing, *IEEE*
- IEEE Transactions on Cybernetics, *IEEE*
- Signal Processing, *Elsevier*
- Multidimensional Systems and Signal Processing, *Springer*





- Journal of Optical Society of America A, *Optical Society of America*
- ISPRS Journal of Photogrammetry and Remote Sensing, *Elsevier*

#### **Tapas Kumar Maiti**

- IEEE/ASME Transactions on Mechatronics, *IEEE*

#### **Yash Agrawal**

- IEEE Transactions on Electromagnetic Compatibility, *IEEE*
- IEEE Transactions on Nanotechnology, *IEEE*
- IEEE Transactions on Electron Device, *IEEE*
- IET Circuits, Devices and Systems *IET Publishing*
- IET Electronics Letters *IET Publishing*
- IET Micro and Nano Letters *IET Publishing*
- IET Microwaves, Antennas and Propagation *IET Publishing*
- IET Power Electronics *IET Publishing*
- World Scientific Journal of Circuits, Systems, and Computers, World Scientific
- International Journal of Circuit Theory and Applications, *John Wiley & Sons Ltd*
- International Journal of Numerical Modelling of Electronic Networks, Devices and Fields, *John Wiley & Sons Ltd*
- COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, *Emerald Publishing Ltd*
- Microelectronics Journal, *Elsevier*
- Microelectronics Reliability, *Elsevier*.

#### **Conference Paper Reviewing**

##### **Anish Mathuria**

- Second ISEA International Conference on Security and Privacy (ISEA-SP), Jaipur, 9-13 January 2019.

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

- International Conference on Acoustics, Speech, and Signal Processing, Brighton, UK, 12-17 May 2019
- Asia-Pacific Signal and Information Processing Association Annual Summit and Conference, Honolulu, USA, 12-15 November 2018.
- INTERSPEECH 2018, Hyderabad, 02-06 September 2018.
- Sixth International Workshop on Spoken Language Technologies for Under-resourced Languages (SLTU'18), Gurugram, Delhi, 29-31 August 2018.

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

- International Conference on Distributed Computing and Internet Technologies (ICDCIT 2019), Bhubaneswar, 9-12 January 2019.
- ISEA International Conference on Security and Privacy, Jaipur, 9-11 January 2019.

##### **Manish Khare**

- Eleventh Asian Conference on Intelligent Information and Database Systems (ACIIDS 2019), Yogyakarta, Indonesia, 8-11 April, 2019.

##### **Srimanta Mandal**

- Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2018), Hyderabad, 18-22 December 2018





**Yash Agrawal**

- Fourth International Conference on Fuzzy Systems and Data Mining (FSDM 2018), Bangkok, Thailand, 16-19 November 2018
- Fifth IEEE International Conference on Electronics, Computing and Communication Technologies (IEEE CONNECT 2019), Bangalore, 26-27 Jul. 2019

**INVITED LECTURES/TALKS/COURSES****Amit Bhatt**

- Edge computing on ARM processors, University of Vienna, University of Aurel Vlaicu, Arad, Romania and Obuda University Budapest, March 2019

**Amit Mankodi**

- Selected Topic in Operating Systems, Anchor Institute Program (AIP), DA-IICT, Gandhinagar, 13-17 May 2019
- Advanced .NET and C#, Anchor Institute Program (AIP), DA-IICT, Gandhinagar, 10-14 Jun 2019
- Python Programming, Six weeks course on Analytics in Agriculture, DA-IICT and Amnex joint venture, 10-21 Jun 2019

**Anish Mathuria**

- Bitcoin Key Management, TEQIP III Sponsored Faculty Development Program on Blockchain Technology, Sardar Vallabhbhai National Institute of Technology, Surat, 4 June 2019.

**Arnab Kumar Ray**

- A white hole under the tap, Ahmedabad University, Ahmedabad, 6 March 2019

**Hemant A. Patil**

- Voice Conversion: Challenges and Opportunities, Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA-ASC), Honolulu, Hawaii, USA, 12-15 November 2018.
- Spoofing Attacks in Automatic Speaker Verification: Analysis and Countermeasures, INTERSPEECH 2018, Hyderabad, 2 September 2018.

**Kalyan Sasidhar**

- IoT and Applications, AD Patel Institute of Technology, Anand, February 2019

**Madhumita Mazumdar**

- Corral and Confine-Colonization and Displacement in the Andaman Islands, Spaces of Occupation Workshop, University of Nottingham Malaysia, Kuala Lumpur, Malaysia, 27 May 2019
- Feminist interventions in online learning, Conference on "Women in the Digital Age," IIT

Gandhinagar, 12 March 2019

- Designing ICT content for Vulnerable Communities, Information Communication Technologies and Development Conference, IIM Ahmedabad, 4-7 January 2019

**Manish K Gupta**

- The beauty of Indian Mathematics, Conference on Ancient Indian Scientist and their contributions, Dindyal Upadhyay Gorakhpur University, Gorakhpur, 23-24 January 2019
- Who Wants to Be a Millionaire?, DST Inspire Science Camp, Bhatinda, Punjab, 26 December 2018
- The Magic of DNA, Department of Biological Engineering, IIT Gandhinagar, 24 August 2018
- The Mathematics of DNA Codes, 84th Annual Indian Mathematical Society Conference, Shri Mata Vaishno Devi University, Jammu, November 2018

**Pankaj Kumar**

- Data analysis and visualization, PP Savani University, Dhamdod, Gujarat, 24 November 2018

**Puneet Bhateja**

- A theoretical framework for testing cyber-physical systems, 6th International Conference on Control, Decision and Information Technologies (CoDIT-2019), Paris, France, 23-26 April 2019

**Sanjeev Gupta**

- Integrated Active Antennas: Challenges and Design Issues, Six-Day Short Term Training Program on "Recent Trends in Antenna Design," Charotar University of Science and Technology (CHARUSAT), Changa, Gujarat, 22 February 2019
- Microstrip Patch Antennas, GUJCOST sponsored workshop on "Recent Trends in Antenna Design," Indus University, Ahmedabad, 8 Jul. 2019

**Srimanta Mandal**

- Evolution of Super-resolution Imaging Techniques, Sarvajanic College of Engineering and Technology, Surat, Gujarat, February 2019
- Background for Pattern Recognition, Government Engineering College, Gandhinagar, June 2019

**Sunitha Vadivel Murugan**

- Advances in Graph Theory with Applications to Network Sciences, QIP short term course and CEP, IIT BHU, Varanasi, August 2018



### **Yash Agrawal**

- Nanoscale Devices and Circuits, Faculty Development Programme, NIT Warangal, hosted by E&ICT Academy, 21-22 June 2019

### **Yash Vasavada**

- Index Modulation for 5G Communication, CR Rao Advanced Institute of Mathematics, Statistics and Computer Science (AIMSCS), Gachibowli, Telangana, 21 January 2019
- An Introduction to Regression Methods, Silver Oak College, Ahmedabad, 26 December 2018
- Index Modulation for Next Generation Wireless Systems, IIIT Delhi, New Delhi, 8 March 2019

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

#### **Anjan Kumar Ghosh**

- International Conference on Fiber Optics and Photonics, 12-15 December 2018, IIT Delhi, New Delhi
- The IEEE Region 10 Symposium 2019, Kolkata, 7-9 June 2019,

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

- Session Co-Chair, Asia-Pacific Signal and Information Processing Association Annual Summit and Conference, Honolulu, Hawaii, USA, 12-15 November 2018.
- Session Chair, INTERSPEECH 2018, Hyderabad, India, 2-6 September 2018.
- Session Chair, 6th international workshop on spoken language technologies for under-resourced languages (SLTU'18), Gurugram, Delhi, 29-31 August 2018.
- Summer School on Speaker Recognition and Diarization, DA-IICT, Gandhinagar, 06-10 Jul. 2019.
- Brainstorming Workshop on Spoken Language Translation, IIIT Hyderabad, 31 January-1 February 2019.
- Winter School on Speech and Audio Processing (WiSSAP), College of Engineering Trivandrum, Trivandrum, 27-29 January 2019.
- Workshop on Neural Systems-Science and Engineering, Indian Institute of Science Bangalore, 22-25 January 2019.
- Summer School on Speech Production (a satellite event of INTERSPEECH 2018), DA-IICT

Gandhinagar, 9-11 September 2018.

- Presented a research paper, Machine Learning in Speech and Language Processing Workshop, Hyderabad, 6 September 2018.
- Samsung AI Conclave, Samsung Research Institute, Bengaluru, 23 August 2018.

#### **Kalyan Sasidhar**

- Eleventh International Conference on Communication Systems & Networks (COMSNETS), 7-11 January 2019

#### **Manish K Gupta**

- Conference on Ancient Indian Scientist and their contributions, Dindyal Upadhyay Gorakhpur University, Gorakhpur, 23-24 January 2019
- DST Inspire Science Camp, Bhatinda, Punjab, 26 December 2018
- Eightyfourth Annual Indian Mathematical Society Conference, Shri Mata Vaishno Devi University, Jammu, 27-30 November 2018.

#### **Pankaj Kumar**

- Presented, Application for Defense using Matlab toolbox, Matlab for Defence, University of South Australia Mawson Lakes, June 2019

#### **Puneet Bhateja**

- Sixth IEEE International Conference on Control, Decision and Information Technology, Paris, France, 23-26 April 2019

#### **Sanjeev Gupta**

- GUJCOST sponsored workshop on "Recent Trends in Antenna Design," Indus University, Ahmedabad, 8 July 2019.

#### **Saurabh Tiwari**

- Twentyfifth Asia Pacific Software Engineering Conference (ASPEC 2018), Nara, Japan, 4-7 December 2018
- Twelfth Innovations in Software Engineering Conference (ISEC 2019), Pune, 14-16 February 2019, India
- Sixth International Workshop on Quantitative Approaches to Software Quality (QuASoQ 2018), in conjunction with the 25th Asia-Pacific Software Engineering Conference (APSEC 2018), Nara, Japan, 4 December 2018
- Workshop on Application of Artificial Intelligence in Software Quality Assurance (AiSQA 2019), co-located with the 12th Innovations in Software Engineering Conference (ISEC 2019), Pune, 14 February 2019

**Srimanta Mandal**

- Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2018), Hyderabad, 18-22 December 2018
- New Trends in Signal Processing, Surat, 8-9 February 2019

**Yash Agrawal**

- Workshop on Faculty Development Programme on Image Processing using VLSI Architectures, IIT Roorkee, 26-30 March 2019

**CONFERENCES/WORKSHOPS COORDINATED****Hemant A. Patil**

- Organized, Satellite Workshop (of INTERSPEECH 2018) on Speech Production, DA-IICT, Gandhinagar, 9-11 September 2018.
- Organized, Summer School on Speaker Recognition and Diarization, DA-IICT, Gandhinagar, 6-10 July 2019.

**Manik Lal Das**

- Conducted, Workshop on 'Blockchain Technology and Applications,' 7-8 July 2018, DA-IICT, Gandhinagar.

**Manish Khare**

- Organized special session on 'Computational Imaging on Vision (CIV 2019),' 11th Asian Conference on Intelligent Information and Database Systems (ACIIDS 2019), Yogyakarta, Indonesia, 8-11 April 2019.
- Conducted 5 day training program 'Image Processing using VLSI Architecture,' supported by the Center of Entrepreneurship Development (CED), Department of Industries and Mines, Government of Gujarat, DA-IICT Gandhinagar, 20-24 May 2019.

**Nabin Kumar Sahu**

- Organized special session 'AMS Special Session on Optimal Methods in Applicable Analysis: Variational Inequalities, Low Rank Matrix Approximations, Systems Engineering, Cyber Security, I,' Joint Mathematics Meeting of American Mathematical Society, Baltimore, USA, 16-19 January 2019.

**Prasenjit Majumder**

- General Chair (overall Coordinator), 'Forum for Information Retrieval Evaluation 2018 (FIRE 2018),' DA-IICT, Gandhinagar, 6-9 December 2019

**Saurabh Tiwari**

- Conducted, WESEE 2019: 2nd edition of the Workshop on 'Emerging Software Engineering Education,' CoEP Pune, 14 February 2019, co-located with 12th Innovations in Software Engineering Conference, ISEC 2019, 14-16 February 2019.

**Yash Agrawal**

- Conducted One Week workshop on 'Image Processing using VLSI Architectures,' 20-24 May 2019, DA-IICT Gandhinagar.
- Organized Short term course on 'Testing and Verification of VLSI design,' 7-9 December 2018, DA-IICT Gandhinagar.
- Conducted one week workshop on 'Device Modeling and Circuit Simulation for Integrated Circuit Designs,' 10-14 December 2018, DA-IICT Gandhinagar.

**Yash Vasavada**

- Conducted Winter School on 5G Communications, DA-IICT, Gandhinagar, 7-8 December 2018.

**CONFERENCE PROGRAM COMMITTEE****Anish Mathuria**

- Member, Program Committee, 2nd ISEA International Conference on Security and Privacy (ISEA-SP), Jaipur, 9-13 January 2019.
- Member, Program Committee, 3rd Workshop on Blockchain Technologies and its Applications, Mumbai and Hyderabad, 4-7 February 2019.

**Bakul Gohel**

- Member, Program Committee, Workshop on Deep Learning, DA-IICT, Gandhinagar, 29-31 March 2019

**Hemant A. Patil**

- Chair, Organizing Committee, ISCA Supported Summer School on Speaker Recognition and Diarization, DA-IICT, Gandhinagar, 6-10 July 2019.
- Chair, Organizing Committee, ISCA Supported Satellite Workshop, INTERSPEECH 2018, Speech Production, DA-IICT Gandhinagar, 9-11 September 2018.

**Manik Lal Das**

- Member, Technical Program Committee, International Conference on Distributed Computing and Internet Technologies (ICDCIT



2019), Bhubaneswar, 9-12 January 2019.

- Member, Technical Program Committee, ISEA International Conference on Security and Privacy, Jaipur 9-11 January 2019.

#### **Manish Khare**

- Member, Program Committee, 11th Asian Conference on Intelligent Information and Database Systems (ACIIDS 2019), Yogyakarta, Indonesia, 8-11 April 2019.
- Member, International Scientific Committee, International Joint Conference on Computer Vision and Pattern Recognition (CCVPR 2018), Wellington, New Zealand, 14-16 December 2018.
- Member, Program Committee, International Conference on Control Automation & Information Sciences (ICCAIS 2018), Hangzhou, China, 24-27 October 2018.

#### **Sanjeev Gupta**

- Member, Organising Committee, Young Professionals (YP) in Space & Engineering, 2nd Indian Conference on Antennas and Propagation (InCAP2019), Ahmedabad, 19-22, December 2019.
- Member, National Advisory Board, International Conference on Advances in Electronics and Communication Devices (AECD), Jaipur, 5-6 April 2019.

#### **Srimanta Mandal**

- Member, Organizing Committee, Summer School on Speech Signal Processing (S4P), DA-IICT, Gandhinagar, 6-10 July 2019.

#### **Suman Kumar Mitra**

- Member, Program Committee, International Conference on Computer Vision, and Image Processing (CVIP 2018), IIIT Jabalpur, 29 September-1 October 2018.

### **SPONSORED RESEARCH PROJECTS**

#### **Anil Kumar Roy**

- Principal investigator, Value Addition in Grassroots Technologies, Sponsor: National Innovation Foundation, Duration: 2011-2019

#### **Bhaskar Chaudhury**

- Principal Investigator, Multiscale Modeling and Simulation of complex Plasma Dynamics during High Power Millimeter Wave Breakdown,

Sponsor: SERB (DST, New Delhi), Duration: 2019-2022

- Principal Investigator, Kinetic Modeling of Large size Negative Ion Sources for Fusion Application, Sponsor: DAE-BRNS; Duration: 2016-2020

#### **Deepak Ghodgaonkar**

- Principal Investigator, Development of Microwave Absorber (Carbonyl Iron Filled Silicon Rubber Sheets) in 1 to 8 GHz range, Sponsor: Space Application Centre, ISRO, Ahmedabad (RESPOND Program), Duration: 2017-2020.

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

- Principal Investigator, Speech-Based Access of Agricultural Commodity Prices and Weather Information in 11 Indian Languages/Dialects, Sponsor: Department of Information Technology (DIT), Ministry of Communications & Information Technology, Government of India, Duration: 2014-2018
- Co-investigator Investigator, India Digital Heritage (IDH) – A DST Initiative, Sponsor: Department of Science and Technology (DST), Government of India, Duration: 2014-2018

#### **Kalyan Sasidhar**

- Co-Principal Investigator, Using mobile sensing mechanism to assess smartphone addiction and its negative impact on students, Sponsor: ICSSR, Duration: 2019-2020.

#### **Manik Lal Das**

- Principal Investigator, Study of Privacy, Accountability and Ownership in IoT. Sponsor: Department of Science and Technology, Government of India under Indo-French Collaborative Research Programme under DST-INRIA-CNRS Targeted Programme, Duration: 2016-2019.

#### **Manish K Gupta**

- Principal Investigator, Archival DNA Data Storage. Sponsor: DST-DAAD (Indo-German), Duration: 2019-2020.

#### **Prasenjit Majumder**

- A Platform for Crosslingual and Multilingual Event Monitoring in Indian Languages, Sponsor: IMPacting Research, INnovation and Technology (IMPRINT), Ministry of Human Resource Development, Duration: 36 Months

**Rajib Lochan Das**

- Co-Principal Investigator, Design and Simulation of Beamforming Algorithms and Baseband Technologies for the Satellite on the Move (SOTM) Networks, Sponsor: ISRO, Ahmedabad (RESPOND Program), Period: 2019-2021

**Sanjeev Gupta**

- Co-Principal Investigator, Development of Microwave Absorbers (Carbonyl Iron filled Silicon Rubber Sheets) in 1 to 8 GHz Range, Sponsor: Space Application Centre, ISRO, Ahmedabad (RESPOND Program), Duration: 2017–2020
- Co-Principal Investigator, Ultra Wideband Dielectric Resonator Antenna, Sponsor: Space Application Centre, ISRO, Ahmedabad, Duration: 2015-2018

**Saurabh Tiwari**

- Principal Investigator, UCMA: a Toolset to Automatically Analyze Functional Requirements Specified in the Use Cases, Sponsor: Science and Engineering Board (SERB), Government of India, Duration: 2017-2019

**Sunitha Vadivel Murugan**

- Principal Investigator, Design and Development of Graph Algorithms for Control of Complex Networks with Applications in Computational Biology, Sponsor: Science and Engineering Research Board, Department of Science and Technology, Government of India, Duration: 2018-2021

**Yash Vasavada**

- Principal Investigator, Design and Simulation of Beamforming Algorithms and Baseband Technologies for the Satellite On The Move (SOTM) Networks, Sponsor: ISRO, Ahmedabad (RESPOND Program), Period: 2019-2021

**VISIT TO INSTITUTES/ INDUSTRIES****Amit Mankodi**

- Indus University, Ahmedabad, External Examiner for CE410808 - Major Project, 6 May 2019

**Anish Mathuria**

- Indian Institute of Technology Jammu, 14-15 June 2019

**K. S. Dasgupta**

- Electronics & Quality Development Centre, Gandhinagar, 26 September 2018

**Sanjeev Gupta**

- Nirma University, Ahmedabad, Doctoral Research Committee (DRC) Meeting, 10 August 2018
  - Nirma University, Ahmedabad, 3rd Advisory Committee Meeting of Faculty of Directorate of Research and Innovation, 18 August 2018
  - Nirma University, Ahmedabad, 36th Meeting of Faculty of Doctoral Studies and Research, 20 September 2018
  - Pandit Deendayal Petroleum University, Gandhinagar, PhD Review and Comprehensive Examination, 24 September 2018
  - Nirma University, Ahmedabad, Research Progress Committee (RPC) Meeting, 12 October 2018
  - Meeting with Principal Secretary, Higher and Technical Education and Additional Chief Secretary, Government of Gujarat, Gandhinagar, 30 November 2018.
  - Meeting with Principal Secretary, Higher and Technical Education and Additional Chief Secretary, Government of Gujarat and Delegates from University of Houston, Gandhinagar, 8 December 2018.
  - iCreate (International Centre for Entrepreneurship and Technology), Ahmedabad, Meeting with Senior Officials, 19 December 2018
  - Gujarat Technological University (GTU), Ahmedabad, External Examiner for PhD students at Research Week, 27 December 2018
  - Gujarat Technical University (GTU), Ahmedabad, Meeting of Doctoral Research Committee (DRC) for scrutiny of applications for PhD Supervisors in discipline of EC Engineering, 28 December 2018.
  - Manipal University, Jaipur, PhD Thesis Examination, 18 January 2019
  - Nirma University, Ahmedabad, Pre-Synopsis Seminar of PhD students, 10 August 2018
  - Nirma University, Ahmedabad, Meeting of Research Promotion Committee (RPC), 14 February 2019.
- Saurabh Tiwari**
- Mälardalen University, Sweden, Post-doctoral Research Fellow, January-October 2018



- Volvo Construction Equipment AB, Sweden, Research Fellow in collaboration with Mälardalen University, Sweden, on Model-Based Systems Engineering (MBSE), 1 January-October 2018.

#### **Sunitha Vadivel Murugan**

- Institute of Mathematical Sciences, 19-23 November 2018
- Institute of Mathematical Sciences, 13 April-12 July 2019

#### **CONSULTANCY WORK**

##### **Bakul Gohel**

- Mentor, Neuro-Track-3D, Sponsors: Student Startup and Innovation Policy Grant

##### **Sanjeev Gupta**

- Faculty Mentor, CEID Start-up Avadhuta Antennaz Solutions Pvt. Ltd.

#### **AWARDS/HONOURS**

##### **Bhaskar Chaudhury**

- Best Poster Award, "Convolutional Neural Networks for Predicting Highest Priority Functional Group in Organic Molecules," at 25th IEEE International Conference on High Performance Computing, Data, and Analytics (HiPC 2018), 17-20 December 2018

##### **Hemant Patil**

- APSIPA Distinguished Lecturer, 2018-2019

##### **Saurabh Tiwari**

- Best Paper Award, "Adopting MBSE in Construction Equipment Industry: An Experience Report," at 25th Asia Pacific Software Engineering Conference (APSEC 2018), 4-7 December 2018
- Early Career Research Award (Individual centric), "two year R&D project," Science and Engineering Board (SERB), Department of Science and Technology (DST), Government of India.

##### **Srimanta Mandal**

- Best paper award (runner-up), Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2018), Hyderabad, 18-22 December 2018

#### **COLLABORATIVE ACTIVITIES FOR RESEARCH**

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

- Collaborative research with University Clermont Auvergne, France on the project Study of Privacy, Accountability and Ownership in IoT

##### **Nabin Kumar Sahu**

- Collaborative research with Prof. Ram N. Mohapatra, Professor, Department of Mathematics, University of Central Florida, Orlando, USA

#### **ANY OTHER SIGNIFICANT CONTRIBUTIONS**

##### **Deepak Ghodgaonkar**

- External Examiner-PhD, Faculty of Science, University Putra Malaysia (UPM), Malaysia, June 2019.
- External Examiner-PhD, Faculty of Electrical Engineering, Universiti Teknologi, MARA, Shah Alam, Selangor, Malaysia, December 2018 & January 2019.
- External Expert, Department Promotion Committee (SC to SD), Space Application Centre, ISRO, Ahmedabad, 24 December 2018.
- Participated in Vibrant Gujarat StartUp and Technology Summit, Gandhinagar, 11-13 October 2018
- Branch Chapter Counsellor, IEEE Microwave Theory and Techniques Society, since November 2018.

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

- Doctoral Thesis Examiner, School of Electrical and Telecommunications, The University of New South Wales (UNSW), Sydney, Australia, 24 December 2018

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

- Thesis Supervisor of Best Thesis Award, "Dixita Limbachyia, On Designing DNA Codes and their Applications," International Conference on Signal Processing and Communications (SPCOM 2018)

## Faculty and Staff Updates

### FACULTY

The faculty consisted of regular faculty, adjunct faculty on full time on a semester basis and visiting faculty who taught specialized courses in all programs. The list of faculty is given in

#### **Annexure 3.**

### New Faculty

The following faculty have joined the Institute during 2017-18:

1. Anjan Ghosh as Professor on 13 September 2018
2. Srimanta Mandal as Assistant Professor on 04 October 2018
3. Vinay Palaparthi as Assistant Professor on 04 December 2018
4. Priyanka Singh as Assistant Professor on 18 April 2019
5. Supantha Pandit as Assistant Professor on 24 April 2019
6. Abhishek Jindal as Assistant Professor on 10 June 2019
7. Tapas Kumar Maiti as Associate Professor on 17 June 2019
8. Ahlad Kumar as Assistant Professor on 22 July 2019
9. Shruti Bhilare as Assistant Professor on 31 July 2019

### Faculty Resignation

1. Laxminarayana Pillutla, Associate Professor on 05 November 2018
2. Rajendra Mitharwal, Assistant Professor on 12 February 2019
3. Amishal Modi, Visiting Assistant Professor on 31 July 2019 (contract ended)

### STAFF

#### New Staff

1. Nitu Singh Bhadouria as Student Counselor on 01 January 2018
2. Pankit Gandhi as Secretary on 01 August 2018
3. Shreejesh Kumar as Secretary on 01 August 2018
4. Madesh Gowda T.M. as Library Trainee on 01 August 2018
5. M D Tariqul Islam as Library Trainee on 01 August 2018
6. Pratibha Kumari as Library Trainee on 01 August 2018
7. Alpesh Chauhan as Accounts Assistant on 03 October 2018
8. Parth Vayeda as CEP Officer on 04 October 2018

#### Staff Resignation

1. M D Tariqul Islam, Library Trainee on 29 June 2019
2. Shreejesh Kumar, Secretary on 26 July 2019





## Student Activities and Achievements

The students plan, organize and enjoy a rich array of activities on campus encompassing cultural, social and educational contents through students' bodies and clubs. They range from music concerts, theaters, folk and classical dances to coding, educational and professional competitions. The Student Body Government (SBG), an elected body of the students consisting of 7 Committees and some 15 Student Clubs provides leadership to these activities. The Institute of Electrical and Electronics Engineers (IEEE) Student Branch at DA-IICT constantly promotes the opportunities that exist in the field of electronics and electrical engineering among students through various educational programs. These activities provide a variety of engagement opportunities to students on the campus and what is learned through organizing and managing them inculcates leadership qualities and communication skills in them, which directly correlate with skills and attributes that employers are seeking of our graduates.

### STUDENT ACTIVITIES

#### Cultural Committee

##### Cultural Weekend (3-5, August)

The cultural weekend was specially organized for the freshers to make them feel comfortable on the



campus and make new friends. The 3-day long event had Cafeteria day, Student Activity Centre (SAC) day and Open Air Theater (OAT) day. Cafeteria day had a treasure hunt organized for the freshers. The SAC day saw some fun events like tug of war, spin and kick and boom with your bum. Finally, on OAT day housie, painting, rangoli, sketching competitions and karaoke night were conducted.

##### Eid (22 August)

The celebration of all festivals is the speciality of the Cultural Committee. Eid was celebrated by distributing sweets among the student community.

##### Janmashtami (3 September)

Janmashtami, the birthday of Lord Krishna, was celebrated with great enthusiasm. The students participated in 'Matki-Fod,' regarded as one of the most celebrated festivals at DA-IICT.





**Teachers' Day (5 September)**

The invites for the Teachers' Day were hand-made by the first-year students. The freshers dedicated to the teachers the musical performance, drama, dance act, stand up comedy and pieces of poetry. The students also honoured their teachers by presenting them with mementos.

**Ganesh Chaturthi (13-15 September)**

Ganesh Chaturthi was celebrated on campus. The celebration ended with immersion of idol of Lord Ganesh.

**Maniere (20 September)**

The Fashion Night, Maniere, acts as a window for the fashion enthusiasts to showcase their skills as costume designers, thinkers, presenters and show stoppers. Displaying creative and inspiring concepts through fashion designing and ramp walks are the USP of Maniere. The students, individually and as groups presented traditional and modern attire designs before the audience.

**Raaga and Rhyme (1-2 October)**

Raaga and Rhyme is a music and rhyme competition where students from all batches participated. It included solo, duet, instrumental and group performances of Indian and Western music.

**Garba Night (17 October)**

Navratri festival is celebrated to worship the nine forms of Goddess Durga, the Goddess of Power. The campus had its share of celebrations on the fifth day of the festival. The students from other Institutions also participated. A group of over 1000 students played Garba in traditional attire and also danced to the beats of the DJ.

**Ramleela (22 October)**

The victory of Lord Ram over Ravan was celebrated through a dramatic enactment of the story of the victory of good over evil. The play was specifically

directed by sophomores and the actors were mostly the freshers. It served as a good confidence booster for freshers. Ravan Dahan, the burning of the effigy of Ravan, the demon King was carried out after Ramleela.

**Diwali (27 October)**

Diwali, the most celebrated festival, encountered a semester break for the students. The students who stayed back on campus celebrated Diwali in traditional manner.

**Rangmanch Drama Night (9 April)**

The drama night had three categories: Stage play, Mime and Felicity. Four stage plays and two mime performances were staged. Students from all batches participated with great enthusiasm.

**Lohri (14 January)**

Lohri is a popular Punjabi folk festival celebrated in the northern regions of the country. It marks the end of the winter season and welcoming the longer days and the Sun's journey to the northern hemisphere. The students gathered at the venue in large numbers, enjoyed the warmth of the bonfire and each other's companionship.

**Makarsankranti (15 January)**

Makar Sankranti or Uttarayan refers both to a specific solar day in reverence to deity Surya (Sun) that is observed in January every year. It marks the first day of Sun's transit into the Makara (Capricorn), marking the end of the month with the winter solstice and the start of longer days. Being the first festival after the winter vacation, students enthusiastically flew kites.

**Waltz-Dance Night (21 January)**

Dance Nite or Waltz is a dance competition where students from all batches show their enthusiasm and energy in the form of mesmerizing dance performances. Three categories under this event solo, duet/trio and group, were conducted.



## Sports Committee

### Inter-hostel wing Tournaments

(August - October)

The Sports Committee organized Inter-hostel wing tournaments. The main aim of the tournament was to drive the interest of students towards sports for their overall development. The tournaments included Badminton, Table Tennis, Volleyball, Basketball, Chess, Cricket and Football. A Captain was selected for each hostel wing to make teams. The PG students who do not live in hostels participated by forming their own teams. The tournament was conducted at the beginning of the semester so that the new batches could showcase their talent and meet the seniors of similar talent.

### Concours 2018: Annual Sports Festival

(25-28 October)

Concours is recognized as one of the biggest sports festivals conducted by a University in Gujarat. Students from various Universities, Institutes, and Colleges took part in the festival. Sports were Badminton, Table Tennis, Volleyball, Basketball, Chess, Cricket and Football. Students from Pandit Deendayal Petroleum University, Gandhinagar, took away the overall Championship Trophy.



## Hostel Management Committee

### Cleanliness Drive

With the participation of inmates, Hostel Management Committee (HMC) worked as an interface between the administration and hostel inmates in keeping the hostels clean and to encourage cleanliness etiquette among hostels. The HMC members visited rooms, floors and evaluated them based on various parameters. The rooms and the floors with the highest marks were shortlisted and awarded on the final day.

## Annual Festival Committee

### Youth Run

The students organized the Youth Run, under the umbrella of the techno-cultural festival of Synapse to demonstrate their support for programs that lead to the betterment of society. It is a great display of what they are passionate about. The Youth Run 2018 was held on 27 October 2018 highlighting the initiatives of Gandhinagar Municipal Corporation and Sports Authority of Gujarat such as *Hum Fit toh India Fit*.

### Synapse 2019 (February 21-24)

Synapse is the annual techno-cultural fest of the students. It is the celebration of culture, technology



and life. It is a time when the student community comes forward to show its intensity, passion and enthusiasm -- be it through participating or organizing artistic, cultural and technology events. In the year 2019, the festival was held during 21-24 February. The festival ended with the celebrity night by Mr. Amit Trivedi, the talented playback icon singer. He mesmerized the crowd with his extraordinarily melodious voice.

### **Press Club**

#### **Freshers Creative Writing Contest (August 2018)**

The Press Club organized a creative writing contest for the freshers. The contest was aimed at motivating students to shed their inhibitions and share their creations with the community. The contest received a positive response from the freshers with some very brilliant creations.

### **DA-IICT Theatres Group**

#### **Gender Sensitization Play (2-3 August 2018)**

The sensitization play was performed specially for freshers to sensitize them about gender discrimination. The event started with a brief speech



on gender and sex by the Conveners of the Gender Cell, Kriti Upadhyay and Arnab Gupta, followed by a play written by Prof. Shweta Garg. The play had five segments covering topics such as female abuse and homosexuality. The response from the audience was overwhelming. Freshers were divided into groups of ten along with a mentor of the senior class and they held discussions leading to better interaction of the freshers with the seniors.

#### **Orientation Street Play and Mime (13 August 2018)**

The Orientation Street Play and Mime were performed for the freshers to make them aware of the theatrics events of DA-IICT and to welcome the new faces to be a part of the DTG family.

#### **Teachers Day Play (5 September 2018)**

The first Open Theatre event of the autumn semester is the chance for the freshers to showcase their talents. Under the auspices of the Theatre Group, a play is performed by the first-year students directed by the second-year students. This year's play was a treat with a few third-year and fourth-year students making special appearances. The play was quite gripping as the story revolved around DA-IICT, carrying few punches that cracked up the audience.

#### **Ramleela play (18 October 2018)**

Ram Leela play was performed on the occasion of Dusshera. The original story of Ram Leela was enacted with some creative twists and a witty and humorous story to make it lively. The play was followed by a monologue depicting the racial and caste system in society and what it would have been like if Lord Rama was witnessing them all. Enacted by first year students, it provided a good participating platform for them.

#### **Outstation Street Play and Stage Play (24-29 October 2018)**

The DA-IICT Theatres Group went for an outstation competition in BITS Goa's cultural fest (Waves) to



compete with teams from Colleges all over India. The Group performed well and had a great experience.

#### **IIMA instation Street Play (26th January 2019)**

The DA-IICT Theatres Group went for a competition in the cultural fest of IIM Ahmedabad-'Chaos' to compete with teams from different colleges all over Gujarat.

#### **NIFT instation Street Play (17 February 2019)**

The DA-IICT Theatres Group participated at the competition in the cultural fest of NIFT Gandhinagar-'Spectrum', to compete with teams from Colleges all over Gujarat. The Group bagged the second prize.

#### **Synapse Street Play, Stage Play and Mime (22nd February 2019)**

Synapse is the Annual Cultural fest of DA-IICT. Synapse has theatrical events like Street play, stage play, and mime. In these categories, different college drama clubs took part and performed. Street play is a powerful mode of theater because of its proximity between the audience and actors. Stage play has a live audience, a story, and stage performers. Mime is another mode of theatre where feelings are expressed not in words but through various forms of Drama. The DA-IICT Theatres Group participated in all these events with great enthusiasm. Each event had Judges (experienced artists from the theatre) and winners were selected by them. DA-IICT bagged 1st prize in Mime and 3rd prize in Street Play.

### **Sambhav**

#### **Blood Donation Camps**

The objective of the camp is to educate and spread blood donation awareness among the youth and its benefits. Two camps were organised, one in October 2018 with 118 donors and the second one in October 2019 with 142 donors.

#### **Visit to Orphanage**

Sambhav has been associated with Special Children Home, an orphanage, for many years. Students

visited the orphanage and interacted with the children ranging in the age group of 5-15 who were AIDS victims. For the majority of the students, this was their first such visit. The interactions they had with the children were enriching.

#### **Visit to Vigyan Shala**

Vigyan Shala, an initiative of Sambhav, with a group of DA-IICT student volunteers visited nearby schools in August 2018 and in February and April 2019 and demonstrated simple scientific experiments to school children. This was altogether a new learning and the School appreciated the initiative.

#### **Book Sale**

Sambhav carried out a book sale in August 2018 and January 2019. The primary aim of it was to collect used books from students and sell them to the students on campus at a lower price.

#### **Swachhata Hi Sewa**

A cleanliness drive was organized on 2nd October 2018 in collaboration with SBG to contribute towards the Swachhata Hi Seva Campaign. As a part of this initiative, the entire DA-IICT community joined hands in cleaning the area stretching from the DA-IICT wall adjacent to NIFT to Reliance Chokdi and surrounding areas.



### Electronics Hobby Centre

#### Orientation for first year B.Tech and M.Tech students (27 August 2018)

An orientation for first year B.Tech and M.Tech students on the activities of the club was conducted. Demonstrated some of the completed projects, such as Bluetooth Controlled Bot and CNC Plotter.

The club conducted the following activities:

#### Session I (18 September 2018)

Introduction to Arduino Board and other Microcontrollers.

#### Session II (1st October 2018)

“Dimming an LED” and “Creating your own Heart Beat Sensor”.

#### Session III (Planning for SSIP Hackathon) (14 November 2018)

Brainstorming session on project topics provided by SSIP Gujarat and discussion on implementation which included selection of projects and topics and teams.

#### Session IV (5 February 2019)

Making of Simple chat application between two Arduino Boards.

#### Session V (12 February 2019)

Demonstration of sensors, brainstorming on how it works. Implementation of Hand Gesture controlled VLC Media Player.

### Heritage Club

Smt. Shovana Narayan, a Padma Shri Awardee performed Kathak Dance on 4<sup>th</sup> September, 2018.

Shri Bhungar Khan, a Kartar Player, and his troupe performed Rajasthani folk music and dance on 5<sup>th</sup> February, 2019.

### Microsoft Student Technical Club

#### Orientation (16 August)

An orientation session was conducted for all the fresh students. Students were briefed on the club's activities.

#### HTML Session (27 September)

An introductory hands-on session of HTML was conducted for first year students in which they were briefed on Web Development and HTML.

#### JS Session (27 September)

Hands-on introductory session of JavaScript was conducted for second year students in which they were briefed on JavaScript and its applications.

#### CSS Session (1 October)

Hands-on introductory session of CSS was conducted in which students were informed of CSS, the language and its uses in industry.

#### ReactJS Session (4 October)

Hands-on introductory session of ReactJS was conducted in which students were told about the ReactJS library, its uses in industry, and how to start working with it.

#### Imagine Cup Session (31 October)

Imagine Cup is an annual competition conducted by Microsoft and large number of developers around the globe participate in it. An introductory session was conducted in order to familiarise the students with the competition.

#### Winter of Code (12 December – 14 January)

The program was conducted by MSTC in which the projects of different Development Stacks were presented to students from which they selected one and developed it from scratch. Winners were: Aniket Modi, Dhyey Gami, Param Modi, Neel Makadiya, Deven Vachhani and Meet Patel.



### **Flutter Session (19 January)**

A workshop on cross-platform app development using flutter was conducted. Over 150 students got an insight into real-world applications of cross-platform app development. Shri Parth Jansari, the co-founder of Zypher Tech. spoke at the session.

### **Face-off (11 April)**

The annual coding competition was held with twisted rules and regulations to make the challenge more interesting and trickier. With over 180 participants, the event was a huge success. Three prizes were given to the winners of the competition.

### **IEEE Student Branch DA-IICT**

#### **Engineers' Dilemma – 23 August 2018**

The event was organised in association with Endeavor Careers, Gandhinagar. It was a session on MBA/MS/CAT and 115 students participated. The session focussed on dilemma of Engineers choosing areas of higher studies and their processes.

#### **Tachyon'18 – 15 September 2018**

A two day bootcamp was conducted on Web Crawling, Web Scraping and Search Engine Optimization. One hundred and twenty seven students which included 20 IEEE members participated.

#### **i.Decipher – 28 September 2018**

The event was online where participants cracked the answer hidden behind a group of images. There were 150 participants including 100 IEEE members.

#### **i.OHunt – 3 October 2018**

The event was an online Treasure Hunt involving general knowledge and puzzle solving. The 150 participants included 100 IEEE members.

#### **Tic Tech Toe'18 – 8 October 2018**

The event was an online hackathon for app and web development. There were 180 participants including 130 IEEE members.

### **i.Fest '18 – 5-7 October 2018**

A three day annual technical fest involving over 23 technical, non-technical and fun events was conducted with over 2500 registrations. Every year, students from all over India participate and almost from all colleges in Gujarat. i.Fest is so popular that the techies come forward and boost industry interaction through various sessions and workshops. i.Fest introduced four new events this year: Roboclash, IoT auction, WIE Hackathon, and i.papyrus. Mr. Sharad Shukla, Scientist, ISRO and Mr. Bhavesh Manglani, Co-founder, Delhivery and RedBull Basement University spoke at the Fest.

#### **Tachyon – March 2019**

IEEE IAS DA-IICT Student Branch Chapter organized Tachyon'19, an all India Industry Applications Society Students Conclave, a three-day mega event. This witnessed an extraordinary conglomeration of in-vogue topics of a faster, newer world like 5G, Blockchain, Artificial Intelligence and Machine Learning.

#### **Synergy – 9 April 2019**

Synergy was organized by WIE. The event concentrated on Hardware and Software Project presentations. Seventy students have participated in the contest.

#### **Industry Application Society (IAS) DA-IICT Day Celebration – June 2019**

It was a workshop which had eminent speakers. They spoke on the IAS and its importance in today's technical world. Forty six students participated.

#### **Summer School – 17-23 June 2019**

Summer school is a seven day technical school organized by IEEE DA-IICT. It helps the students to enhance their skills in a particular technical field. In 2019, the topic was Machine Learning focusing on Android Studio and Blockchain. One hundred fifty students have participated.

### Workshop on Ethical Hacking and Cyber Security – 30 September-1 October 2018

The Workshop was on ethical hacking and machine learning. There were 83 participants including 66 IEEE members.

### IAS Webinar Screening – 10 September 2018

Two top IEEE IAS webinars were screened for students. Seventeen students have attended the screening.

### IEEE DA-ICT Student Chapter: 2018-19

The Chapter pursued its membership drive, mobilisation of scholarship fund and technical projects. The Chapter also organised weekly/ fortnightly events via its SIG Embedded, SIG Mobile Apps, SIG Machine Intelligence and SIG Humanitarian Technology. These sessions help the budding engineers get an insight in the field and improve their skills.

### Awards and Achievements:

- Travel grant for the IAS annual meet was awarded to Raksha Rank and Harsh Patel
- First Prize for Most Happening Chapter in IAS CMD.
- Third Prize for IAS CMD Humanitarian Contest awarded to Harsh Patel, Rahil Patel and Smit Shah.
- Awarded as the Best Student Branch for 2018-19 in IEEE Gujarat Section at Sampark 2019.
- Rahil Patel and Darshak Patel were awarded as the best volunteers by IEEE Gujarat Section at Sampark 2019.



## ACHIEVEMENTS

The sports contingent participated in the following sports festivals:

### GLS' Titanium Jural Sports Fest, 2018

(31 October- 2 November, 2018)

They won as follows:

- Long Jump: 1st Position
- Shotput: 3rd Position
- Discuss Throw: 3rd Position
- Badminton Girls: Winners
- Basketball Boys: Runners Up
- Volleyball Boys: Runners Up
- Basketball Girls: Semi-finalist
- Badminton Boys: Semi-finalist
- Volleyball Girls: Semi-finalist
- Football Boys: Quarter-finalist

### Khel Mahakumbh (October 2018)

The results were as follows:

- Football (Women): Runners up
- Football (Men): 3rd Place
- Basketball (Men): Quarter-finalist

### IIM Ahmedabad, 'Shaurya 18' (October 2018)

They won as follows:

- Athletics: Third position
- Badminton Girls: First Runners up
- Badminton Boys: Semi-finalist
- Carrom: Semi-finalist
- Chess: Semi-finalist
- Football Boys: Quarter-finalist
- Tennis: Semi-finalist
- Volleyball Boys: First Runners-up
- Volleyball Girls: Semi-finalist

### PDP 'Petrocup 2019' (14-18 February, 2019)

The results are as follows:

- Badminton Girls: Runners-up
- Football Girls: Runners-up
- Lawn Tennis Girls (Team Event): Runners-up
- Badminton Boys: Semi-finalists



### **GNLU 'Justice League 2019'** (7-10 February, 2019)

The results were the following:

- Badminton Boys: Winners
- Table Tennis Boys: Winners
- Table Tennis Mixed: Winners
- Carrom: Semi-finalists
- Lawn Tennis Boys Singles: Semi-finalists
- Lawn Tennis Boys (Team Event): 4th position
- Long Jump: 3rd position
- Shot Put: 4th position

### **Reliance Foundation Youth Sports** (January 2019)

The football men's team had reached the quarter-finals stage of the tournament in the College Boys Category. The following players won laurels:

- Ashish Sharma, Winner of the Golden Ball with 8 goals in 5 matches and Runner-up for the Golden Boot.
- Dveep Chaudhari, Runner-up for Golden Glove with 4 clean sheets out of 5 matches.

### **EDI - 'EQUIPO 19'** (6-10 January 2019)

The results were as follows:

- Football Boys: Winners
- Table Tennis Mixed: Runners-up
- Volleyball Boys: Quarter Finalists
- Basketball Boys: Quarter Finalists

The Debate Club participated in **AYMUN (Asia Youth Model United Nations)** (25 November 2018).

The results were as follows:

- Rajat Garg, Best Delegate
- Saumya Doshi, Best Delegate
- Rohit Chaku, High Commendation

Rajat Garg has won the best delegate award in COEPMUN 2018, Pune. Bishesh Oram has won the

best delegate award in HLCC Model United Nations 2018.

Fifteen students represented DA-IICT at Ahmedabad Quiz Fest 2018. Chahak Mehta, Anish Deshpande and Dhruv Charan finished in 5th place in the MELA quiz.

Following are the achievements of Music Club:

- PDPU - Solo singing - Shivam Pandit: 1st prize
- BITS GOA – Alaap, Aditya Pandit: 3rd prize
- BITS GOA – SOLO, Shivam Pandit: top 5
- BITS GOA - INDIAN ROCK: 1st prize

The Chess Club represented DA-IICT in Spree 2019 (29-31 March 2019) held at BITS, Goa and won the Runners-up prize.

Following students were selected for the Google Summer of Code (GSoC 2019) in different organizations:

- Mrinal Dutta, M.Sc (IT) 2nd Year, Percona
- Deepak Kumar, M.Sc (IT) 2nd Year, InterMin
- Himanshu Sahu, M.Sc (IT) 2nd Year, CERN
- Dhyey Thakor, M.Sc (IT) 1st Year, Mozilla
- Amarnath Karthi, B.Tech 4th Year, CERN
- Mohamed Shadab, B.Tech 3rd Year, University of Nebraska-Lincoln, USA
- Pranav Pandey, B.Tech 2nd Year, Rocket.Chat
- Kartikeya Gokhale - B.Tech 2nd Year, Percona
- Akshay Jain - M.Sc (IT) 1st Year, Julia (Honorable Mention for getting selected in JSoC)
- Abhinav Raj, B.Tech 2nd Year, became GSoC mentor in FOSS Asia





## Alumni Association Activities and Achievements

DA-IICT Alumni Association, a separate registered legal entity, has now more than 6000 members worldwide. The Association is enthusiastically involved in networking, mentoring and organizing placement assistance and internships to the fellow alumni and current students.

DA-IICT Student Chapter of the Association organized an Alumni Reunion during 23-24 February 2019, coinciding with Synapse -- the festival of students. The Alumni, along with their families, attended the reunion and the festival.

The reunion began with a tour of the campus reminiscing campus life and beholding the physical changes that took place on the campus, particularly the new hostel blocks. The Reunion marked several events such as 'Alumni Quiz,' organized by Headrush, 'Giftagoo' where alumni recited their experiences at the Institute, and 'Acoustic Night,' a music night organized by the Music Club with improvised singing by Alumni. The Association

also discussed various plan of activities and one of them is introducing Alumni Lecture Series at the Institute -- alumni from Industry and Universities would stop by and deliver talks during week-ends. The other activities planned are preparation of an alumni directory with areas of interest, organize regular regional meets, network with all batches, encourage juniors and current students to network with 3-5 seniors, establish a formal scheme for communication, relocation, study abroad, design and offer a student's exchange program and ways to contribute to the Institute.

On the second day, a sports event was organized in the forenoon followed by the Director's address and discussion on the working of the Association. The final event was the 'Dance Cypher,' organized by the Dance Club of Students.

During the Orientation Program of 2019-20 batch, Alumni closely interacted with fresh undergraduate and post-graduate students.





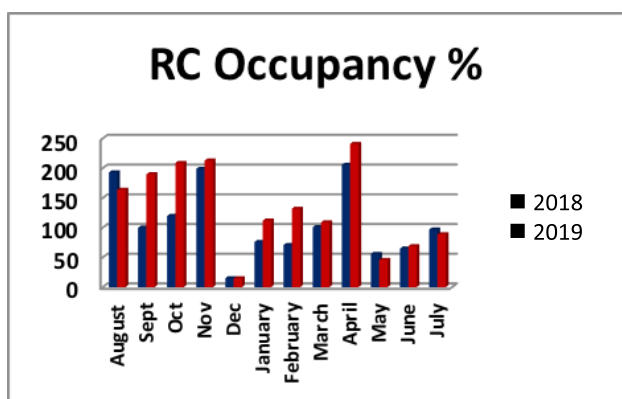
## Resource Centre

The year gone by provided many opportunities for the Resource Centre (RC) to interact with the users and provide augmented services. The electronic resources increased its outreach covering post-graduate and PhD scholars as the key users. The training programs organised by RC further refined the information searching capabilities of these user groups. Continuing information sharing with other libraries, empowering users with enhanced awareness about information searching, plagiarism checks, research writing, journal selection; addition of new database; data gathering and data compilation for accreditation and ranking purposes were some of the key activities undertaken during the reporting period.

### The Preferred Study Destination

The RC occupancy data for the calendar years 2018 and 2019 shows that there have been significant rise in faculty, staff, researchers and students using RC. The median occupancy was 122% in 2019 as against 98% in 2018. The peak times were during the examination, with occupancy, as high as 214%. The users showed considerable interest in the diverse and rich collection.

The digital resources witnessed high usage for which RC facilitated access by providing PCs with high-speed internet connection. The informal seating arrangement encouraged collaboration between students for their project work.



### Collections

Collection Type	Added during 2018-19	Total as of 31 July 2019
Books	421	32028
E-books	1198	13291
CDs/DVDs & AV Collection	10	3961
Theses & Dissertations	72	759
Bound Volumes of Journals	141	2940

A new database, Bloomsbury Design Library, was added to the resources for the design students. A short video-based introductory session was also conducted for them to familiarise with its various features and unique collection.

### Orientation of Fresh Students

The 2018-19 batches of students were introduced to the collection and services during their orientation sessions followed by a visit to various facilities of RC. This has made a positive impact on developing a reading culture among the fresh students. Fresh PhD scholars were given focused orientation on the use of subscribed sources of scientific information. They were acquainted with various capabilities of each source, its integration with other applications, which will help them to save time for information search.

### Author Workshops

Two author workshops were organized for faculty and students with experts from publishers; Springer Nature and Elsevier. The sessions elaborated on choosing the right journal, finding out predatory journals, understanding authors instructions, reasons for manuscript rejection, plagiarism check, citation analysis and using external contents such as diagrams, pictures and copyright.

### Introduction of Research Assist Tool

The faculty and research scholars at DA-IICT spend a fair amount of their time in searching for various electronic resources. One of the key challenges they faced is to access the resources that are scattered across multiple sources. Hence, to reduce search redundancy, a research assist tool, RAx was introduced. It is a personalized AI-powered research assistant for academic research incubated at the DA-IICT Centre for Entrepreneurship and Incubation by Prof. Sourish Dasgupta.

An introductory session was conducted for faculty and researchers to gain insights into various features of the tool. External Experts on information searching, Academicians and Librarians attended the session and shared the challenges faced by the researchers while searching for relevant information. A demonstration of the tool with applications clarified the queries of participants.

### Training Library Professionals

The RC recruits every year 4 fresh post graduates in Library Science as Trainees. The 4 library trainees recruited in 2018 were trained to manage the circulation counter responsibilities and other supporting jobs. They were also exposed to new skills such as developing a website using open source software, presentation of learning topics, curating the faculty publications data using

excel, data mining from the databases such as ScienceDirect and Web of Science. Another 4 library trainees recruited in 2019 were successfully inducted.

The RC hosted 7 MLibSc students from Central University of Gujarat, Gandhinagar, SP University, Vallabh Vidya Nagar and Gujarat University, Ahmedabad for internship.

### Shri Manish Mankad, Librarian

- Member, Springer Nature User Experience Advisory Group.
- Workshop on Legal Aspects of e-Books' at the Springer Nature e-books Conclave, Jaipur.

### Publications

#### Book Chapter

1. T. R. Manu, Minaxi Parmar, **Shashikumara AA** and Viral Asjola, "Research Information Management Systems: A Comparative Study," in *Research Data Access and Management in Modern Libraries*, Raj Kumar Bhardwaj and Paul Banks, Eds., London: IGI Global, May 2019, pp. 54-80. DOI: 10.4018/978-1-5225-8437-7.ch003

#### Conferences Papers

*Second International Conference on Librarianship Development through Internet of Things & Customer Service (LDITCS)*, Gujarat Power Engineering & Research Institute, Mehsana, 6-8 February 2019. ISBN: 9789353463250

1. T. R. Manu, Viral Asjola, Panna Chaudhary, **Prasanna Kumar Muduli** and **Shashikumara AA**, "International Open Access Week Celebrations in India: A Bright Beginning," pp. 234-240.
2. **Prasanna Kumar Muduli**, T. R. Manu, Viral Asjola, Panna Chaudhary and **Shashikumara AA**, "E-Learning Platforms for Transforming Higher Education through Distance Learning," pp. 61-69.



3. **Abid Fakhrealam, Madesh Gowda, Prasanna Kumar Muduli**, T. R. Manu, Viral Asjola, Panna Chaudhary and **Shashikumara AA**, "Cloud Computing Infrastructure for Academic Libraries," pp. 1-8.
4. **Shashikumara AA**, T.R. Manu, Panna Chaudhary, Viral Asjola and **Prasanna Kumar Muduli**, "Emerging Technology Trends for Libraries and Library Professionals," pp. 75-81.

*International Conference on Knowledge Organisation in Academic Libraries (I-KOAL-2018)*, Library Professionals Association (LPA) and University of Hyderabad, 26-27 November 2018. ISBN: 9789388342148

1. **Julfikar Ahmed, Abid Fakhrealam, Prasanna Kumar Muduli**, T. R. Manu and **Shashikumara AA**, "Scholarly Social Networking for Early Career Researcher," pp. 428-436.
2. T. R. Manu, Viral Asjola, **Madesh Gowda, Shashikumara AA**, Panna Chaudhary and **Prasanna Kumar Muduli**, "Analysis of Research Data Repositories in India," pp. 312-322.
3. M. C. Pramila, **Shashikumara AA**, T. R. Manu, Viral Asjola and Panna Chaudhary, "Research Data Repositories for Biomedical Science Professionals," pp. 350-356.

*International Conference on Marching Beyond the Libraries: Managerial Skills and Technological Competencies (ICMBL 2018)*, Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar, India, 16-17 November 2018. ISBN: 9788193879771

1. T. R. Manu, **Shashikumara AA**, Viral Asjola, Panna Chaudhary and **Prasanna Kumar Muduli**, "Core Competencies for 21st Century Library and Information Science Professionals," pp. 647-655.
2. **Shashikumara AA**, T. R. Manu, Panna Chaudhary, Viral Asjola and **Prasanna Kumar Muduli**, "The Information Literacy Competency Standards for 21st Century Higher Education," pp. 19-32.

*International Conference on Scholarly Communication, Open-access Publishing and Ethics (SCOPE-2018)*, School of Planning and Architecture, Vijayawada, Andhra Pradesh, India, 25-26 October 2018. ISBN: 9789387593923

1. **Shashikumara AA**, Viral Asjola, T. R. Manu, Panna Chaudhary and **Prasanna Kumar Muduli**, "Open source tools for information visualization: a comparative study," pp. 131-144.
2. **Trupti Barot**, Minaxi Parmar, **Shashikumara AA** and T. R. Manu, "Design and Implementation of Digital Asset Management System in Academic Libraries," pp. 184-196.

*Librarians' day 2018 and Seminar Startup India & Role of Libraries*, MICA, Ahmedabad, Gujarat, 25 August 2018, pp. 71-81. ISBN: 97881937313

1. **Shashikumara AA**, T. R. Manu, Viral Asjola, Panna Chaudhary, **Rutu Parekh** and **Manish Mankad**, "Growth and Development of Global Startup Research: A Bibliometric Analysis," pp. 71-81.
2. **Shashikumara AA**, T. R. Manu, Viral Asjola, Panna Chaudhary and **Prasanna Kumar Muduli**, "Library Service Startups in India: An Overview," pp. 138-144.
3. T. R. Manu, **Shashikumara AA**, Viral Asjola and Panna Chaudhary, "Startup Support Centre Service in Libraries: An Overview," pp. 145-153.



*International Federation of Library Associations and Institution (IFLA)*, Department of Library & Information Science, University of Calcutta, Kolkata, WB, India, 20-21 August 2018, pp. 265-269. ISBN: 9788193742914

1. **Shashikumara AA**, Viral Asjola, T. R. Manu, Panna Chaudhari and **Prasanna Kumar Muduli**, "Information Visualization and Society: Reaching Communities through Visualizations," pp. 265-269.
2. T. R. Manu, Viral Asjola, **Shashikumara AA**, S. Prashanth, B. Rajesha and H.S. Karunakara, "Mapping the Curriculum of LIS Education in Indian Universities and Institutions: A Critical Study," pp. 191-209.

*International Conference on Exploring the Horizons of Library and Information Sciences: From Libraries to Knowledge Hubs*, DRTC, Indian Statistical Institute, Bangalore, 7-9 August 2018. ISBN: 9789353117269

1. T. R. Manu and **Shashikumara AA**, "Emerging Software Tools for Research Information Management Systems: A Study," pp. 129-139.
2. **Shashikumara AA**, **Manish Mankad** and **Prasanna Kumar Muduli**, "Collaborating ETDs to Reach the Unreached," pp. 140-149.

#### **Conference, Seminar, Workshop Attended Prasanna Kumar Muduli, Assistant Librarian**

- International Conference on Exploring the Horizons of Library and Information Sciences: from libraries to knowledge hubs," Documentation Research and Training Centre (DRTC), Bengaluru, 7-9 Aug. 2018
- Workshop on Implementing Successful Library & Information Teaching Sessions in Academic Libraries, Indian Institute of Technology Gandhinagar, Gandhinagar, 18 Aug. 2018
- Second International Conference on Changing Landscape of Science & Technology Libraries (CLSTL 2019), Indian Institute of Technology Gandhinagar, Gandhinagar, 28 Feb.-2 Mar. 2019

#### **Shashikumara AA, Assistant Librarian**

- Second International Conference on Changing Landscape of Science and Technology Libraries (CLSTL 2019), Indian Institute of Technology Gandhinagar, Gandhinagar, 28 Feb.-2 Mar. 2019
- ADINET quarterly seminar on Rethinking Role of Libraries in National Development, Central University of Gujarat, Gandhinagar, 9 Mar. 2019
- Seminar on the Role of Communication in 21st Century, School of Library and Information Science, Central University of Gujarat, Gandhinagar, 27 Aug. 2018
- World Library and Information Congress 2018: Satellite Session (Pre-Conference) International Conference on "Transforming the Society: Libraries as the Torch-Bearer of Change," Department of Library and Information Science, University of Calcutta, Kolkata, 20-21 August 2018
- Workshop on Implementing Successful Library and Information Teaching Sessions in Academic Libraries, Indian Institute of Technology Gandhinagar, 18 August 2018

#### **Visitors to RC**

- Dr. Rajib Badyopadhyay, Head, Department of Science, PDP, Gandhinagar
- Dr. Roshni Solanki, Assistant Registrar, PDP, Gandhinagar
- Dr. Santosh KV, Deputy Director (Research), Manipal University
- Dr. Nabi Hasan, Librarian, IIT Delhi
- Students and faculty from SDJ International College, Surat – on study tour
- The following group of students visited RC on study tour:
  - Post-graduate students from the Library and Information Services, Gujarat University along with their faculty.
  - MLISc students of Maharshi Dayanand Saraswati University.
  - Mahapragya Vidya Niketan students from standards 10th, 11th and 12th.



## Infrastructure

### ICT

The Information and Communication Technology (ICT) Committee works towards the mission to provide the best computing facilities possible for faculty research and student learning. During the reporting year, the Institute has invested Rs. 150 lakh to upgrade ICT infrastructure and acquire new hardware and software.

DA-IICT has modern eco-friendly, fully networked campus through high-end intelligent CISCO switch with 10G support, optical fiber cable connectivity between various buildings and 1Gbps Internet Bandwidth. The students on the campus have access to high speed Wi-Fi connectivity. This helps them access online class lectures and assignments. Institute's wireless network consists of 120 access points spread over various campus locations.

There are over 1220 desktop PCs for laboratories, faculty and staff. Additionally, Laptops are provided to faculty members. A Data Center with 30 servers provides various IT services. The Institute has deployed Moodle open source software online learning management for hosting course contents and submission of assignments. The Network Attached Storage (NAS) provides storage space for post graduate Students and Doctoral Scholars.

The Institute has deployed High Performance Computing (HPC) cluster to meet the computing requirements of the B.Tech (ICT) Computational Science Program. Another setup of four high-end computing servers have been deployed for Research Scholars. For efficient use of these servers, provisions have been made for off-campus access for faculty and Doctoral Scholars via VPN.

The Institute has subscribed to campus-wide licenses of the popular scientific software like MATLAB, LabVIEW, Netsim Academic with tools. This is important since most of the virtual instruments have gone through major changes.

The Cadence Electronic Design Automation Suite License was renewed and upgraded. To facilitate the design activities of M.Des (Communication Design) students, 20 licenses of Adobe CCT were subscribed. Turnitin, an anti-plagiarism software and campus software agreement licenses were renewed.

In the new Hall of Residence for Men (Hostel), 30 high-end wireless access points and CCTV and surveillance system were set up.

### LABORATORY

During the reporting year, equipment and devices worth Rs. 40.00 lakh were procured for the Laboratory. They were electronics instruments and kits, sensors, boards, audio-visual equipment and consumables and biometric attendance devices for student attendance.

### CAMPUS

The following infrastructure projects were completed:

- Construction of New Hall of Residence for Men (Hostel) having an occupancy provision for 476 students.
- Extension of Laboratory building with an additional 172 seats.
- Renovation of washrooms in Laboratory block.
- Refurbishing the Resource Centre preview room and converting it as a smart classroom.
- Seating capacity of 460 seats in Food Courts increased to 690.
- Tensile structures of Food Courts were refurbished.
- A car park to accommodate 40 cars behind Lecture Theatre-1 and a two-wheeler park near HoR Women were constructed.

## Annexure 1

**MANAGEMENT****Academic Council**

Prof. K.S. Dasgupta, Chairman	Director, DA-IICT, Gandhinagar
Shri K. Narayan, Member	Management Consultant, Reliance Group, Mumbai
Prof. Surendra Prasad, Member	Professor, IIT Delhi, New Delhi
Prof. David Koilpillai, Member	Professor, IIT Madras, Chennai
Shri Tapan Misra, Member	Director, Space Application Centre, Indian Space Research Organisation, Ahmedabad
Shri Suresh Rangachar, Member	President, Reliance Communications Limited, Mumbai
Prof. Sanjeev Gupta, Member	Dean (Research & Development), DA-IICT, Gandhinagar
Prof. Suman K Mitra, Member	Dean (Academic Programs), DA-IICT, Gandhinagar
Prof. Naresh Jotwani, Member	Professor, DA-IICT, Gandhinagar
Prof. Sanjay Srivastava, Member	Professor, DA-IICT, Gandhinagar
Prof. Binita Desai, Member	Professor, DA-IICT, Gandhinagar
Shri Soman Nair, Secretary	Executive Registrar, DA-IICT, Gandhinagar

**Finance Committee**

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

**Board of Studies**

Prof. Suman K Mitra, Chairman	Dean (Academic Programs), DA-IICT, Gandhinagar
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Prof. Vishvajit Pandya, Member	Coordinator, M.Des (CD) Program, DA-IICT, Gandhinagar
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Prof. Shweta Garg, Member	DA-IICT, Gandhinagar
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Shri Hasit Kaji, Member	Tata Consultancy Services (Industry Representative)
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Prof. Sanjay Chaudhary, Member	Professor and Head (Research), Institute of Engineering and Technology (IET), Ahmedabad University, Ahmedabad (Nominated by the Academic Council)

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Prof. Anil Roy	Director, IQAC
Shri Suresh Rangachar	Reliance Communications – Management Member
Shri Soman Nair	Executive Registrar, DA-IICT – Administrative Member
Prof. Binita Desai	Chairperson, Gender Cell, DA-IICT – Faculty Member
Prof. Suman Mitra	Dean (Academic Programs), DA-IICT – Faculty Member
Prof. Sanjeev Gupta	Dean (Research & Development), DA-IICT – Faculty Member
Prof. Ranendu Ghosh	Dean (Students), DA-IICT – Faculty Member
Prof. Maniklal Das	PG Convenor, DA-IICT – Faculty Member
Prof. Asim Banerjee	Placement Committee Convenor, DA-IICT – Faculty Member
Prof. Sanjay Srivastava	Alumni Board Convenor, DA-IICT – Faculty Member
Prof. V. Sunitha	UG Convenor, DA-IICT – Faculty Member
Shri Paul Cherian	Head, HR, DA-IICT – Administrative Member
Shri Nilesh Ranpura	ASIC, eINFOCHIPS, – Member from Employer
Shri Giridharan Surendran	FactSet Systems, Hyderabad, – Member from Employer
Shri Yash Shah	SBG Convenor, DA-IICT, – Student Member
Ms. Ishita Jain	Student, DA-IICT, – Student Member
Ms. Shivani Thakkar	Student, DA-IICT, – Student Member
Shri Amit Kumar Shah	Alumnus, DA-IICT, – Alumni Member
Dr. Jayanti Ravi	Sarjan Foundation NGO, – NGO Member



## INSTITUTE OFFICIALS

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#### Students

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Shri Soman Nair

### Head-HR and Administration

Shri Hasendrasinh Jhala

### Librarian

Shri Manish Mankad

### Internal Committees

#### Undergraduate Committee

Prof. V Sunitha, Convenor

Prof. Jaideep Mulherkar, Member

Prof. Mukesh Tiwari, Member

Prof. Bharani Kollipara, Member

Prof. Manish Narwaria, Member

Prof. Yash Agarwal, Member

#### Postgraduate Committee

Prof. Manik Lal Das, Convener

Prof. Binita Desai, Member

Prof. Aditya Tatu, Member

Prof. Arnab Roy, Member

Prof. Manish Khare, Member

Prof. Saurabh Tiwari, Member

Prof. P. Kalyan Sasidhar, Member

#### Laboratory Committee

Prof. Suman K Mitra, Dean (Academic Programs),  
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Prof. Manik Lal Das, PG Convenor, Member (ex-officio)

Prof. V Sunitha, UG Convenor, Member (ex-officio)

Prof. Yash Agrawal, Member

Shri Rajendra Shah, Lab Superintendent  
(ex-officio Invitee)

#### Research Promotion Committee

Prof. Manjunath V. Joshi, Convener

Prof. Vishvajit Pandya, Member

Prof. Deepak Ghodgaonkar, Member

Prof. Hemant A Patil, Member

Prof. Biswajit Mishra, Member

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Prof. Rajib Lochan Das, Member

Prof. Rajendra Mitharwal, Member

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Shri Nimesh Patel, Manager (IT & Systems),  
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Prof. P M Jat, Member

Prof. Yash Vasavada, Member

Prof. Gagan Garg, Member

Prof. Ritu Parekh, Member

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Prof. Gautam Dutta, Member

Prof. Madhumita Mazumdar, Member

Prof. Shweta Garg, Member

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### **Annual Report Committee**

Shri Soman Nair, Executive Registrar, Convener (ex-officio)  
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Prof. Sanjeev Gupta, Dean (R&D), Member (ex-officio)  
Prof. Ranendu Ghosh, Dean (Students), Member (ex-officio)  
Prof. Asim Banerjee, Convenor, Placement Committee, Member (ex-officio)  
Prof. Anish Mathuria, Member  
Prof. Shweta Garg, Member  
Shri Manish Mankad, Librarian, Member (ex-officio)

### **Disciplinary Action Committee**

Prof. Ranendu Ghosh, Dean (Students), Convener  
Prof. Gagan Garg, Warden, HOR-Men, Member (ex-officio)  
Prof. Shweta Garg, Warden, HOR-Women, Member (ex-officio)  
Shri Jigar P Yagnik, Dy. Registrar, Member (ex-officio)  
Student Representatives – two nominated students

### **Gender Cell**

Prof. Binita Desai, Convener  
Prof. Suman K Mitra, Dean (Academic Programs), Member (ex-officio)  
Prof. Shweta Garg, Warden, HOR-Women, Member (ex-officio)  
Ms. Geeta Mehta, Chief Account Officer, Member  
Prof. Usha Neelakatan (LDCE) – External Member  
Student Representatives – two nominated students

### **Student Activities Council**

Prof. Ranendu Ghosh, Dean (Students), Convener  
Prof. Rahul Muthu, Convener (Sports Committee)  
Prof. Nabin K. Sahu, Co-convener (Cultural Committee)  
Prof. Jaideep Mulherkar, Convener (Synapse Committee)

### **International Student Cell**

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Prof. Rahul Muthu, Member  
Prof. Hemant Patil, Member

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Mr Shashikumara AA, Assistant Librarian, Member

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Prof. Ranendu Ghosh, Dean (Students), Member (ex-officio)  
Shri Soman Nair, Executive Registrar, Member (ex-officio)

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Prof. Madhumita Mazumdar, Member  
Prof. Mukesh Tiwari, Member  
Prof. Yash Vasavada, Member  
Prof. Bharani Kollipara, Member  
Prof. Sourish Dasgupta, Member

### **BTP Coordinator**

Prof. Manoj K Raut

### **Summer Internship Coordinator**

Prof. Nabin K. Sahu

### **Director IQAC**

Prof. Anil K. Roy

## Annexure 2

### THESES, PROJECTS AND REPORTS

#### PhD Theses

1. Rao, Ch. V. Narasimha, MMIC based high power transmit/receive and receive protection switches with integrated LNAs; xiv, 133 p.; 2019. (Supervisor: Deepak Ghodgaonkar)
2. Shah, Jalpa Bharatkumar, Investigation into a low cost low energy IoT enabled wireless sensor node for particulate matter prediction for environmental applications; vii, 104 p.; 2019. (Supervisor: Biswajit Mishra)
3. Kasodniya, Sanjay Kumar, Investigation into radiation hardening techniques on differential receiver and power management unit in 0.8 $\mu$ m CMOS for space applications; ix, 123 p.; 2019. (Supervisor: Biswajit Mishra)
4. Modha, Sandip Jayantilal, Microblog processing : summarization and impoliteness detection; xvi, 164 p.; 2019. (Supervisor: Prasenjit Majumder)
5. Patel, Hardik Nayankumar, Microwave imaging for breast cancer detection using 3D level set based optimization; xiv, 186 p.; 2019. (Supervisor: Deepak K. Ghodgaonkar)
6. Gopal, Krishna, On heterogeneous distributed storage systems: bounds and code constructions; xiii, 132 p.; 2019. (Supervisor: Manish K Gupta)
7. Limbachiya, Dixita, On designing DNA codes and their applications; xvii, 117 p.; 2019. (Supervisor: Manish K. Gupta)
8. Shah, Nirmesh J., Voice conversion: alignment and mapping perspective; xxvi, 207 p.; 2019. (Supervisor: Hemant A. Patil)
3. Baranwal, Sweety, MIMO reception in Rayleigh and Rician fading with imperfect channel estimation; 48 p.; 2019. (Supervisor: Yash Vasavada)
4. Batada, Arlene, DCA : (Data capturing application); 23 p.; 2019. (Supervisor: Asim Banerjee)
5. Bharatbhai, Lad Pinal, Area efficient and high performance approximate multiplier design; 60 p.; 2019. (Supervisor: Yash Agrawal)
6. Bhatia, Aakash J., Export to PPT and certification recommendation system; 33 p.; 2019. (Supervisor: Aditya Tatu)
7. Bhatt, Pranjal Ketanbhai, Kernel variants of extended locality preserving projection; 40 p.; 2019. (Supervisor: Suman K. Mitra)
8. Changulani, Smriti, Predictive maintenance schedule; 68 p.; 2019. (Supervisor: Aditya Tatu)
9. Chavda, Vijay, Unlinking bitcoin transactions; 59 p.; 2019. (Supervisor: Maniklal Das)
10. Doshi, Tirth, Placement system development; 18 p.; 2019. (Supervisor: Asim Banerjee)
11. Gangopadhyay, Surupendu Prakash, Personalized news recommender system using deep reinforcement learning; 23 p.; 2019. (Supervisor: Prasenjit Majumder)
12. Ghodgaonkar, Abhijeet, Multi-crop classification using hyperspectral data: comparison of classical machine learning and convolutional neural network techniques; 26 p.; 2019. (Supervisor: Ranendu Ghosh)
13. Gupta, Rishabh, IP testing through an automation framework VIPER; 21 p.; 2019. (Supervisor: Yash Agrawal)
14. Jain, Jiket, Study of transactional synchronization extensions (TSX) feature in x86 processor architecture; 16 p.; 2019. (Supervisor: Yash Agrawal and Prohor Chowdhury)
15. Jivani, Foram, Identity verification in smart KYC; 17 p.; 2019. (Supervisor: Aditya Tatu)
16. Kakran, Bhoomiti, Experiment based approach to understand delay tolerant network; 38 p.; 2019. (Supervisor: P. S. Kalyan Sasidhar)

#### M.Tech Theses

1. Ahuja, Priya, Design and implementation of low power processor design using RISC-V ISA; 57 p.; 2019. (Supervisor: Amit Bhatt)
2. Banik, Sanghamitra, Design of prominent floating point multiplier using single electron transistor operating at room temperature; 26 p.; 2019. (Supervisor: Ritu Parekh and Yash Agrawal)

17. Kotadia, Dhruvil, Cattle health monitoring using an IoT enabled impact sensing device; 17 p.; 2019. (Supervisor: Biswajit Mishra)
18. Kumar, Bitu, Reconfigurable time-to-digital converter based on pulse stretcher and gated delay line; 41 p.; 2019. (Supervisor: Biswajit Mishra)
19. Macwan, Rinoy Ravikant, Network security using machine learning; 67 p.; 2019. (Supervisor: Maniklal Das)
20. Mahavadia, Krutika J., Azure migration manager & certification recommendation system; ix, 46 p.; 2019. (Supervisor: Aditya Tatu)
21. Maheshwari, Eti, Investigation of emerging graphene field effect transistors for low power applications; 35 p.; 2019. (Supervisor: Yash Agrawal and Rutu Parekh)
22. Malaviya, Shubham M., Defending machine learning models against adversarial attacks using GANs; 43 p.; 2019. (Supervisor: Yash Vasavada)
23. Mehta, Archan, Image question and answering; 50 p.; 2019. (Supervisor: Manish Khare)
24. Nagaich, Esha, Design of leaf cell layouts for memory compiler; 30 p.; 2019. (Supervisor: Rutu Parekh and Yash Agrawal)
25. Nandani, Mitali, Sensor based approach for early disease detection in plants; 52 p.; 2019. (Supervisor: P. S. Kalyan Sasidhar and Vinay Palaparthi)
26. Oza, Urvi, Analytical study of color spaces for object recognition in convolutional neural networks; 59 p.; 2019. (Supervisor: Pankaj Kumar)
27. Panchal, Karishma, Modeling and comparative analysis of Si-MOSFET and GaAs FETs for high speed devices; 54 p.; 2019. (Supervisor: Yash Agrawal and Rutu Parekh)
28. Pandat, Ami, Semantic aware partitioning and distribution with partial replication for RDF graph; 26 p.; 2019. (Supervisor: Minal Bhise)
29. Parikh, Dharit, Image and video super resolution using deep learning; 15 p.; 2019. (Supervisor: Srimanta Mandal)
30. Patel, Ketul, Design of low power interrupt driven RISC-V instruction set processor for embedded systems; 24 p.; 2019. (Supervisor: Amit Bhatt)
31. Patel, Maitri, Predicting quality of service parameter for Internet of Things network; 17 p.; 2019. (Supervisor: P. S. Kalyan Sasidhar)
32. Patel, Mausamee, Quantification of mineral end-members in lunar spectra through deep learning; 45 p.; 2019. (Supervisor: Suman K. Mitra and Aditya Kumar Dagar)
33. Patel, Venus, Plant disease detection using image processing and machine learning; 45 p.; 2019. (Supervisor: Manish Khare)
34. Prajapati, Pratik Kamlesh, Optical character recognition (OCR) feature extraction and classification; 47 p.; 2019. (Supervisor: Manjunath V. Joshi)
35. Pulawala, Tasneem, Printed gujarati word-matching; 19 p.; 2019. (Supervisor: Suman K. Mitra)
36. Rabadiya, Vidhi, Tyre pressure monitoring system; 53 p.; 2019. (Supervisor: Aditya Tatu)
37. Rajaraman, B, Development of environment air quality monitoring system using drone; 56 p.; 2019. (Supervisor: Sanjay Srivastava and Anil K. Roy)
38. Sengar, Udit Pratap Singh, Cost per scan (CPS); 8 p.; 2019. (Supervisor: Aditya Tatu and Akash Deep Verma)
39. Shah, Dhruva, Fuel monitoring system; 48 p.; 2019. (Supervisor: Aditya Tatu)
40. Shah, Dimple, Application of smartphone sensing system for general and mental assessment of students; 35 p.; 2019. (Supervisor: P. S. Kalyan Sasidhar)
41. Shah, Jainam, Placement system development; 48 p.; 2019. (Supervisor: Asim Banerjee)
42. Shah, Ketul Tejas, Segmentation and classification: optical character recognition algorithms to enhance the accuracy; 19 p.; 2019. (Supervisor: Manjunath V. Joshi)
43. Shah, Rajat Jatinbhai, Hotel management system; xiv, 186 p.; 2019. (Supervisor: Asim Banerjee)

44. Shah, Urmi, Emerging On-Chip interconnects for futuristic integrated circuit design; 36 p.; 2019. (Supervisor: Yash Agrawal and Rutu Parekh)
45. Shah, Viral, AgriChain: supply-chain management for agri foods using Block-chain technology; 28 p.; 2019. (Supervisor: Maniklal Das)
46. Shailja, Maniar, Emotion detection through smartphone typing; iv, 39 p.; 2019. (Supervisor: P. S. Kalyan Sasidhar)
47. Sharma, Ankur, Design of prominent single precision 32-bit floating-point adder using single electron transistor operating at room temperature; 35 p.; 2019. (Supervisor: Rutu Parekh)
48. Sharma, Chinmay, Physical design implementation of "ARP Block-4" module at 28nm "CHIPTOP" module at 90nm; 59 p.; 2019. (Supervisor: Aditya Tatu)
49. Shaw, Grishma, Image captioning and neural architecture search using reinforcement learning; xvii, 117 p.; 2019. (Supervisor: M.V. Joshi)
50. Shingala, Mitalee, Monkey detection using deep learning; 19 p.; 2019. (Supervisor: Pankaj Kumar)
51. Singh, Pranav, Design and implementation of low power interrupt-driven processor using RISC-V ISA; 43 p.; 2019. (Supervisor: Amit Bhatt)
52. Somaiya, Isha Nalinbhai, Full chip interface timing, pipeline planning and rapid floorplanning; 48 p.; 2019. (Supervisor: Yash Agarwal)
53. Teja, LT CDR NK., Smart soldier system incorporating embedded electronics; vi, 48 p.; 2019. (Supervisor: Rutu Parekh and Yash Agrawal)
54. Thaker, Vandan Bharat, Dimensionality reduction using deep autoencoder; 40 p.; 2019. (Supervisor: Suman K. Mitra)
55. Thakrar, Akash, Chatbot platform; 25 p.; 2019. (Supervisor: Saurabh Tiwari)
56. Trivedi, Rachesh, Design of prominent time to time digital (TDC) converter using single electron transistor operating at room temperature; 82 p.; 2019. (Supervisor: Rutu Parekh and Yash Agrawal)
57. Upasani, Ashwini, Application of smartphone sensing system for general and mental assessment of students; 25 p.; 2019. (Supervisor: P. S. Kalyan Sasidhar)
58. Uphad, Aishwarya Dinkar, Antenna design and forward problem solution for brain stroke detection using microwave imaging; vi, 18 p.; 2019. (Supervisor: Deepak Ghodgaonkar)
59. Vora, Yash, ECG-PPG device for real time detection of various cardiovascular diseases; 51 p.; 2019. (Supervisor: Biswajit Mishra)

### M.Des Project Reports

1. Agarwal, Aakanksha, देखा-अनदेखा दरबार (Dekha-andekha darbar) : Documentary film; 42 p.; 2019. (Supervisor: Vishvajit Pandya and Madhumita Mazumdar)
2. Agnihotri, Anupriya, Chutkis (Jani kala ke anjaane karigar ); vi, 31 p.; 2019. (Supervisor: Madhumita Mazumdar)
3. Kadegia, Bhavik, Changes in the Bardic traditions of Gujarat; iv, 26 p.; 2019. (Supervisor: Vishvajit Pandya and Madhumita Mazumdar)
4. Patel, Parth, Gangdo vahlo lage che - life of Salt Pan workers; v, 28 p.; 2019. (Supervisor: Vishvajit Pandya and Madhumita Mazumdar)
5. Shah, Dishant, Beaches of Mumbai; 33 p.; 2019. (Supervisor: Binita Desai)
6. Sinwal, Shweta, Alzheimer's awareness and care; v, 36 p.; 2019. (Supervisor: Madhumita Mazumdar and Binita Desai)
7. Yadav, Vikas, जानने का हक- Graphic novel; 49 p.; 2019. (Supervisor: Binita Desai and Madhumita Mazumdar)



## Annexure 3

### FACULTY WITH AREAS OF INTEREST

#### Regular Faculty

Name of the Faculty	Areas of Interest
<b>Dasgupta, K S (Director)</b> PhD (Engineering) IIT Bombay	Digital Signal and Image Processing, Digital Communication, Computer Networking and Satellite Communication.
<b>Agrawal, Sarita</b> PhD (Wireless Sensor Network) DA-IICT, Gandhinagar	Wireless Sensor Network Security
<b>Agrawal, Yash</b> PhD (Electronics & Communication Engineering) NIT Hamirpur, Himachal Pradesh	Design, modeling and simulation of high-performance VLSI interconnects, Nanotechnology
<b>Ahmad Kumar</b> PhD (Electrical Engineering) University of Malaya, Malaysia	Image Processing, CMOS Analog Design and Deep Learning
<b>Banerjee, Asim</b> PhD (Electrical Engineering) IIT Bombay	Pattern Recognition, Medical Imaging, Image Processing, Digital Signal Processing, Speech Coding, Software Engineering, Software Quality Assurance and Project Management
<b>Bhateja, Puneet</b> PhD (Computer Science) Chennai Mathematical Institute, Tamil Nadu	Formal Methods used for Testing and Verification
<b>Bhatt, Amit</b> PhD (Electrical Engineering) North Carolina State University, USA	Multicore Computer Architecture and Parallel Programming, Low Power Methodology in Digital design
<b>Bhilare, Shruti</b> PhD (Computer Science and Engineering) IIT Indore	Biometrics, Pattern Recognition, Image Processing
<b>Bhise, Minal</b> PhD (Computer Science) BITS Pilani	Semantic Web, Distributed Databases, Software System Analysis and Design
<b>Chaudhury, Bhaskar</b> PhD (Physics) Institute for Plasma Research, Ahmedabad	Computational Science, High-Performance Computing, Computational Physics, Modeling and Simulation of Plasmas, Computational Electromagnetics, Parallel Programming, GPU Computing, Plasma Electronics
<b>Das, ManikLal</b> PhD (Information Technology) IIT Bombay	Information Security, Cryptography, System Design and Analysis
<b>Das, Rajib Lochan</b> PhD (Adaptive Signal Processing) IIT Kharagpur	Adaptive Signal Processing, Compressive Sensing, Image Processing
<b>Dasgupta, Sourish</b> PhD (Computer Science) University of Missouri-Kansas City, USA	Distributed Multi-Agent System, Service Oriented Architecture, Semantic Web, Artificial Intelligence
<b>Desai, Binita</b> PG Diploma (Animation) National Institute of Design, Ahmedabad	Animation, Communication Design and Multimedia

<b>Dutta, Gautam</b> PhD (Physics) Physical Research Laboratory, Ahmedabad	Quantum Computers, Signal Processing, Image Processing, Particle Physics
<b>Garg, Gagan</b> PhD (Computer Science and Automation) Indian Institute of Science, Bangalore	Information Theory, Cryptography, Number Theory
<b>Garg, Shweta</b> PhD (English) IIT Roorkee	Food and Cultural Studies, Performance Studies, Creative Writing, Literature of the Indian Diaspora
<b>Ghodgaonkar, Deepak</b> PhD (Electrical Engineering) University of Utah, USA	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
<b>Ghosh, Anjan</b> PhD (Electrical Engineering) Carnegie Mellon University, Pittsburgh, Pennsylvania, USA	Optical Communication - Fiber Optic and Free Space, Photonic Devices and Subsystems, Sensors, Image and Signal Processing, Nonlinear Systems and Chaos, System Dynamics Modelling of Education
<b>Ghosh, Ranendu</b> PhD (Soil science & Agricultural Chemistry) Indian Agricultural Research Institute, New Delhi	Satellite Remote sensing & GIS, Satellite Communication Applications for Rural Development, Sustainable Agriculture System
<b>Gohel, Bakul</b> PhD (Bio and Brain Engineering) Korea Advanced Institute of Science and Technology, Daejeon, South Korea	Bio and Brain Engineering, Information Technology, Medicine
<b>Gupta, Manish K</b> PhD (Mathematics) IIT Kanpur	Information processing in Biology, Bio-molecular (DNA, Membrane, Cell) Computing, Coding and Information Theory, Cryptology, Quantum Computing, Computational, Structural and Systems Biology and Bioinformatics
<b>Gupta, Sanjeev</b> PhD (Communication Engineering) Queen's University of Belfast, UK	Smart Antennas, Communication and Radar Systems, RF/Microwave Applications
<b>Jat, Pokhar Mal</b> PhD (Computer Science and Engineering) ML Sukhadia University, Udaipur	Databases, Data Mining, Web of Data, Software Design
<b>Jindal, Abhishek</b> PhD (Wireless Communications) IIT Delhi	Physical Layer Security in Wireless Communication (MIMO Systems; Relay Based Co-operative Communication), IoT based Device Design and Security
<b>Joshi, Manjunath V</b> PhD (Electrical Engineering) IIT Bombay	Computer Vision, Image Processing, Super-Resolution, Restoration, Signal Processing, Digital Communication
<b>Jotwani, Naresh</b> PhD (Computer Science) Rice University, Houston, Texas, USA	Solar Energy, Engineering Design, Economics
<b>Khare, Manish</b> PhD (Computer Science) University of Allahabad, Allahabad	Image Processing, Computer Vision, Infrared Imaging, Applications of Wavelet Transforms.



<b>Kollipara, Bharani</b> PhD (English Literature) English and Foreign Languages University, Hyderabad	Literature and Philosophy, Ancient Greek Philosophy, Political Theory, Aesthetics
<b>Koley, Santanu</b> PhD (Mathematics) IIT Kharagpur	Integral Equations, Computational Techniques, Hydrodynamics, Statistical Modeling, Renewable Energy
<b>Maiti, Tapas Kumar</b> PhD (Electronics & Telecommunication Engineering) Jadavpur University, Kolkata	SPIICE for VLSI Circuits, Humanoid Robot, Cyber-Physics
<b>Majumder, Prasenjit</b> PhD (Computer Science) Jadavpur University, Kolkata	Information Retrieval, Natural Language processing, Digital Libraries
<b>Mandal, Srimanta</b> PhD (Computing and Electrical Engineering) IIT Mandi	Image Processing, Computer Vision, Machine Learning
<b>Mankodi, Amit</b> MS (Computer Science) California State University, USA	Embedded Systems, Computer Networks, High-Performance Computing
<b>Mathuria, Anish</b> PhD (Computer Science) University of Wollongong, Australia	Computer Security
<b>Mazumdar, Madhumita</b> PhD (Modern History) University of Calcutta, Kolkata	Social History of Science, Technology and Medicine in India, Cultures of Communication and The Media
<b>Mishra, Biswajit</b> PhD (Electrical & Electronics Engineering) University of Southampton, UK	Ultra-Low Power and Sub-threshold Circuit Methodologies, Very Low Voltage Circuits for Wireless Sensor Networks, Digital IC Design, Power Management for Energy Harvesters, Signal Processing, Hardware for Color Image Processing, Geometric Algebra and Novel Hardware
<b>Mitharwal, Rajendra</b> PhD (Engineering Science) Telecom Bretagne, Brest, France	Computational Electromagnetics
<b>Mitra, Suman Kumar</b> PhD (Computer Science) Indian Statistical Institute, Kolkata	Image Processing, Pattern Recognition, Fractal, Bayesian Network and Digital Image Watermarking
<b>Mulherkar, Jaideep</b> PhD (Mathematics) University of California Davis, USA	Mathematical Physics, Quantum Computation and Information
<b>Muthu, Rahul</b> PhD (Computer Science) Homi Bhabha National Institute, Mumbai	Graph Theory and Algorithms
<b>Palaparthi, Vinay</b> PhD (Electrical Engineering) IIT Bombay	Micro/Nano-Sensors, Micro-Electro-Mechanical Systems (MEMS), System Design
<b>Pandit, Supantha</b> PhD (Computer Science) IIT Ropar	Theoretical Computer Science, Mainly Focused On: Approximation Algorithms, Computational Geometry, Computational Complexity, Combinational Optimization



<b>Pandya, Vishvajit</b> PhD (Anthropology) University of Chicago, USA	Material Culture, Design and Communication Culture, Visual Anthropology, Rituals and History with specific reference to Colonialism
<b>Pankaj Kumar</b> PhD (Electrical and Computer Engineering) National University of Singapore, Singapore	Machine Learning, Artificial Intelligence, Neural Network, Computer Vision, Image Processing, Digital Signal Processing, Signals and Systems, Engineering Mathematics
<b>Parikh, Alka</b> PhD (Agriculture and Allied Economics) Cornell University, USA	Rural development and the related issues like Agriculture, Poverty, Unemployment and Wages, Rural Finance, Environment and Development, Disaster Management
<b>Parekh, Rutu</b> PhD (Electrical Engineering) Sherbrooke University, Sherbrooke, Canada	Nanoelectronics, Nano Device-CMOS Hybridization, Design and Simulation, Circuit Design, Modelling and Simulation of Next-Generation Memory (PCM), Nanofabrication
<b>Patil, Hemant</b> PhD (Signal Processing) IIT Kharagpur	Speaker Recognition and Wavelet Signal Processing
<b>Raut, Manoj Kumar</b> PhD (Mathematics) IIT Madras	Logic in Computer Science
<b>Ray, Arnab Kumar</b> PhD (Physics) Jadavpur University, Kolkata	Astrophysics and Nonlinear Systems
<b>Roy, Anil</b> PhD (Physics) IIT Delhi	Fibre Optics and Optical Communication, Quantum Optics, Nanotechnology, Semiconductor Devices, ICT Applications in Rural Development
<b>Sahu, Nabin Kumar</b> PhD (Mathematics) IIT Kharagpur	Applied Functional Analysis, Operator Theory, Variational Inequality, Variational Inclusion Problems
<b>Sasidhar, P S Kalyan</b> PhD (Computer Science and Engineering) University of North Texas-Denton, Texas, USA	Mobile and Pervasive Computing
<b>Singh, Lavneet</b> M.S. (Software Systems) BITS Pilani	Cloud Computing, IoT, Software Architecture, Design and Engineering, Enterprise Software Systems.
<b>Singh, Priyanka</b> PhD (Computer Science) Motilal Nehru National Institute of Technology, Allahabad, India	Encrypted Domain Processing, Digital Forensics, Security and Privacy issues in Cloud Computing, Secure Data Deduplication, Computer Vision
<b>Srivastava, Sanjay</b> PhD (Physics) University of California, Los Angeles, USA	Computer Networks: Protocol Modelling, Simulation
<b>Sunitha, V</b> PhD (Mathematics) IIT Madras	Algorithms, Discrete Mathematics, Graph Theory, Parallel and Distributed Computing, Theoretical Computer Science, Interconnection Networks
<b>Tatu, Aditya</b> PhD (Image Analysis) University of Copenhagen, Denmark	Applications of Differential Geometry (Shapes, Curve Evolutions, etc.) Image features, Continuous Optimization.



<b>Tiwari, Mukesh</b> PhD (Optical Science & Engineering) University of New Mexico, USA	Statistical Physics, Non-Linear Dynamics, Quantum Transport, Surface Science
<b>Tiwari, Saurabh</b> PhD (Software Engineering) IIITDM Jabalpur	Requirement Engineering, Empirical Software Engineering, Evidence-based Software Engineering, Safety Analysis, Model-based Testing
<b>Vasavada, Yash</b> PhD (Wireless Communications) Virginia Polytechnic Institute and State University, USA	Wireless Communications, Satellite Communications, Signal Processing, Detection and Estimation Theory, Information Theory and Coding Theory, Machine Learning and AI, Cognitive Communications, LTE and 4G/5G, MIMO Channels

## Adjunct Chair Faculty

<b>Name of the Faculty</b>	<b>Areas of Interest</b>
<b>Levin, David</b> PhD (Statistics) University of California, Berkeley	Mathematics, Probability Theory and its Applications
<b>Smith, David M</b> PhD (Biological Physics) University of Leipzig, Germany	DNA-based Nano-materials, Bio-Nanotechnology, Bio-polymer self-assembly, Soft Matter Physics, Cellular Biophysics
<b>Pasi, Gabriella</b> PhD (Computer Science) University of Rennes, France	Data Science, Fuzzy Logic, Information Retrieval, and Information Filtering
<b>Fujisawa, Hiromichi</b> PhD (Electrical Engineering) Waseda University, Tokyo, Japan	Pattern Recognition, Integrated Document Management System
<b>Belkin, Nicholas</b> PhD (Information Studies) University College, University of London, UK	Human-centered Information Retrieval and Development of the Cognitive viewpoint in Information Science
<b>Thomas Mandl</b> PhD (Information Science) University of Hildesheim, Germany	Information Management

## Visiting Faculty

<b>Name of the Faculty</b>	<b>Areas of Interest</b>
<b>Banerjee, Nandini</b> PhD (Economics) R D University, Jabalpur	Economics and General Management
<b>Dasgupta, Kuntala</b> Bachelor of Science (B.Sc) Calcutta University, Kolkata	Rabindra Sangeet, North Indian, Classical, India Film Music and History.
<b>Desai, Nikita</b> PhD (Design) DA-IICT, Gandhinagar	Design, Culture, Conversation and Display

<b>Ganesh Devy</b> PhD (English) Shivaji University, Kolhapur, Maharashtra	Romanticism in the Poetry and Literary Criticism of Shri Aurobindo
<b>Duttgupta, Anirban</b> Graduate (Visual Communication Design) NID, Ahmedabad	Visual Communication Design with Specialization in Filmmaking & Communication Design
<b>Lalchandani, Jay Prakash</b> PhD (Computer Science & Engineering) IIT Kharagpur	Slicing UML Models, Software Engineering
<b>Nagchoudhuri, Dipankar</b> PhD (Electrical Engineering) Michigan State University, USA	VLSI Design, CMOS Circuits and Technology, Biomedical Signal Processing, Chip Design
<b>Pal, Ajit</b> PhD (Computer Science & Electronics) Calcutta University, West Bengal	Synthesis of digital logic circuits MOS
<b>Patel, Narendra</b> Diploma in Visual Communication (Animation Film), National Institute of Design, Ahmedabad	Film and Animation film, HFX, Communication Design, eLearning, Photography, Web Design, Multimedia, Graphics user Interface, Software Development, Printing Technology
<b>Rangwala, Tanvi</b> MS (Computer Science) University of Southern California, USA	Computer Science, Entrepreneurship
<b>Sarkar, Aditi Nath</b> MA (English) Calcutta University, Kolkata	English Literature
<b>Shaikh, Jasmine</b> MPhil Gujarat University, Ahmedabad	Culture studies, Gender studies, Fashion theory and Popular fiction
<b>Sisodia, Diksha</b> PhD (Management) University of Connecticut, USA	Operations Management, Quantative Techniques
<b>Verma, Grishma</b> Post Graduate (Animation Film Design) NID, Ahmedabad	Animation Film Design, Visual Narrative





## Annexure 4

### OFFICERS AND STAFF

#### Registrar

Soman Nair, Executive Registrar

#### Academic Programs

Jigar P Yagnik, Deputy Registrar (Academic)  
Jalpesh Pandya, Assistant Registrar (Academic)  
Dinesh Prajapati, Senior Programmer  
Jainik Patel, Academic Assistant  
Nandini Banerjee, Counselor  
Nitu Singh Bhadauria, Counselor

#### Administration & HR

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

#### Accounts

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

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

Venugopal PR, Executive Secretary to Director  
Abhilash Bhaskaran, Senior Secretary to Executive Registrar  
Satyabir Singh, Senior Secretary to Dean (AP) & Dean (R&D)  
Pankit Gandhi, Secretary Faculty Block 1  
Deepa Poduval, Secretary Faculty Block 2  
Geeta S Nair, Secretary Faculty Block 4

#### Placement

Sneha Thakker, Manager-Placement  
Anuradha Srivastava, Secretary

#### CEP and Anchor Institute Programs

Parth Vayeda, CEP Officer  
Shreejesh Kumar-Secretary

#### Resources Centre (Library)

Manish Mankad, Librarian  
Prasanna Kumar Muduli, Assistant Librarian  
Shashikumara A A, Assistant Librarian  
Madesh Gowda T.M, Library Trainee  
Abid Fakhre Alam, Library Trainee  
Pratibha Kumari, Library Trainee  
M D Tariqul Islam, Library Trainee  
Manish Goswami, Library Attendant  
Mukesh Shrimali, Library Attendant

#### Computer Systems

Nimesh B Patel, Manager (IT & Systems)  
Prabhunath Sharma, Senior Design & Systems Assistant  
Darshan Prajapati, Hardware & Network Engineer  
Priyank Santola, Hardware & Network Engineer

#### Laboratory

Rajendra Shah, Laboratory Superintendent  
Ramesh Prajapati, Deputy Laboratory Superintendent  
Abhishek B Jani, Assistant Laboratory Superintendent  
Sanjay Bariya, Senior Laboratory Assistant  
Krunal G Patel, Senior Laboratory Assistant  
Bhargav Patel, Laboratory Assistant  
Naresh Patel, Laboratory Assistant  
Dharmik Mehta, Laboratory Assistant

#### Sports

Vishal Pratap Singh, Sports Officer  
Shirish Varma, Sports Assistant

#### Hostels

Jitendra Parmar, Senior Hostel Supervisor  
Sawankumar Sachaniya, Hostel Supervisor

#### DCEI

Sujani Shah, Incubation Assistant  
Bhumi Vyas, Secretary

### Project Staff

1. Naimishi Gupta, Junior Research Fellow, DSPLM-ISRO sponsored project w.e.f. 15 July 2019 [Supervisor: Rajib Lochan Das]
2. Tilak Nanavati, Junior Research Fellow, DSPLM-ISRO sponsored project w.e.f. 15 July 2019 [Supervisor: Rajib Lochan Das]
3. Aarushi Dhami, Junior Research Fellow, SATCOM-ISRO sponsored project w.e.f. 01 February 2019 [Supervisor: Yash Vasavada]
4. Naitik Parekh, Junior Research Fellow, SATCOM-ISRO sponsored project w.e.f. 01 February 2019 [Supervisor: Yash Vasavada]
5. Viral Dave, Senior Research Fellow, DLDMVA-ISRO sponsored project w.e.f. 05 September 2017 [Supervisor: Ranendu Ghosh]
6. Surupendu Gangopadhyay, Junior Research Fellow, IMPRINT-MHRD sponsored project w.e.f. 01 June 2018 [Supervisor: Prasenjit Majumder]
7. Sonu Surati Research Associate, ICSSR-sponsored project w.e.f. 24 September 2018 [Supervisor: Alka Parikh]
8. Maitri Vaghela, Field Investigator, ICSSR-sponsored project w.e.f. 24 September 2018 [Supervisor: Alka Parikh]
9. Pramod Tripathi, Field Investigator, ICSSR-sponsored project w.e.f. 24 September 2018 [Supervisor: Alka Parikh]
10. Megha Pandya, Junior Research Fellow, DLDMVA-ISRO sponsored project w.e.f. 02 April 2018 [Supervisor: Ranendu Ghosh]
11. Swati Priya, Junior Research Fellow, AVIRIS-ISRO sponsored project w.e.f. 01 February 2018 [Supervisor: Ranendu Ghosh]
12. Vishwa Vardiwale, Junior Research Fellow, DBLM-SERB sponsored project w.e.f. 12 April 2019 [Supervisor: Biswajit Mishra]
13. Rahul Vasisth, Junior Research Fellow, DMAASRS-ISRO sponsored project w.e.f. 01 August 2017 [Supervisor: Deepak Ghodgaonkar]
14. Deepti Ameta, Junior Research Fellow, TAFUC-SERB sponsored project w.e.f. 03 July 2017 [Supervisor: Saurabh Tiwari]
15. Nupur Jain, Junior Research Fellow, TDCSA-ISRO sponsored project w.e.f. 01 August 2018 [Supervisor: Biswajit Mishra]
16. Pratik Ghosh, Junior Research Fellow, MMSPD-SERB sponsored project w.e.f. 01 May 2019 [Supervisor: Bhaskar Chaudhary]
17. Miral Shah, Senior Research Fellow, KMFA-DAEBRNS sponsored project w.e.f. 22 March 2016 [Supervisor: Bhaskar Chaudhary].

#### Annual Report Committee

Shri Soman Nair | Prof. Suman K Mitra | Prof. Sanjeev Gupta  
 Prof. Ranendu Ghosh | Prof. Asim Banerjee | Shri Manish Mankad  
 Prof. Anish Mathuria | Prof. Shweta Garg

Acknowledgment: Prasanna Kumar Muduli | Prabhunath Sharma



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