



# ANNUAL REPORT 2022 2023

August 2022 – July 2023



ENGINEERS WITH  
SOCIAL RESPONSIBILITY

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

DA-IICT Road, Gandhinagar, Gujarat, India 382007.

Tel.: +91 79 6826 1700 | Fax: +91 79 6826 1710 | Web: [www.daiict.ac.in](http://www.daiict.ac.in)

NAAC Accreditation Grade 'A+'

Recipient of Centre of Excellence Award by the Government of Gujarat



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**Cover Page Credit:**

*Our student, Aditya Chaturvedi, composed this abstract Art as part of the Fundamentals of Design 2 module of the MDes course under the guidance of Prof Binita Desai. The task was to choose the works of a famous artist and, using them, create a composition that reflects the artist's novel work. Aditya chose David Hockney (b. 1937), a well-known artist proficient in using diverse media. His paintings, inspired by the nature he observed from the top of Hollywood Hills from 1980s to 2000s reflect his masterful use of textures and colours and served as the inspiration for this artwork. This composition selected colours and textures present in Mr. Hockney's works, primarily his Hollywood paintings, attempting to emulate their overall look and feel.*



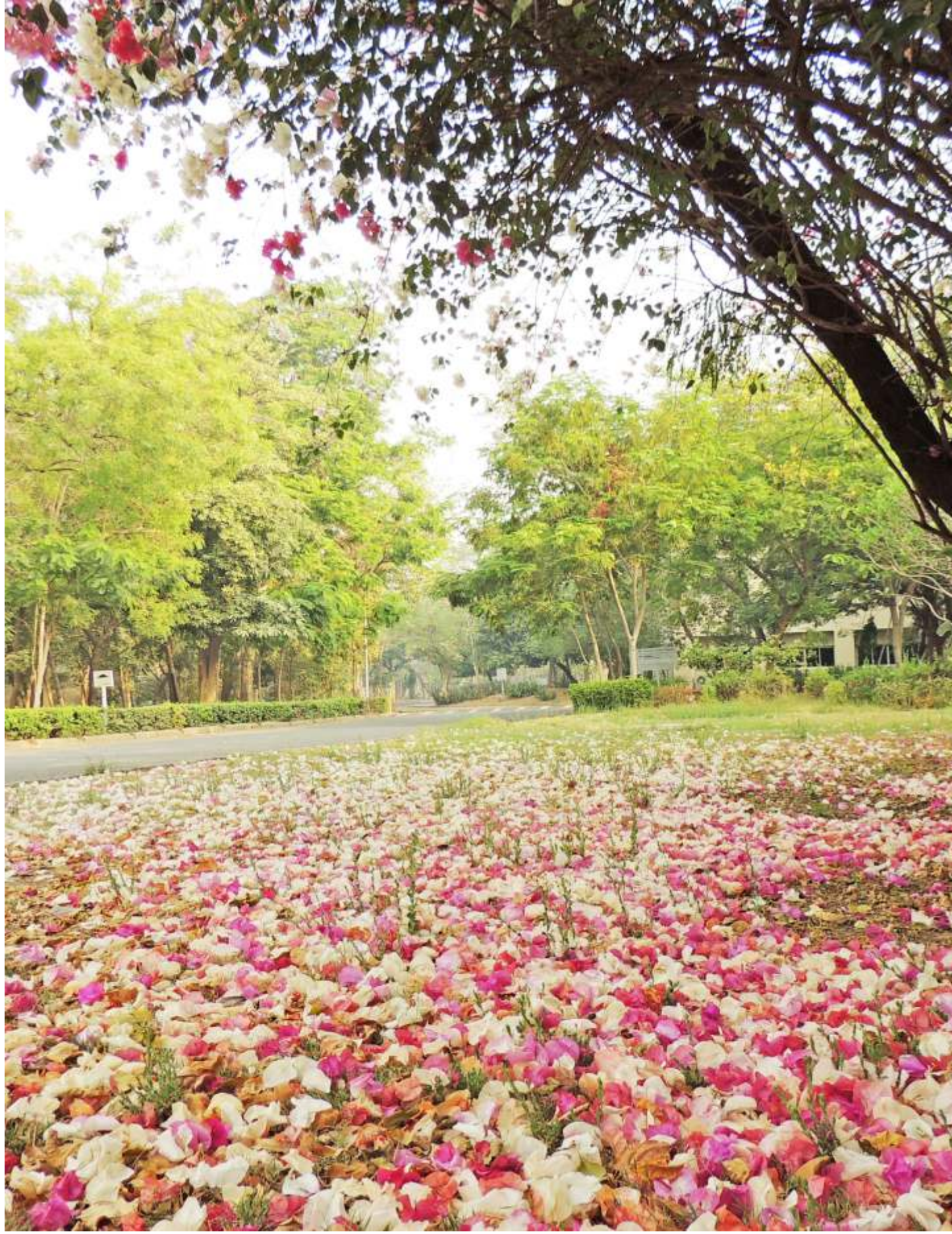


**Shri Dhirubhai Hirachand Ambani**

(28th December, 1932 – 6<sup>th</sup> July, 2002)

Founder Chairman, Reliance Group  
Founder Chairman, DA-IICT









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## Board of Governors



### President

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Patron Trustee, Dhirubhai Ambani Memorial Trust and Chairperson, Group CSR, Reliance Group

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Expert Academician, Provost – CEPT University and Director – L.D. Institute of Indology, Ahmedabad

Ambassador T. S. Tirumurti

Expert, Indian Foreign Service (Retired); Former Secretary to the Government of India; Former Permanent Representative of India to the United Nations in New York

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Representative of DA-IICT Society, A Health, Technology and Finance enthusiast and entrepreneur; Director at Kokilaben Dhirubhai Ambani Hospital

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Head, PC Bose Centre for Cryptology and Security, Indian Statistical Institute, Kolkata

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Director, Indian Institute of Technology, Kanpur

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Director, Dhirubhai Ambani Institute of Information and Communication Technology Society, Mumbai

Shri Mukesh Kumar

Principal Secretary, Department of Higher & Technical Education, Government of Gujarat, Gandhinagar

Shri Vijay Nehra

Secretary, Department of Science & Technology, Government of Gujarat, Gandhinagar

Shri Punit Garg

Representative of DA-IICT Society, Executive Director and Chief Executive Officer, Reliance Infrastructure Limited

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Chief Technical Officer, Samsung R&D Institute India, Bengaluru

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Chief Business Officer, Reliance Power Limited, Mumbai

Ms. Alpna J Doshi

Founder and CEO, Board Director, Stralynn Consulting Services, Inc.

Shri Shrenik Vaishnav

Vice President (Finance), Torrent Power Limited, Ahmedabad

Prof. Manik Lal Das

Dean (Academic Programs), Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar

Prof. Manjunath V. Joshi

Dean (Research & Development), Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar

### Secretary

Mr. Siddharth Swaminarayan

Executive Registrar, DA-IICT, Gandhinagar



## Director's Page



The academic year 2022-23 marked the end of the pandemic which ravaged the world. During the pandemic the normal human life went for a toss. The individuals were forced to live in isolation, the teaching and learning went online, the institutes became desolate places, the lives were no longer normal. From the middle of 2022 the institute slowly prodded back to normalcy and the offline classes started from the autumn semester. In the annals of human history, this period will be remembered as transitioning from despair to hope.

The pandemic brought unforeseen challenges. The semiconductor industry faced a huge shortage of chips. China being the hub of semiconductor manufacturing and a country severely affected by the pandemic, global production was adversely affected, consequently, other industries, for which it works as ancillary, faced huge problems. It is now being realized that semiconductor manufacturing is to be spread out by setting up units in other Asian countries like India. This has created an opportunity for India to become a hub of the semiconductor manufacturing industry. Some multinationals started planning to set up manufacturing units in India. In the next few years, there will be a good demand for electronics engineer with VLSI specialization. Considering this fact, the Institute has introduced a unique four-year B. Tech in Electronics and VLSI Design (EVD) from the Academic Year 2023-24 to produce VLSI industry-ready engineers. In the first two years, the curriculum offers courses to build a strong foundation in the discipline and in the next two years, it trains the students to specialize in VLSI System Design and Electronics System Design to acquire both technical and entrepreneurial skills for becoming a leader in the industry.

Our faculty members continue producing significant research outputs that are being published in leading peer-reviewed journals and conference proceedings. We have several ongoing projects funded by the Ministry of Electronics and Information Technology, Dept. of Space, Govt. of India, SERB under Dept., of Science and Technology, Govt. of India, GUJCOST, Government of Gujarat, SAC-ISRO, TIHIT Bombay, NLTM under MeitY among others.

Our graduates continue to draw some of the best recruiters for jobs and internships in the industry. As in the past, Google, Microsoft, Sprinklr, DE Shaw, Atlassian, Qualcomm, Cadence, Morgan Stanley, Flipkart, KPMG, Barclays, Amazon, Goldman Sachs, LinkedIn, etc. have been visiting our campus to offer placements for Summer Internship and jobs.

The Institute received recognitions: Centre of Excellence (COE) awarded by the Government of Gujarat and Five Star rating by the Gujarat State Institutional Rating Framework (GSIRF), Government of Gujarat. It amply shows our commitment towards the Institute's vision.

With deep regret, we inform you of the sad demise of Mr Soman Nair, Executive Registrar, who contributed immensely to the growth and stability of the Institute.

Finally, I would like to express our gratitude to the members of the Governing Body and the Reliance ADA Group for their valuable guidance in managing the Institute. The Institute is also grateful to the State and Central Governments for their continuing support.

Tathagata Bandyopadhyay  
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 became a member of the Association of Indian Universities (AIU).

DA-IICT is envisioned as 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 Doctorates from prominent institutions across the world and having exceptional research credentials.

DA-IICT offers four undergraduate, six post-graduate programs and a doctoral program.

The undergraduate programs are full-time, (duration 4-years) namely B.Tech. (ICT), B.Tech. (Honours) in ICT with a Minor in Computational Science, B.Tech. (Mathematics and Computing) and B.Tech. (Electronics and VLSI Design).

The postgraduate programs are M.Tech. (ICT), M.Sc. (IT), M.Sc. (Data Science) and M.Des. (Communication Design). M.Sc. (Agriculture Analytics) is jointly offered by DA-IICT, Anand Agriculture University and the Indian Institute of Remote Sensing (IIRS, Dehradun). M.Tech. (EC) program is offered jointly by CR Rao Advanced Institute of Mathematics, Statistics and Computer Science (AIMSCS) Hyderabad, and DA-IICT.





The Alumni of the Institute consist of over 7500 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 worldwide and have made a name for themselves in their respective fields.

DA-IICT designs and offers Continuing Education Programs to upgrade the skills of researchers, academics and professionals in industry, private and government organizations. These programs are based on knowledge-sharing and 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 developed collaborations with industry, teaching and research institutions in India and abroad for faculty exchange, joint research, and the guidance of Masters, Doctoral and Postdoctoral scholars.

DA-IICT is spread over 50 acres of land in Gandhinagar, the 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, all instill an awareness of the environment 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 gardens and lawns. The campus is also home to various species of birds and many rare birds have been spotted by avid birdwatchers among the DA-IICT community.





## Academic Programs

The Institute offers eleven academic programs -- four undergraduate and six post-graduate programs including a Doctoral Program. The feature of the academic programs is that they are interdisciplinary, and have an effective combination of core and elective courses in ICT, Basic Sciences, Humanities, Social Sciences, Design, Management and project-based, flexible learning and internships in rural, industrial and research environments. In the case of the M.Tech Programs, there are specializations and dissertation modules. In addition to foundational and elective courses, all the programs involve

internships and projects. The curricula of the programs are periodically reviewed by the Curriculum Review Committees, 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 the induction of new elements to ensure that the curriculum is updated and will effectively prepare the students to work with the latest technology and possess the research skills required by their employers and meeting highest academic standards. The details of 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	270
2	B.Tech. (Honours) in ICT with minor in Computational Science	2013	4	70
3	B.Tech (MnC)	2020	4	50
4	B.Tech. (EVD)	2022	4	270
5	M.Tech. (ICT)	2002	2	80
6	M.Tech (E&CE) with specialization in Wireless Communication and Embedded Systems	2019	2	20
7	MSc (Information Technology)	2002	2	120
8	MSc (Data Science)	2020	2	120
9	MSc (Agriculture Analytics)	2022	2	120
10	M.Des. (Communication Design)	2004	2	20
11	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 2022-23 BATCHES

Admission to undergraduate (UG), postgraduate (PG) programs started in March-April 2022. Applications for admission to all the programs

were to be made by filling forms online. The details of all admission processes and notification were made available on the DA-IICT website. Further, advertisements were published



in several regional, national and international newspapers. The call for admissions was also circulated on social media platforms, and using posters and banners. The admissions, interviews and counselling were conducted using an online system.

### Undergraduate Programs

**The Institute offered admissions in the following undergraduate programs**

- B.Tech. (ICT)
- B.Tech. (ICT-CS)
- B.Tech. (MnC)

The approved intake in these programs were 262, 120 and 50 respectively: a total of 432 seats. The seats in UG programs were filled under three different categories: All India, NRI and Gujarat. For the UG programs, admissions to 50% seats were carried out by the institute (this includes 35% of the 'All India' category and 15% of the 'NRI' category). The admissions to the remaining 50% seats, which fall under the 'Gujarat' Category were administered by the Admission Committee for Professional Courses (ACPC), Government of Gujarat.

In the 'All India' category, admission was based on the All India Rank of Joint Entrance Examination Main (JEE Main), 2022. The institute followed the guidelines for admission of reserved category students. Admission in the 'NRI' category included Non-resident Indians, Foreign Nationals, and Persons of Indian Origin. Admission in this category was based on the candidates' 10th, 12th, SAT II or JEE Main 2022 results. Under the 'Gujarat' category, applicants with Gujarat as their domicile were eligible for admission and the process was conducted by ACPC based on their GUJCET/JEE 2022 scores.

### Postgraduate Programs

The Institute offered admissions in the following post-graduate programs:

#### Master of Technology (M.Tech.)

- **M.Tech. (ICT):** For the year 2022-23, the institute offered three specializations namely, Machine Learning (ML), Software Systems

(SS) and VLSI and Embedded Systems (VLSI&ES). The approved intake in these specializations was: 32 in ML, 26 in SS and 16 in VLSI&ES, a total of 74 seats. The admission to M.Tech. (ICT) with all three specializations was conducted through two channels, GATE and Non-GATE. In the GATE channel, the merit list was prepared based on applicants' GATE scores, and in selected cases interviews were conducted by the institute. For the non-GATE category, interviews were conducted. Admission in the non-GATE category was based on marks obtained in the qualifying degree and an interview.

- **M.Tech. (EC):** The institute offered admissions in M.Tech. (EC) with specializations in Wireless Communications and Signal Processing (WC&SP). Both GATE and non-GATE channels were available for admission into the program.

#### Master of Science (M.Sc.)

- **M.Sc. (IT):** The approved intake in this program was 120. The institute conducted an online entrance exam for the selection of students. The merit list was prepared based on aggregate scores received by applicants in the entrance exam.
- **M.Sc. (DS):** The intake in the program was 60. Admission to the program was through qualification in the DA-IICT entrance exam, followed by an interview.
- **M.Sc. (AA):** This was a new program with 30 seats, introduced in 2022-23. Admissions and the merit list in this program were based on a DA-IICT entrance exam and interview as well as 10th, 12th and graduation marks.

#### Master of Design (M.Des.)

- **M.Des. (Communication Design):** The institute offered admission in the M.Des. program with a specialization in Visual Communication Design and Interaction Design. The approved intake in this program was 20. Admission to the program was through two channels: the Common Entrance Exam for Design (CEED) score and the DA-



IICT Aptitude Test (DAT). The institute also conducted interviews to select and admit students. The merit list was prepared based on the CEED/DAT score and interview marks.

### Doctor of Philosophy (Ph.D.)

Admission to the Ph.D. program was through the following tracks:

- Ph.D. (Regular)
- Ph.D. (Rolling)

DA-IICT offers a Ph.D. in varying research domains, broadly conceived, such as Communication and Signal Processing, Algorithms and Theory of Computation, VLSI and Embedded Systems, Physics and Mathematical Sciences, AI, ML and Data Science, Software Systems and Networking, Humanities, Social Sciences and Design.

The admission process for the Ph.D. (Regular) is

conducted two times in a year i.e. in Summer and Winter. Admissions to the Ph.D. (Rolling) are conducted four times in a year (typically in the month of March, June, September, December).

Admission to the Ph.D. (Regular) program was through two modes, Direct Interview and Online Entrance Exam. The Ph.D. Admission process comprised of two steps, namely shortlisting and selection. In the Direct Interview mode, shortlisting was based on valid GATE score/UGC-NET JRF/M.Phil. Degree/Statement of Purpose (SoP), while in the other mode, shortlisting was based on the DA-IICT entrance exam marks. The final selection in both the modes was made through interviews.

Admissions in the Ph.D. (Rolling) program were based on a research presentation and interview.

**Table 2** shows the statistics at the end of the admission 2022-23 session.

**Table 2: Admission 2022-23 Statistics of UG and PG Programs\***

Program		Applications Received	Admitted Candidates
Undergraduate	B.Tech. (ICT)	6707	258
	B.Tech. (ICT-CS)		120
	B.Tech. (MnC)	1260	50
Postgraduate	M.Tech. (ICT)	365	78
	M.Tech. (EC)	53	05
	M.Sc. (IT)	571	122
	M.Sc. (DS)	319	63
	M.Sc. (AA)	49	29
	M.Des. (CD)	40	12
	Ph.D.	112	21

### ORIENTATION

The orientation for the undergraduate students was held from 10th to 14th October 2022 and for postgraduate students from 26th to 29th July 2022. The Program is designed to provide an overview of life at DA-IICT, from academics to extra-curricular and social activities to the newly admitted students, and to help them integrate

into the Institute community. The sessions conducted covered the 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 they met faculty, staff and senior



students. The orientation acquainted the students and parents with the course structure, evaluation system, academic regulations, campus space, infrastructure, and 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.

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

These 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 2022-23, in the Autumn semester twelve students, and in the Winter semester thirteen students were awarded Merit Scholarships. In the Autumn semester, Rs. 10,32,000 and in the Winter semester, Rs. 11,18,000 was disbursed as part of the UG-Merit scholarship.

#### **UG-DAFS Merit Scholarship**

The DAFS Merit Scholarships are awarded to the top five students admitted to the B.Tech program having 8 (eight) or above SPI in their respective semesters. During the academic year 2022-23, in the Autumn semester, nine students and in the Winter semester, twelve students were awarded the Merit Scholarships. In the Autumn semester, Rs. 6,30,000 and in the Winter semester, Rs. 12,05,000 was disbursed as part of the UG-DAFS Merit scholarship.

#### **PG-Merit Scholarship**

Merit Scholarships are awarded to the top students admitted to the PG programs like M.Sc. (IT), M.Sc. (DS) and M.Sc. (AA) having the highest SPI in their respective semesters. During the academic year 2022-23, in the Autumn semester nine students, and in the Winter semester, ten students were awarded the Merit

Scholarships. In the Autumn semester, Rs. 10,35,000 and in the Winter semester, Rs. 12,10,000 was disbursed as part of the PG-Merit scholarship.

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

The Merit-Cum-Means Scholarships are awarded to five students each semester, based on good academic performance, and the annual income of their parent(s)/guardian (s) not exceeding Rs. 4.50 lakh. Six students in the Autumn semester received the scholarship during the academic year 2022-23, and the amount of Rs. 5,16,000 has been disbursed.

#### **Assistantships**

The Institute offers full-time Teaching Assistantships, disbursed through monthly fellowship/scholarships to PhD Scholars and M.Tech (ICT) students. Eligible B.Tech (ICT) students are also offered half-time Teaching Assistantships in their final year of studies. During the reporting year, 41 PhD Scholars and 132 M.Tech students received assistantships. A total amount of Rs. 2,45,12,026 was disbursed.

#### **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 undergraduate students in the preparation and submission of applications for the Chief Minister Scholarship and MYSY. The Registrar's Office guides and assists 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' income is up to Rs. 6.00 lakh. Four hundred ninety-three B.Tech students have received the scholarship. The total scholarship amount is Rs. 2,92,08,000.

#### **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, students pursue two semesters of research under the guidance of a faculty advisor and submit a Master's thesis to obtain a degree specializing in the respective track. The students of MSc (IT), MSc (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 provided 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:

- **Anand Agricultural University:** Design, develop and deliver programme to enhance the quality of education in the PG program. Enhancing skills of students/aspirants through internship and vocational training.
- **Bureau of Indian Standards:** To develop and collaborate on activities in the areas of Standardization and Conformity Assessment based on equality and reciprocity. Participate in Standardization activity, undertake R&D Projects related to standardization and conformity assessment, and develop infrastructure support for R&D Projects of relevance to standardization.
- **Civil Hospital Ahmedabad (IKDRC):** For academic and research collaboration, to design and offer joint certificate courses, undergraduate and/or postgraduate teaching programs leading to Degrees. To exchange information on teaching, and learning materials, to jointly organize seminars, conferences, workshops, internships, and/or short-term continuing education programs, to exchange faculty, and staff and to jointly guide research candidates for doctoral and/or post-graduate programs.
- **Enago - Crimson Interactive Pvt Ltd:** To collaborate for instituting Doctoral Fellowships titled 'Enago Scholars' in research areas.
- **Erisha Space Private Limited, New Delhi.** A Memorandum of Understanding between DAIICT & Erisha Space Private Limited, New Delhi.
- **Gujarat Council On Science & Technology, Dept of Science & Technology, Govt Of Gujarat:** The GUJCOST supercomputer facility aims to provide capacity building among students and faculties with advanced technologies to perform high-end computations for scientific, engineering and academic programs to address and catalyse the research using modelling, simulation and data analysis. Promoting research by integrating leading-edge emerging technologies at the grassroots level.
- **IIM, Ahmedabad:** To collaborate with Billion Readers (BIRD) Initiative a research project at the Indian Institute of Management Ahmedabad, to survey 100 rural low-income households to understand the viewing patterns of the TV programs that women and children with semi-to-low literacy background watch every day.
- **Indian Institute of Remote Sensing (IIRS):** To disseminate knowledge and provide learning opportunities to aspiring students through a PG program. Curricula building for the program, to enhance the quality of education. Enhancing skills of students through internship and vocational training.
- **Indian Institute of Remote Sensing:** To develop academic and research cooperation in teaching, training and research for the advancement and dissemination of learning.



- **Institute of Seismological Research (ISR):** For academic and research collaboration, exchange and technical resource sharing between the two institutions for scientific and technical research/study, to share the knowledge and conduct conferences, workshops, seminars, and short-term training programs.
- **Jadavpur University:** For academic exchange as well as for exchange students along with the development of opportunities for faculty to teach courses or conduct seminars. Collaborate for various national and international scholarships.
- **Rishabh Integrated Skill Enhancement (RISE):** To exchange information on teaching, learning materials and other literature relevant to each other's educational programs. To exchange faculty, staff and students and to jointly organize seminars, conferences, workshops, and/or short-term continuing education programs on topics of mutual interest and/or training programs.
- **Sardar Vallabhbhai National Institute of Technology, SVNIT** A Memorandum of Understanding between DAIICT & Sardar Vallabhbhai National Institute of Technology, SVNIT. This is an academic and Research collaboration and includes Student Exchange programmes.
- **Smt. GR Doshi and Smt. KM Mehta Institute of Kidney Diseases and Research Centre Ahmedabad**
- **Tata Consultancy Services:** To nominate suitable full-time PhD candidates of DA-IICT for the TCS Research Scholar Program.
- **TCG CREST:** For academic and research collaboration for joint certificate/diploma programs, PhD and PG programmes, research publications, joint research workshops, course offerings, scholar supervision and exchange of academic information, scholarly information, materials and publications as well as exchange of students, staff and faculty.

## Continuing Education Program

The Continuing Education Program (CEP) has been identified as one of the focus areas of DA-IICT. CEP is a long-term revenue-generating activity for the institute. The CEP Office (with the guidance of the CEP Advisory Committee in appropriate situations and support from the Social Media Office) has the primary responsibility to open up parallel revenue channels for the CEP Office and, in turn, for DA-IICT, leading to infrastructural development and research fund corpus-building. Apart from that, a successful CEP program adds to the branding of the institute. DA-IICT seeks to provide effective training in the areas of core competence of its faculty members.

### Continuing Education Program

CEP aims to enhance skills for fresh graduates/undergraduates, faculty members from other institutions, industry, the corporate sector, government employees, police and armed forces, or any interested groups of individuals with the help of the expertise of the DA-IICT faculty members and as required in collaboration with industry and other universities.

### Developing an institute corpus from CEP

The institute's revenue generated from CEP will be reinvested in building the CEP activity – infrastructure, human resources, system, and methodology - eventually making it self-sustaining. The programs should eventually lead to financial independence (Account, audit, and signatories) and be managed by the Chair of the CEP Office in consultation with the Director, DAIICT, and assigned CEP Advisory Committee. The infrastructure and systems so developed would be shareable with all faculty bodies for research and teaching purposes based on availability. Till financial independence is achieved, the CEP Office would be entitled to an annual operating budget as approved by the Institute.

### Categories of the CEP Program

There are two broad categories of CEP Programs:

### I. Institute-driven Continuing Education Programs:

These programs are designed either for:

- External organizations (called **Sponsor Agencies**) that would like to partner with DA-IICT for the specialized training of their employees/staff, or External partners (called **Collaboration Partners**) who come together to develop and deliver a comprehensive Continuing Education initiative which would be open for specific or generic target audiences that are not affiliated with the collaboration partner(s).

The sponsor agencies include (but are not limited to) for-profit corporate bodies, universities, educational institutes, Non-profit organizations, Government Departments, etc. The CEP Office negotiates terms of reference and financial aspects with the Sponsor Agency/Collaboration Partner.

### Institute-driven Continuing Education Programs under MoU:

In specific cases where DA-IICT already has a standing MoU with the Sponsor Agency, the CEP Office would formulate a suitable CEP proposal as per the directive from the Director's office and specific requirements within the scope of the MoU.

There will be a designated DA-IICT faculty (called **Anchor Faculty**) for all institute-driven CEP programs who will be the coordinator of the course and who will be collaborating with Collaborator Partners in designing and running the course.

### II. Faculty-driven Continuing Education Programs:

This program has been designed for any regular DA-IICT faculty member (called Anchor Faculty) to design and float CEP courses for specific target audiences – either individually or as a group with other DA-IICT faculty members or with an Industrial partner, or with faculties from other reputed universities.

The above two categories of CEP can be further subdivided into two subtypes – **short-term** and **long-term** based on the expected revenue. For





Faculty-driven CEP, there should be an Anchor Faculty who has to run the program.

**a) Short-term CEP:** These CEPs encompass software training, networking, technical aptitude training, database software, soft skill training, etc. They will also include Summer Schools, Workshops, Tutorials, Conferences, Symposiums, and Seminars related to the above. The Anchor Faculty would run the program with the assistance of graduate students (Masters or Ph.D. students) as Teaching Assistants or help desk staff as Lab Assistants. However, prior approval of the faculty supervisor(s) (in the case of the students) or DA-IICT Registrar (in the case of help desk staff) needs to be taken.

**b) Long-term CEP:** These CEPs include training in cutting-edge technologies, state-of-the-art tools/methods/techniques, and exploration of new paradigms/areas that are of high market-demand. Such programs should have a minimum of 40 lecture-cum-lab hours (i.e., 40 sessions, with session duration being 1 hour). Efforts should be made to offer as many long-term and targeted CEPs as possible.

In some cases, the brand value of the CEP certificate from DA-IICT may increase if co-

branded with relevant industry/research institute partners. These partners may charge a fee for using their brand name for the program and the certification. Such costs will be factored in for relevant collaborations.

DAIICT was also selected as an Anchor Institute by the Center for Entrepreneurship Development (CED), Department of Industries, Government of Gujarat, in the specialization area of Information and Communication Technology. This is a 5-year program. Under this program, nodal institutes are selected within Gujarat, and DAIICT faculty trains faculty members from these nodal institutes.

The objective of this Anchor Institute Program is to achieve the ultimate goal of making students of Gujarat “industry ready” through well-trained faculty members of Gujarat-based engineering colleges. Over the last five years, AIP programs have been run on topics such as Operating Systems, Digital and Analog Communication Systems, Image Processing using VLSI Architectures, Multicore Processor Architecture and parallel Programming, Data Structures, Software Engineering, Programming, .Net and C#, Real-time and Embedded Systems, and others.



**Anchor Institute Program Centre (AIPC) DA-IICT**

## Placements and Internship

### PLACEMENTS

DA-IICT has consistently ranked as a top choice among companies seeking to acquire talented and promising individuals for their workforce. Numerous students have secured positions with competitive compensation packages from prominent corporations such as Microsoft, Google, Goldman Sachs, Sprinklr, Tekion, Atlassian, Wells Fargo, and more. During the 2022-23 placement season, a wide array of industries and domains were represented by recruiters, offering roles such as Software Engineer, R&D Engineer, Business Analyst, Data Scientist, Site Reliability Engineer, ASIC Design Engineer, and Business Intelligence Consultant, among others. Over 150 companies actively participated in on-campus placement drives for the graduating batch of 2022-23. There were more than 20 companies engaged with DA-IICT to provide summer internships to pre-final year

students through the campus placement process. Notable among them were BNY Mellon Technology, Barclays, Microsoft, Morgan Stanley, Deutsche Bank (DBOI Global Services Private Ltd), and Google.

In addition to regular placement activities, the Placement Cell also introduced initiatives to connect current students with alumni, allowing for mentorship and better preparation for the campus placement process.

Furthermore, the institution helps students to prepare for placements by conducting mock assessments and interview preparation sessions for pre-final year students, aiming to enhance their performance and increase their chances of securing internships and final job offers from participating companies in the campus placement process.

**Table 3: Placement Status**

Placement 2022-23	B.Tech	M.Tech	MScIT	M. Des
Students opting for campus placement (each batch)	340	59	117	13
Students opting out of campus placement (each batch)	29	2	6	0
<b>Total</b>	<b>369</b>	<b>61</b>	<b>123</b>	<b>13</b>

Details	B.Tech	M.Tech	MScIT	M. Des
Total Jobs offered	315	37	99	6

The students are equipped with the knowledge imparted by the esteemed faculty at DA-IICT through the curriculum that is dynamically updated in line with the changes that are taking place in the areas of Information and Communication Technology. They take advantage of multiple initiatives, and participate and do well in contests at national and global levels. These help them find employment opportunities in the increasingly diverse domains offered by the spectrum of recruiters visiting DA-IICT.

The average annual salary package was Rs. 17 lakh. The highest salary package touched Rs. 82 lakh per annum.

### RURAL INTERNSHIPS

The Rural Internship is a mandatory requirement of the B.Tech curriculum. The objective is to expose students to the social and economic realities of rural lives; sensitize them to the vulnerabilities of rural communities, and facilitate an appreciation of the constraints and opportunities presented by the development of



rural India. A Rural internship is for three weeks at the end of their Third Semester, during December vacation. A five-member Rural Internship Committee appointed by the Director is responsible for the Rural Internship.

For the academic year 2022-2023, two batches of students were enrolled for these internships.

The BTech 2020 and 2021 batches together comprised around 760 students. They were placed in 8 States with 68 Non-Governmental Organizations. The Rural Internship period was from December 14, 2022, to January 7, 2023. Details appear in **Table 4**.

**Table 4 : State and Organization-Wise Student Distribution - 2022 Batch**

Sr.	Name of the NGO	Location	Number of Students
1	Aastha Trust	Botad, Gujarat	5
2	AILSG	Pune, Maharashtra	2
3	Ajeet Foundation	Ahmedabad	6
4	Akshay Patra	Ahmedabad, Gujarat Vadodara, Gujarat	16
5	Anoopam	Anand, Gujarat	10
6	Aravali	Jaipur, Rajasthan	1
7	Avbodh	Ahmedabad, Gujarat	10
8	Bhavnagar Blood Bank	Sardarnagar, Bhavnagar	21
9	Blind People Association	Ahmedabad	15
10	CEE	Ahmedabad, Gujarat	16
11	Chetna	Ahmedabad	15
12	Craft Silicone	Ahmedabad	19
13	Dhruva	Navsari	14
14	Divine Feel Trust	Rajkot	6
15	Diwali Ben Trust	Surat	5
16	Dwarkesh Gaushala	Manavadar, Junagadh, Gujarat	5



17	Ek Khwayish	Vadodara	7
18	Ekta Trust	Surat, Gujarat	6
19	Elixir	Ahmedabad, Gujarat	18
20	ESI Sughad	Gandhinagar, Gujarat	6
21	GHCL Foundation	Sutrapada, Gir Somnath	11
22	GKSM Trust	Vyara, Gujarat	57
23	Hariraj Trust	Amreli, Gujarat	4
24	Helpage India	Ahmedabad, Mumbai	8
25	HiFeed	Uttarakand	45
26	Iswar GVT	Patan, Gujarat	18
27	Jeevantirth	Ganghinagar, Gujarat	10
28	Jivan Jyot	Bhavnagar, Gujarat	5
29	Kalavidya	Kutch, Gujarat	7
30	Kalyani Sahasik Mahila Vikas Sangh	Ahmedabad, Gujarat	19
31	Karmdeep Foundation	Rajkot, Gujarat	3
32	Kartavya Jivdaya Kendra	Morbi, Gujarat	4
33	Late J V Nariya Edu Trust	Jamnagar, Gujarat	5
34	Lok Seva Trust	Mehsana, Gujarat	24
35	Lok Vikas Sanstha	Surat, Gujarat	9
36	Mahalakshmi Mitra	Valsad, Gujarat	4
37	Maitri Mannthan	Udaipur, Rajasthan	7
38	National Association for the Blind	Navsari, Gujarat	19
39	Navjeevan Educational Charitable Trust	Porbandar, Gujarat	6
40	Nirmaan	Hyderabad	9
41	People's Welfare Society	Upleta, Rajkot, Gujarat	11
42	PJKS	Dehradun, Uttarakhand	16



43	PNR Society	Bhavnagar, Gujarat	10
44	Pochabhai Foundation	Golana, Khambhat, Anand	3
45	Pragatipath Charitable Trust	Aravalli, Gujarat	6
46	Pratibha Foundation	Vadodara, Gujarat	44
47	Prayosha Pratishthan	Ahwa, Saputara	7
48	Raj Foundation	Gandhinagar, Gujarat	3
49	RD Acharya Mahila Sansthan	Surendranagar, Gujarat	5
50	Ruchi Foundation	Shimla, HP	20
51	Sahaj Sansthan	Phalodi, Rajasthan	4
52	Sahayog Pragati Mandal	Surat, Gujarat	5
53	Sahjeevan	Kutch, Gujarat	4
54	Sanjivani NGO, Pune	Pune, Maharashtra	11
55	Seva Mandir	Udaipur, Rajasthan	2
56	SEWA Sanstha	Ahmedabad	3
57	Shram Vidyapeeth	Lucknow	11
58	Shree Bolbala Trust	Rajkot, Gujarat	18
59	Shree Krishnam Foundation	Vadodara, Gujarat	17
60	Shree Sarvodaya Arogya Mandal	Isanpur Mota, Gujarat	14
61	SUTRA	Himachal Pradesh	5
62	Tara Sansthan	Udaipur, Rajasthan	15
63	Udaan	Rajkot, Gujarat	6
64	Upkriti	Delhi	3
65	Vandemataram	Hyderabad, Telangana	4
66	Vatsalya NGO	Rajkot, Gujarat	6
67	Women Empowerment Corp	Ahmedabad, Gujarat	10
68	Yuvaunstoppable	Gandhinagar, Gujarat	2







## RESEARCH/ INDUSTRIAL INTERNSHIPS

At the end of the sixth semester, the students of the B.Tech program (Batch 2022) undertake the research or industrial internship of six to eight weeks during the summer vacation. A research internship can be done either at DAIICT or at other academic or R&D institutions under the supervision of a faculty or scientist. The objective of this internship is to expose the students to cutting-edge research at an undergraduate level. An industrial internship can be done at companies. The industrial internship's purpose is to familiarize the students with the corporate environment and team-driven development work.

The B Tech 2022 batch students took internships across Industry, Research and Development Laboratories, and national Academic Institutions

(including DA-IICT). Google, Amazon, Microsoft, Capgemini, Sprinklr, Mercer Mettl, FactSet, Atlassian, BNY Mellon, Deutsche, Goldman Sachs, Morgan Stanley, Wells Fargo, and a few startups and new companies. Different institutions such as the Indian Institutes of Technology, Indian Institute of Management, National Institute of Technology, and ISRO are some of the academic/research institutions where the students did their research internships. A total of 376 students undertook internships, of which 308 were industrial internships and 68 were summer internships. On completion of internships, the students made their presentations. It was observed that through research/industrial internships, they could get excellent exposure to implementing their knowledge on ICT in various problem-solving and industrial applications.

**Table 5 : Number of students opting for Industrial Internships: 308**

Sr. No.	Name of the Organisations/Institution	No. of Students
1	Aavenir Software Private Limited - India	1
2	Amazon Development Centre (India) Private Limited	24
3	Atlan	2
4	Atlassian	2
5	Autolytics Technology Private Limited	13
6	Awaaz De Infosystems Private Limited	1
7	BNY Mellon Technology   India	2
8	Cadence Design Systems	1
9	Clientjoy	4
10	Cloudera Data Platform India Private Limited	3
11	Private Limited	3
12	Colgate Global Business Services	5
13	Delhivery Limited	2
14	Digicorp Information Systems Pvt. Ltd.	1
15	Episource India Pvt Ltd	2
16	Euler Motors	7
17	Exxat	1
18	Fintech Global Center (Adsom Globaltech)	3
19	Flipkart	4
20	Futures First Info Services Pvt. Ltd	5
21	GamesKraft Technologies Pvt Ltd. (Kworks Technologies Private Limited)	2
22	GE Digital	6
23	Goldman Sachs Group, Inc	12
24	Growby Exx Services Pvt. Ltd.	10
25	HashedIn.-Deloitte	5
26	IBM Software Labs	1
27	Infocusp Innovations	5
28	InfoObjects Inc.	2
29	Infor India Pvt. Ltd.	1
30	Injala Private Limited	1
31	Intello Labs Private Limited	3
32	KFin Technologies Limited.	3
33	MAQ Softwares Pvt Ltd.	11
34	Mastek (Evosys)	5
35	Mercer Mettl	4
36	MindTickle Interactive Media Private Limited	2
37	Morgan Stanley Advantage Services Private Limited	5
38	Nagarro Softwares Pvt. Ltd.	2
39	NEW FOLD DIGITAL (Endurance International Group) Ontic Technologies.	1

Sr. No.	Name of the Organisations/Institution	No. of Students
40	Ontic Technologies.	5
41	OpsHub Technologies (P) Ltd.	3
42	Optimized Solutions Limited	2
43	Panamax Infotech.	16
44	Pirimid Fintech.	2
45	Qualcomm	1
46	Quicko	1
47	QUINBAY	5
48	RAAPID (HEALTHCARENLP SOFTECH LLP)	2
49	RapidBox (Trusource Technology Private Limited)	10
50	rtCamp Solutions Pvt. Ltd.	3

51	Searce Co-sourcing Services (P) Ltd.	10
52	Shipmnts	2
53	Shipturtle Apps Private Limited	3
54	SKH Algorithms Pvt. Ltd.	3
55	Sprinklr Solutions Pvt. Ltd.	17
56	Squadstack	1
57	TartanHQ Solutions Private Limited	2
58	Tekion India Private limited	28
59	Trading Technologies	3
60	Vinculum Solutions Pvt. Ltd.	5
61	Wizzy Softech Pvt Ltd	4
62	Zoop One.	7
63	ZURU Tech India Private Limited	1

**Table 6 : Number of students selected by companies for Summer Internships (off-campus through the Placement Cell): 68**

Sr. No.	Name of the Organisations/Institution	No. of Students
1	Flipkart	3
2	Google	3
3	Microsoft:	25
4	Sprinklr:	10
5	Atlassian	2
6	BNY Mellon	2
7	D. E. Shaw India Private Limited	2
8	Deutsche India Pvt Limited	5
9	Goldman Sachs	9
10	Morgan Stanley	1
11	Wells Fargo	6





## Seventeenth Convocation

The seventeenth Annual Convocation of the Institute was held on 28th January 2023. Degrees were awarded to the students of the Eighteenth batch of B.Tech (ICT), the sixth batch of B.Tech (Honours) in ICT with a minor in Computational Science, the nineteenth batch of M.Tech (ICT) and M.Sc (IT), the thirteenth batch of M.Des (CD), second batch of M.Tech (EC), first batch of M.Sc (DS) and 5 PhD Scholars, all numbering 563 students. The following students were awarded the President's Gold Medal for scholastic performance:

Sr. No.	Name	Program
1	Makadiya Neel Narendrabhai	B.Tech (ICT)
2	Shah Nishant Ketankumar	B.Tech (Honours) ICT with Minor CS
3	Mehta Krunal Kamleshkumar	M.Tech (ICT)
4	Therattil Anand Saju	M.Tech (EC)
5	Srivastava Niharika	MSc (IT)
6	Patel Preet Arvindbhai	MSc (DS)
7	Bhanot Juhi	M.Des (CD)

The following students were recipients of the President's Gold Medal from the previous two years when the Convocation was not held. The President's Gold Medals for last year, 2022 were awarded at the Seventeenth Convocation in 2023.

2022		
Sr. No.	Name	Program
1	Baxi Rushiraj Ashish	B.Tech (ICT)
2	Mehta Bhargey Jay	B.Tech (Honours) ICT with Minor CS
3	Bhat Shripad Anant	M.Tech (ICT)
4	Mankad Vrutant	MSc (IT)
5	Asha K S	M.Des (CD)

2021		
Sr. No.	Name	Program
1	Jogi Yash	B.Tech (ICT)
2	Shah Rutvik	B.Tech (Honours) ICT with Minor CS
3	Nanavati Tilak Digantkumar	M.Tech (ICT)
4	Jain Akshay	MSc (IT)
5	Shah Romil Hemendra	MSc (IT)
6	Siddhesh Prathamesh Vinay	M.Des (CD)





The Chief Guest at the Convocation was Dr. Subhasis Chaudhuri (Director, IIT Bombay). He began his speech by reflecting on India's past, to provide a better understanding of the development of education, comparing the ancient Indian tradition of the 'Gurukulam' to Plato's school in Greece. Dr. Chaudhuri pointed out that in the Gurukulam system, the students had to fulfil various responsibilities, such as household chores and manual labour. This represented the cost of obtaining an education, similar to part-time jobs or teaching assistantships today. He underlined the importance of recognizing the fact that sustaining a robust educational system requires financial support.

Dr. Chaudhuri observed that India's current gross enrollment ratio in higher education stands at approximately 25% and that a concerted effort was required to increase it to 50% by 2030 to realize the demographic dividend fully. At the same time, it was essential to equip students to adapt to evolving technologies and industries, ensuring they remain relevant in an ever-changing world. He also touched on the sensitive question of depression among students and highlighted possible

gaps between aspirations and reality as a significant factor in its prevalence. He stressed that building meaningful relationships and maintaining mental well-being were vital aspects of personal and professional growth.

The post-COVID period and the uncertain state of the international economy were prominent themes in Dr. Chaudhuri's Convocation speech. He urged the fresh graduates to concentrate on honing their observational abilities as a key tool for problem-solving in engineering and life in general. He also highlighted the creation of multiple unicorns in India as evidence that entrepreneurship is flourishing here. He advised them to consider starting their businesses or contributing to established ones to foster innovation, job possibilities, and wealth generation. He lauded the "Make in India" and "Atmanirbhar Bharat" initiatives for providing favourable circumstances for these activities.

Dr. Chaudhuri concluded by congratulating the graduates and reminding them that their education was a personal accomplishment and an asset to their country and community. He wished them luck in achieving the highest levels of success.





## Research and Development (Sponsored Projects and Entrepreneurship)

DA-ICT has been a research-led University since its inception in 2001. Since its founding, 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 the Humanities and Social Sciences catering to both academia and industry. The Institute aims to encourage basic, applied and developing research conducted by students and faculty alike. The Institute's encouragement is reflected in the policies it has formulated for research activities and professional development. Although the needs of the 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 society.

DA-ICT'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 is also encouraged to seek out the latest opportunities for research collaboration and funding. Partnerships with the industry are a priority. Besides, all efforts to participate in bilateral, international and multi-institutional research grants aimed at solving critical problems will be 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 the following: 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 2022-23, the Institute received grants for twelve new sponsored projects

**Table 7: New Projects**

Title of the Sponsored Project	Investigators	Sponsoring Agency
An empirical analysis on Deriving Test Cases from Natural Language Text using MBT approach	SAC-ISRO	PI: Prof. Saurabh Tiwari Co-PI: Prof. Sourish Das Gupta
Detection of trace Elements using Micro-sensor array in Human Spaceflight	ISRO-RAC	Prof. Vinay S. Palaparthi
Development of Robotic Computing Accelerator	SERB, DST	PI: Prof. Tapas Kumar Maiti Co-PI: Prof. Srimanta Mandal
Discourse Integrated Dravidian Language to Dravidian Language Machine Translation (DL-DiscoMT) - Under - National Language Translation Mission (NLTM)	GOI, E&IT	Prof. Prasenjit Majumder
Implementation techniques of discrete and continuous time: quantum random walks and their applications	GOI, E&IT	PI: Prof. J. Mulherkar Co-PI: Prof. G. Datta

Title of the Sponsored Project	Investigators	Sponsoring Agency
Indian Language to Indian Language Machine Translation - National Language Translation Mission (NLTM)	GOI, E&IT	Prof. Prasenjit Majumder
IoT Enabled, Self-Calibrating and Self-Healing Sensor System for In-situ Agriculture Applications	TIH, IIT Bombay	Prof. Vinay S. Palaparthi
KAVACH- Futuristic Flexible electronics-based Communication system for Monitoring soldier's condition during warfare	GUJCOST	Prof. Rutu Parekh
Miniaturization and calibration of an IoT enabled ultra-low power consuming heart monitoring of patient with cardiovascular diseases for resource constrained regions	GUJCOST	Prof. Biswajit Mishra
Optical Camera Based Smart Navigation System for Assisting Total Knee Arthroplasty	CSR -IKDRC Govt. of Gujarat	Prof. Anil K. Roy Prof. Bakul Gohel
Prototyping Dog Jacket for Real Time Rescue Operation inspired by Robotics Technology	GUJCOST	Prof. Tapas Kumar Maiti
Speech Technologies in Indian Languages - National Language Translation Mission (NLTM)	GOI, E&IT	Prof. Hemant Patil

Faculty continued work on 24 ongoing sponsored projects.

**Table 8: On-going Projects**

Title of the Sponsored Project	Sponsoring Agency	Investigators
A Device for Bed Load Measurement	SERB/DST	Prof. Biswajit Mishra
Adaptive Beam Forming for Mitigation of Interference and Jamming at the Ground Terminal of Global Navigational Satellite Systems (GNSS)	SAC-ISRO	Prof. Sanjeev Gupta
Computational Investigations of Instability-driven Transport in Low Temperature Magnetized Plasma Discharges using massively parallel 2D-3v PIC-MCC simulations	NSM (National Supercomputing Mission)	Prof. Bhaskar Chaudhary/ Prof P.S. Kalyan Sasidhar
Design and Field Training Testing of an Energy Autonomous Internet of Things Enabled Cattle Estrus Detection Device Targeted for Resource-Constrained Regions	DST, GOI	Prof. Biswajit Mishra Prof. P.S Kalan Sashidhar
Design and Implementation of a visibility Improvement model for haze removal in images acquired from real time CCTV camera	GUJCOST	Prof. Manish Khare
Design and simulation of Physical layer and Medium Access Control (IMAC) Layer Functionalities of Future Mobile Satellite Systems	SAC-ISRO	Prof. Rajib Lochan Das Prof. Yash Vasavada
Design of a Novel and Ultra-Low power All Digital Front Acquisition with Configurable Time of Digital converter and Integrated Application Specific Processor for Detection of Myocardial Infarctions	SERB	Prof. Biswajit Mishra
Development of an Integrated Intelligent Surveillance System for Suspicious Behaviour Analysis	SERB	Prof. Manish Khare





Title of the Sponsored Project	Sponsoring Agency	Investigators
Development of Geo-magnetism based Indo navigation syste	DST, NGP Div	Prof. P.S Kalayan Sasidhar
Dynamical Sampling and Representation of Frames via iterated Operator Systems	SERB	Prof. Nabin Kumar Sahu
FIST Program - 2019 (TPN-32478)	GOI, DST	Prof. Biswajit Mishra
IoT Enabled, 2-D Nanomaterial Leaf Wetness Microsensor on Flexible Substrate for Integrated Plant Disease Management	SERB, DST	Prof. Vinay S. Palaparthu
IOT Enabled, smart Micro-Sensor for Integrated Plant Disease Management	GUJCOST	Prof. Vinay S. Palaparthu
Multiscale and Simulation of complex Plasma Dynamics during High Power Milimer Wave Breakdown	DST-SERB	Prof. Bhaskar Chaudhary
Nodal Institute for Start-ups	Industries Commissionerate Govt. of Gujarat	Dean R&D
Respond Project - Design and simulation of Beamforming Algorithms and Baseband Technologies for SATCOM	SAC-ISRO	Prof. Yash Vasavada Prof. Rajib Lochan Das
Respond Project - Satellite Network Simulator (SNS) with ULPC and ACM features	SAC-ISRO	Prof. Bhaskar Chaudhary Prof. Yash Vasavada
SAR Polarimetric Image classification using Wishart Mixture model and Convolution Neural Networks	SAC-ISRO	Prof. Srimanta Mandal Prof. Tapas Kumar Maiti
Setting up of Anchor Institute by DA-IICT	CED (Govt. of Gujarat)	Dean R&D
Speech to Speech Machine Translation (SSMT) : Pilot System	IIT Hyderabad	Prof. Prasenjit Majumder
Student Start-up and Innovation	Govt. of Gujarat	Dean R&D
Teachers Association for Research Excellence (TARE)	SERB	Prof V. Sunitha
Using Mobile Sensing Mechanism to access Smart Phone Addiction and Its Negative Impact on Students	ICSSR	Prof. Alka Parikh
Vulnerability Research on QUIC Implementation	DRDO, Bengaluru	PI: Prof Anish Mathuria Co-PI: Prof Saurabh Tiwari

## CONSULTANCY PROJECTS

In the year 2022-23, the faculty took on 1 consultancy project.

**Table 9 : Consultancy Project**

Consulting Area	Organization	Faculty
Educational Research Project	IIM Ahmedabad	Prof. Tathagata Bandyopadhyay

## Workshops, Special Lectures and Visitors

### SEMINARS / CONFERENCES / WORKSHOPS / SUMMER SCHOOLS ORGANISED

The Institute regularly organises conferences, seminars, and workshops to promote

interactions with wider academic and research communities. Below is a listing of the organised during 2022-23:





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

Title	Dates	Details
Prof. S C Sahasrabudhe Memorial Lecture	20th Nov. 2022	The title of this year's talk was "The Fiber that Changed the World", by Dr. R. K. Shevgaonkar (FIEEE, FINAE, FNASc, FIETE, FOSI Professor Emeritus, IIT Bombay; Former Director, IIT Delhi). This memorial lecture was initiated by the IEEE Gujarat Section last year, and the inaugural lecture was delivered in 2021 by the then-President of the IEEE, Susan Kathy Land.
Workshop on Geographic Information Systems (GIS)	19-23 Sept. 2022	A workshop for DA-IICT staff members. 13 employees enrolled themselves for this workshop. An inaugural function was held at CEP 002 on the 19th, at 3.30 pm. Dr. K S Dasgupta (Director DA-IICT) inaugurated this workshop in the presence of Dr. Ranendu Ghosh (Acting Registrar) and Shri Hasendrasinh Jhala (Head- HR & Administration). Mr. Viral Dave, DA-IICT Ph. D. student, was the instructor, and participants acquired the knowledge and on-hand practice of various tools of GIS. A "Participation Certificate" was awarded to all the participants.
Workshop on "Research with Multiple Arrows in your Artillery" for PhD Students	03rd Dec. 2022	Organised by DAIICT Gandhinagar in association with ACM India Council
NCM-ATM Schools Hosts Mathematics for Data Science Session	2nd - 14th Jan. 2023	The National Centre for Mathematics-Advanced Training in Mathematics Schools (ATM Schools) initiative, jointly supported by IIT Bombay and TIFR Mumbai, successfully concluded its recent program focusing on Mathematics for Data Science. This event was held at DAIICT. Prof. Bhaskar Chaudhury and Prof. Tathagata Bandyopadhyay, DAIICT Gandhinagar faculty, organized and facilitated the event. Through this two-week session, participants were immersed in topics meticulously chosen to empower them with a solid grasp of the mathematical underpinnings critical to Data Science's evolution as a discipline.
9th Annual International Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2023)	9th and 11th Feb. 2023	The conference attracted experts and enthusiasts from around the world. In line with the tradition of CALDAM, the proceedings of accepted papers from this year's conference are set to be published in the 'Lecture Notes in Computer Science' by Springer. One of the highlights of CALDAM conferences has been the recognition of outstanding student presentations, a tradition generously sponsored by Springer. It is anticipated that selected papers will be featured in a special issue of Discrete Applied Mathematics (DAM), mirroring the practice from previous CALDAM events. The event was organized under the aegis of the Association for Computer Science and Discrete Mathematics (ACSDM).



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

Title	Dates	Details
Workshop on Intellectual Property Rights	15th April 2023	The virtual event was open to MTech students, PhD scholars, faculty members, and startup enthusiasts. The event had some notable speakers who shared their knowledge. Anil Gupta, a former professor at IIM Ahmedabad, started things off. Yashawant Dev Panwar from TIFAC, a government organization in India, also shared valuable insights. Other experts included Narottam Sahoo from GUJCOST, a government body in Gujarat, Andrew Michael Ong from WIPO, Kavita Amish Shah, who is an Independent Patent Agent, and Tarun Jain from Jain and partners consultants.
High End Workshop in 'Image Processing and its Applications using VLSI Architectures'	3rd - 8th July 2023	The focus of the one-week workshop was to start with the basics of Image Processing. The workshop was jointly conducted by KARYASHALA, SERB, Accelerate Vigyan, India and IEEE chapter of SSCS and EDS, Gujarat section and coordinated by Dr. Yash Agrawal and Dr. Manish Khare.
Workshop on 'AI/ML Algorithms and Applications in VLSI Design and Technology'	17th - 22nd July 2023	The one-week workshop aimed to introduce the basic concepts of Artificial Intelligence and Machine Learning followed by its applications in the area of VLSI Design and Technology. The scope of AI/ML at various levels of abstraction were covered in detail. Hands-on-training and exposure to different computer-aided design tools such as MATLAB, Python, Cadence, Xilinx-Verilog and FPGA were provided to the participants. Application oriented VLSI system project development using AI/ML were developed towards the end of the workshop. It was jointly conducted by KARYASHALA, SERB, Accelerate Vigyan, India and IEEE chapter of SSCS and EDS, Gujarat section and coordinated by Dr. Yash Agrawal and Dr. Sreeja Rajendran, DA-IICT Gandhinagar.
Expert Talk sessions on 'Emerging Trends in Semiconductor Devices'	29th July 2023	IEEE Chapter of SSCS and EDS, Gujarat Section, India organized these sessions. Dr. Meena Mishra from Solid State Physics Laboratory (SSPL) Delhi, and Dr. Deependra Singh Rawal from SSPL, Delhi delivered expert talks on GaN MMIC technology and GaN/SiC HEMT device technology for X/Ku band MMIC Applications.

**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 2022-23:

**Table 11: Visitors**

Date	Name of the visitor	Details
22/11/2022	Prof Bhaskaran Raman	Professor, CSE, IIT-Bombay
25/11/2022	Dr Aloknath Dey	A Missionpreneur
30/11/2022	Team, Rishabh Software	Dr. Umesh Shah & Dr. Rajesh Kajuria
06/01/2023	Tina Ambani	Chairperson, DA-IICT
11/01/2023	Dr Praveen Nahar	Director, NID
19/02/2023	Prof Russel Millar,	Auckland University
15/03/2023	Calorex Delegation	CEO-Operations, Mr. Anantha Krishnan and General Manager
02/06/2023	Delegation Sakalchand University	MOU
22/06/2023	CEERI Pilani	Dr. Manish George
12/07/2023	e-info chips delegation	Mr. Sumit Sethi (Head), Bharath Aitha(CMO), Prajose John (Sr. Software expert)



## Faculty Publications

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

postgraduate and undergraduate students in research.

During the reporting year, the faculty published one book, edited four volumes, reviewed two books, contributed fifty three chapters in books and one hundred twenty six papers in journals and conferences along with ten technical papers.

### Books

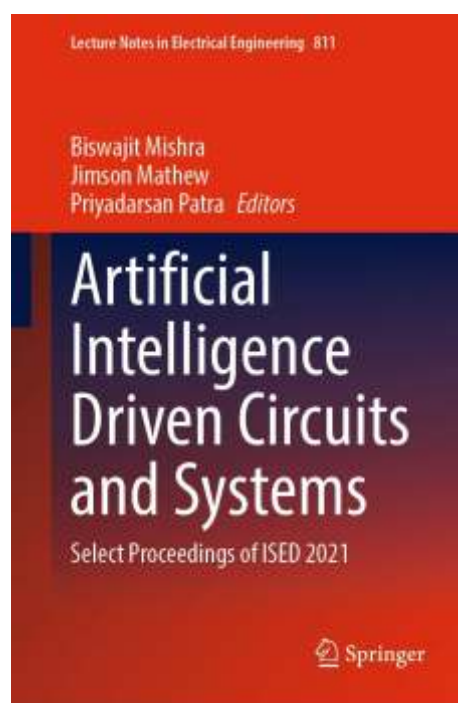
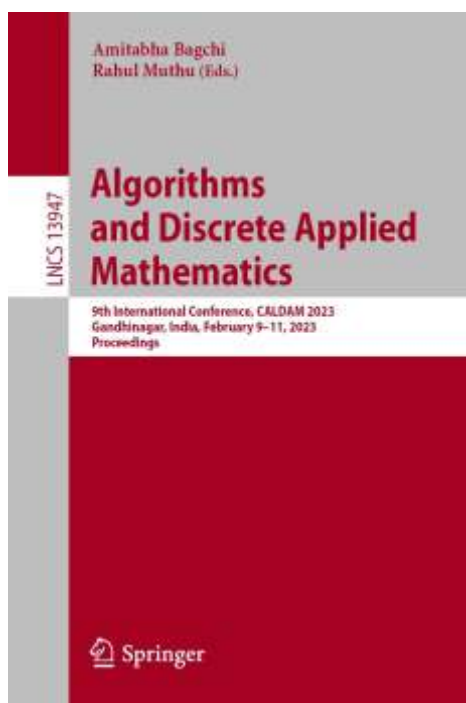
1. Hardik N Patel, **Deepak K. Ghodgaonkar**, and Jasjit S Suri, Breast Image Reconstruction and Cancer Detection Using Microwave Imaging, IOP Publishing, Bristol, UK, Dec. 2022. ISBN: 9780750325929. doi: 10.1088/978-0-7503-2592-9.

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1. Biswajit Mishra, Jimson Mathew and Priyadarsan Patra Eds., "Artificial Intelligence Driven Circuits and Systems," Select Proceedings of ISED 2021, Lecture Notes in Electrical Engineering, vol 811. Springer, Singapore, 2022, ISBN: 9789811669408, doi: 10.1007/978-981-16-6940-8. [Published Online]
2. Debasis Ganguly, Surupendu

Gangopadhyay, Mandar Mitra, and **Prasenjit Majumder**, Eds., "FIRE '22: Proceedings of the 14th Annual Meeting of the Forum for Information Retrieval Evaluation," Association for Computing Machinery, New York, 12 Jan. 2023, ISBN: 9798400700231, doi: 10.1145/3574318.

3. Amitabha Bagchi, and **Rahul Muthu**, Eds., "Algorithms and Discrete Applied Mathematics: 9th International Conference, CALDAM 2023, Gandhinagar, India, February 9–11, 2023, Proceedings (Lecture Notes in Computer Science; volume 13947)," Springer, Cham, 26 Jan. 2023, pp. xvii, 462, ISBN: 9783031252112, doi: 10.1007/978-3-031-25211-2.
4. Sonali Agarwal, Abhik Roychoudhury, Rahul Purandare, **Saurabh Tiwari**, and







Lov Kumar Eds., "Proceedings of ISEC2023: 16th Innovations in Software Engineering Conference," ACM digital Library, Association for Computing Machinery, New York, 23 Feb. 2023, pp. 193, ISBN: 9798400700644, doi: 10.1145/3578527.

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3. Neha Arora and **Biswajit Mishra**, "An Efficient and Affordable R-Pi Based Cardiac Disease Detection System," in Artificial Intelligence Driven Circuits and Systems, Lecture Notes in Electrical Engineering, vol 811., Mishra B., Mathew J., Patra P. (eds), 2022, Gandhinagar, Gujarat, pp. 1-15, doi: 10.1007/978-981-16-6940-8\_1, ISBN: 9789811669408.
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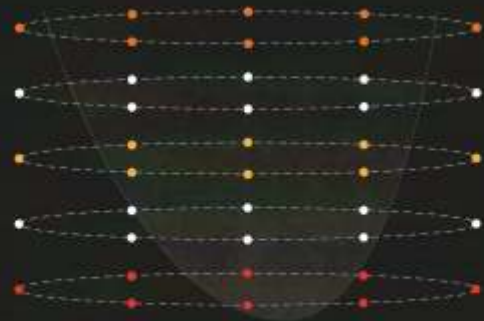
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The faculty and staff continued to be actively involved in international, national, state and local level professional activities and made significant contributions at all levels. They also received

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

#### 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

- Member of Plasma Science Society of India (PSSI).
- Member of Indian Science Congress Association (ISCA).
- Honorary Member, DMP (Data for Modeling plasmas).
- Member of Division of Plasma Physics-Association of Asia Pacific Physical Societies.
- Member, Doctoral Committees, HBNI, Mumbai
- Member, International Low-Temperature Plasma Community
- Member, Evaluation Committee for development of MDADSS for Lalbhai Dalphatbhai Institute of Indology, Ahmedabad.







- Thesis Examiner, HBNI, Mumbai
- Reviewer for Research Grant Proposals, DAE-BRNS
- External expert for the promotional review of Scientists at Institute for Plasma Research, Department of Atomic Energy, Gov. of India.

#### **Biswajit Mishra**

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- Life Fellow, Institution of Electronics and Telecommunication Engineers, (FIETE), India.
- Senior Member, Institute of Electrical and Electronics Engineers, (SMIEEE), USA
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- Member, Academic Advisory Committee Board, Chhotubhai Gopalbhai Patel Institute of Technology, Bardoli, Gujarat
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- 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

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- Member, Institute of Electrical and Electronics Engineers (IEEE)
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#### **K. S. Dasgupta**

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

#### **Madhukant Sharma**

- Lifetime Member of the Indian Mathematical Society.
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- Member Sensor Council
- Member IEEE Electronic Society
- TPC IEEE INDICON, IEEE APSCON, IEEE WCNC
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- Co-ordinator for cooperation with SAC under the MoU for cooperation in research and academic activities, Space Applications Centre, ISRO, Department of Space, Govt. of India, Ahmedabad
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- Member of the Faculty of Doctoral Studies and Research, Nirma University, Ahmedabad
- Member of the Board of Studies (BOS) of Charotar University of Science and Technology (CHARUSAT), Changa, Gujarat
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- External Expert Member for selection of faculty at Institute of Technology, Nirma University, Ahmedabad

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- Member, The IEEE Signal Processing Society
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- IEEE Control Systems Society Member
- IEEE Computational Intelligence Society Member

#### **Sunitha Vadivel Murugan**

- Academic Expert Member, Board of Studies, Department of Mathematics, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat.
- Expert Member, Research Advisory



Committee, Department of Information Technology, Nirma University, Ahmedabad, Gujarat.

- Expert Member, Research Progress Committee, Department of Mathematics, SRM University, Kattankulathur, Tamil Nadu
- Professional Member, Association for Computing Machinery (ACM)
- Life Member, Academy of Discrete Mathematics and Applications (ADMA)

#### **Tapas Kumar Maiti**

- Member, IEEE – Institute of Electrical and Electronics Engineers
- Member, IEEE Technical Committee on Multi-Robot Systems (TC MRS)
- Member, IAAM – International Association of Advanced Materials
- Life Member, IEI – The Institute of Engineers (India)

### **FELLOWSHIPS/VISITING SCHOLARSHIPS**

#### **Yash Agrawal**

- Received the Travel Grant for a Research Visit and prospective collaboration with the Technical University of Munich (TUM), Germany

### **JOURNAL EDITORSHIP**

#### **Anish Mathuria**

- Associate Editor, Sadhana, Indian Academy of Sciences

#### **Bhaskar Chaudhury**

- Co-Editors, Bhaskar Chaudhury (DA-IICT, India), Matthias Ehrhardt (U. Wuppertal, Germany) and Vrushali Bokil (Oregon State University, USA), Journal of Computational Science, Title- Finite Difference Methods: Recent Developments and Applications in Computational Science, Special Issue in Elsevier
- Associate Editor, Statistical and Computational Physics, Frontiers in Physics Journal.

#### **Biswajit Mishra**

- Associate Editor: Frontiers Journal in Cardiovascular Medicine

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

- Member, Editorial Board, Engineering Letters, International Association of Engineers
- Guest Co-Editor, Special Issue on State-of-the-art Handcrafted Feature Extraction for Speech and Voice Analysis, 2020

#### **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

#### **Rahul Mishra**

- Guest Editor MDPI Algorithms

#### **Rutu Parekh**

- Editorial Board Member, SCIREA Journal of Electrical Engineering, SCIREA
- Editorial board member, Journal of Recent Advances in Electronics and Communication Engineering (JRAECE), Unique Pub International (UPI)

#### **Sanjeev Gupta**

- Member, Editorial Board, International Journal on Science and Technology

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

#### **Yash Agrawal**

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

### **REVIEWING OF BOOK/JOURNAL/CONFERENCE PAPERS**

#### **Bhaskar Chaudhury**

- Physics of Plasmas. (American Institute of Physics Journal)
- Journal of Parallel and Distributed Computing, Elsevier
- IEEE Transactions on Plasma Science.
- Journal of Phys. D: Applied Physics. (Institute of Physics, UK Journal)
- IEEE Transactions on Microwave Theory and Techniques.
- IEEE Transactions on Antennas and Propagation.
- Journal of Electromagnetic Waves and Applications (JEMWA).
- European Physical Journal: Applied Physics.
- Journal of Applied Physics. (American Institute of Physics Journal)
- Plasma Sources Science and Technology (Institute of Physics, UK)

#### **Deepak Ghodgaonkar**

- IEEE Transactions. Instrumentation and Measurement (IM)
- IEEE Transactions on Microwave Theory and Techniques (MTT)
- IEEE Transactions on Antennas and Propagation (AP)

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

- IEEE Transactions on Information Forensics and Security, IEEE

- Computer Speech and Language, Elsevier

#### **Jaideep Mulherkar**

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

#### **Kalyan Sasidhar**

- IEEE Transactions in Measurement and Instrumentation, IEEE

#### **Madhukant Sharma**

- Reviewer of the Computing Reviews (Association for Computing Machinery).
- Reviewer of the Mathematical Reviews (American Mathematical Society)
- Reviewer of the Journal of Applied Mathematics and Computing.
- Reviewer of the Journal of Inequalities and Applications.
- Reviewer of the Journal of Analysis.

#### **Manik Lal Das**

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

#### **Manish Khare**

- Pattern Recognition Letters, Elsevier
- IEEE Signal Processing Letters
- IEEE Transaction on Image Processing
- KSII Transactions on Internet and Information Systems
- The Imaging Science Journal, Maney Online Publication
- 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
- Computational Intelligence
- International Journal on Computational Vision and Robotics, Interscience Publication

#### **Minal Bhise**

- Knowledge and Information Systems KAIS, Springer





- International Database Engineered Applications Symposium IDEAS, Hungary, 2022
- IEEE International Conference on Fog and Mobile Edge Computing FMEC, Tartu, Estonia 2023

#### **Mukesh Tiwari**

- Force chain structure in a rod-withdrawn granular layer: Modern Physics Letters B
- Travel time analysis in the Chinese coupled aviation and high-speed rail network: Chaos, Solitons and Fractals
- Nonlinear wave dynamics of disperse granular layer stimulated by the inwards moving piston: Granular Matter

#### **Nabin Kumar Sahu**

- Journal of Applied Mathematics and Computing, Springer
- Asian European Journal of Mathematics, World Scientific
- International Journal of Mathematics and Mathematical Sciences, February 2020

#### **Prosenjit Kundu**

- Physical Review E
- Chaos
- Plos One
- Frontiers in Physics
- International Journal of Modern Physics B
- Communications in Nonlinear Science and Numerical Simulation

#### **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

#### **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
- IEEE Access Journal
- IEEE Journal of Electron Devices Society
- IET Circuits, Devices and Systems
- IET Electronics Letters
- IET Micro and Nano Letters
- IET Microwaves, Antennas and Propagation
- IET Generation, Transmission and Distribution
- 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.
- Emerald COMPEL: The International Journal for Computation and Mathematics in

- Electrical and Electronic Engineering
- Elsevier Super lattices and Microstructures
- Elsevier Alexandria Engineering Journal
- Elsevier Microelectronics Journal
- Elsevier Microelectronics Reliability
- American Scientific Pub., Nanoelectronics and Optoelectronics
- Springer, Nuclear Science and Techniques

## INVITED LECTURES/TALKS/COURSES

### Bhaskar Chaudhury

- Invited Lecture, LE STUDIUM On-line Meeting on Artificial Intelligence for Plasma Science, Orléans - France, Nov 2022.

### Deepak Ghodgaonkar

- Delivered Invited Lecture entitled Microwave Nondestructive Testing (MNDT) of Composite Materials and Structures using Free-Space Measurement System on 25th November 2022 during Conference NDE 2022 organized by Indian Society For Non-Destructive Testing, November 24 to 26, 2022 at Gandhinagar, Gujarat.

### Madhumita Mazumdar

- Anna Mani Lecture Series. - 20 October 2022 'Understanding the gendered cultures of science: the case for methodological pluralism' Organised by Working Group for Gender Equality, Astronomical Society of India

### Minal Bhise

- Transaction Management in Databases, CSE Department, PDEU, Gandhinagar

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

### Bakul Gohel

- Comprehensive Online Certificate Course on IPR, FICCI-IP Education Centre (IPEC), New Delhi.

### Deepak Ghodgaonkar

- Member, Wireless, Antenna and Microwave

Symposium, June 7 to 10, 2023, Gandhinagar, Gujarat.

### Sujay Kadam

- Outreach Program on Indian Standards and Workshop on Drone and Robotics Standards 8th October 2023, DA-IICT, Gandhinagar
- Faculty Development Program focused on Generative AI & Industrial IoT, Intel SRR Campus, Bengaluru, 3rd and 4th November, 2023.

## CONFERENCE PROGRAM COMMITTEE

### Bhaskar Chaudhury

- Technical Program Committee Member, International Conference on High Performance Big Data and Intelligent Systems, 2021, 2022, 2023

### Prosenjit Kundu

- Member, Technical Program Committee, Complex Networks 2023

## SPONSORED RESEARCH PROJECTS

### Bhaskar Chaudhury

- Principal Investigator (PI) – Govt. sponsored Project (National). Sponsor: National Supercomputing Mission, Gov. of India. Title: Computational investigations of instability driven transport in low temperature magnetized plasma discharges using massively parallel 2D-3v PIC-MCC simulations.
- Principal Investigator (PI) – Govt. sponsored Project (National). Sponsor: SCIENCE & ENGINEERING RESEARCH BOARD (SERB), DST, Gov. of India. Title: Multiscale Modeling and Simulation of complex Plasma Dynamics during High Power Millimeter Wave Breakdown.
- Principal Investigator (PI) – Govt. sponsored Project (National) Sponsor: ISRO (Indian Space Research Organization), Department of Space, Gov. of India. Title: Satellite Network Simulator with ULPC and ACM features
- Principal Investigator, Kinetic Modeling of



Large size Negative Ion Sources for Fusion Application using Emerging Parallel Processing Computer Architectures, Sponsor: DAE-BRNS

#### **Deepak Ghodgaonkar**

- Principal Investigator, Development of Microwave Absorber (Carbonyl Iron Filled Silicon Rubber Sheets) in 1 to 8 GHz range, Name of Funding Agency – Space Application Centre, ISRO, Ahmedabad (RESPOND Program)

#### **Kalyan Sasidhar**

- Principal Investigator, Using Mobile Sensing mechanism to assess smartphone usage among college students, Sponsor: ICSSR
- Principal Investigator, Development of geomagnetism based indoor navigation system using smartphones, Sponsor: DST-NRDMS

#### **Manik Lal Das**

- Principal Scientific Advisor, Speech to Speech Machine Translation (SSMT): Pilot System, Sponsor: Govt Of India

#### **Manish K Gupta**

- Principal Investigator, Archival D Data Storage, Sponsor: DST-DAAD (Indo-German)

#### **Mukesh Tiwari**

- Principal Investigator, Kinetic Modeling of Large size Negative Ion Sources for Fusion Application using Emerging Parallel Processing Computer Architectures, Sponsor: DAE-BRNS

#### **Prasenjit Majumder**

- Principal Investigator, Speech to Speech Machine Translation (SSMT): Pilot System. Sponsor: Govt Of India

#### **Rajib Lochan Das**

- Principal Investigator, Design and simulation of Physical layer and Medium Access Control (MAC) Layer Functionalities of Future Mobile Satellite Systems, Sponsor: ISRO
- Principal Investigator, Adaptive beam forming

for mitigation of interference and jamming at the ground terminal of global navigational satellite systems (GNSS), Sponsor: ISRO

- Principal Investigator, Design and Simulation of Beamforming Algorithms and Baseband Technologies for SATCOM On the Move (SOTM) Networks
- Principal Investigator, Design and Simulation of Physical Layer and MAC Layer Functionalities of Future Mobile Satellite Systems, Sponsor: ISRO

#### **Prof. Sanjeev Gupta,**

- Co-Investigator, Principal Investigator, Development of Microwave Absorber (Carbonyl Iron Filled Silicon Rubber Sheets) in 1 to 8 GHz range, Name of Funding Agency – Space Application Centre, ISRO, Ahmedabad (RESPOND Program)

#### **Saurabh Tiwari**

- Principal Investigator, UCMA: A Toolset to Automatically Analyze Functional Requirements Specified in the Use Cases, Sponsor: DST-SERB

#### **Sujay Kadam**

- Principal Investigator, A Robotic Arm Platform for Performing Human Motor Learning-like Studies (RAPPer-HML), Sponsor: DA-IICT through Seed Grant

#### **Suman K Mitra**

- Principal Investigator, SAR Polarimetric image classification using Wishart Mixture Model and Convolution Neural Networks. Sponsor: ISRO

#### **Sunitha Vadivel Murugan**

- Principal Investigator, Design and development of graph algorithms for control of complex networks. Sponsor: DST-SERB

#### **Vinay S. Palaparthi**

- Principal Investigator, IoT Enabled, 2-D Nanomaterial Leaf Wetness Micro-Sensor On Flexible Substrate for Integrated Plant Disease Management, Sponsor: DST-SERB
- Principal Investigator, IoT Enabled, Smart

Micro-Sensor for Integrated Plant Disease Management. Sponsor: DST\_GUJCOST

#### **Yash Vasavada**

- Principal Investigator, Design and Simulation of Beamforming Algorithms and Baseband Technologies for SATCOM On the Move (SOTM) Networks, Sponsor: SAC-ISRO
- Principal Investigator, System Design for Ground Based Beamformer, Sponsor: SAC-ISRO

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

#### **Sujay Kadam**

- Visit to Reliance Sasan Power Limited, Sasan, Madhya Pradesh, India

### **ANY OTHER SIGNIFICANT CONTRIBUTIONS**

#### **Bakul Gohel**

- Incubated a startup "NeuroTrack3D" at IIPH, Gandhinagar, under the IIPHG-NIDHI-Technology Business Incubator (TBI) scheme

#### **Deepak Ghodgaonkar**

- Twelve (12) BTech students completed Summer Research Internship (SRI) under my supervision Het Patel (202001123), Ramoliya Harsh Madhukantbhai (202001155), Sangani Hemil Sharadbhai (202001144), Soham Mandaviya (202001142), Mahaveer Bohra (201801018), Rishit Shah (202001411), Om Limbachiya (202001443), Kuldipsinh Gohil (202001092), Smit Bhavsar (202001464), Ruchir Darji (202001194) and Dev Darji (202001189).
- Coordinator for the MOU between DA-IICT-UiTM. DA-IICT signed an MOU with Microwave Research Institute, Universti Teknologi MARA (UiTM), Malaysia from May 2018.
- Student Branch Chapter Counselor, IEEE MTT Society since November 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 provided at **Annexure 3**.

#### New Faculty

The following faculty have joined the Institute during 2022-23:

1. Amishal Modi joined as Adjunct Faculty, on 03 October 2022.
2. Jenson Joseph joined as Assistant Professor, on 17 October 2022.
3. Rahul Mishra joined as Assistant Professor, on 21 December 2022.
4. Prosenjit Kundu joined as Assistant Professor on 30 December 2022.
5. Sudip Bera joined as Assistant Professor, on 02 January 2023.
6. Pankaj Kumar joined as Assistant Professor, on 16 January 2023.
7. Sujay Kadam joined as Assistant Professor, on 12 April 2023.
8. Gaurav Vaidya joined as Assistant Professor, on 29 May 2023.
9. Pratim Roy joined as Assistant Professor on 27 July 2023.

#### Faculty Resignation

1. Sanjeev Gupta, Professor, on 17 August 2022
2. Avik Hati, Assistant Professor, on 14 Oct 2022
3. Ahlad Kumar, Assistant Professor, on 28 Oct 2022
4. Ayan Palchoudhury, Assistant Professor, on 26 December 2022.
5. Amit Bhatt, Professor, on 31 December 2022
6. Nalin Kumar Sharma, Assistant Professor, on 20 January 2023.
7. Priyanka Singh, Assistant Professor, on 30 April 2023.
8. Binita Desai, Professor, on 30 June 2023.
9. Shweta Garg, Associate Professor, on 31 July 2023.

### STAFF

#### New Staff

1. Chirag Nayak joined as Laboratory Assistant, on 23 January 2023.
2. Chaitanya D Bhamare joined as Project Leader, on 01 August 2022.
3. Ashvin Chaudhari joined as System Administrator, on 01 August 2022.
4. Vipul Makwana joined as Media Officer, on 24 July 2023.
5. Jaydeep Panchal joined as Junior Accountant, on 24 January 2022.
6. Rahul Rajput joined as Sports Officer, on 01 November 2022.
7. Himatsinh Rana joined as Driver, on 01 April 2023.
8. Jayveersinh B Veghela joined as AV and Biometric Attendant, on 22 August 2022.
9. Mihir S Rabari joined as AV and Biometric Attendant, on 22 August 2022
10. Priyank V Chauhan joined as AV and Biometric Attendant, on 22 August 2022
11. Mayuri K Mistry joined as Academic Assistant, on 01 March 2023.
12. Jayesh I Patel joined as AIP/CEP Officer, on 20 March 2023.
13. Aparna Singh joined as Media Officer, on 24 April 2023.

#### Project Staff:

1. Viral Dave joined as Junior Research Fellow, on 05 September 2017 continues
2. Swati Priya joined as Junior Research Fellow, on 01 February 2018 continues
3. Megha Pandya joined as Junior Research Fellow, on 02 April 2018 continues
4. Naitik Parekh joined as Junior Research Fellow, on 01 February 2019 continues
5. Aarushi Dharmi joined as Junior Research Fellow, on 01 February 2019 continues
6. Vishwa Vardiwale, joined as Junior Research Fellow, on 12 April 2019 continues
7. Pratik Ghosh joined as Junior Research Fellow, on 01 May 2019 continues
8. Bhargav Dave joined as Junior Research Fellow, on 01 August 2019 continues
9. Surupendu Gangopadhyay joined as Junior Research Fellow, on 01 January 2020 continues

10. Rohit Kumar Singh joined as Junior Research Fellow, on 13 August 2020
11. Bhavesh Singh joined as Junior Research Fellow, on 08 January 2021 continues
12. Riya Saini joined as Junior Research Fellow, on 04 January 2021 continues
13. Purva Thaker joined as Junior Research Fellow on 24 February 2020 continues
14. Komal Kumari joined as Junior Research Fellow on 04 August 2020 continues
15. Kamplesh Patle joined as Junior Research Fellow on 03 March 2020 continues
16. Naimishi Gupta joined as Junior Research Fellow on 15 July 2019 continues.
17. Tilak Nanavati joined as Junior Research Fellow on 15 July 2019.
18. Nilamben M Chaudhari joined as Junior Research Fellow, on 10 August 2020.
19. Rupal Budhbhatti joined as Research Assistant, on 28 September 2020 continues.
20. Purvi Patel joined as Junior Research Fellow, on 13 August 2020 continues.
21. Yasha Mehta joined as Junior Research Fellow, on 01 October 2019 continues.
22. K Sessa Sai Anudeep joined as Junior Research Fellow, on 04 December 2019 continues.
23. Joel Fernandez joined as Junior Research Fellow, on 04 December 2019 continues.
24. Vishrut Jetly joined as Student Internship 01 February 2020 to 31 March 2020.
25. Sparsh joined as Student Internship

01 August to 31 December 2020.

26. Vedant joined as Student Scholarship 01 August to 31 December 2020.
27. Miral Shah joined as Senior Research Fellow 22 March 2016 to 31 March 2020.

### Staff Resignation

1. Aparna Singh, Media Officer, on 16 June 2023.
2. Vipul Makwana, Media Officer, on 31 March 2023.
3. Pawan Kohil, Library Trainee, on 14 February 2023.
4. Kirtisinh Vaghela, Administrative Assistant, on 10 Feb 2023.
5. Parth Vayeda, CEP Officer, on 16 December 2022.
6. Sujani Shah, Incubation Assistant, on 14 October 2022.
7. Vishal Pratap, Singh Sports Officer, on 13 April 2022.
8. Sachin A Parmar, Library Trainee on 31 July 2023.
9. Navdeep Gandhi, Library Trainee, on 31 July 2023.
10. Nilesh M Ganeshe, Library Trainee on 31 July 2023.



## Student Activities and Achievements

The student organizations and clubs organized a wide range of cultural, social and educational events on campus. They include folk and classical dances, theater productions, music concerts along with coding and other educational and professional competitions. The Student Body Government (SBG), an elected body of students consisting of 7 Committees and some 15 Student Clubs provides leadership for these activities. The Institute of Electrical and Electronics Engineers (IEEE) Student Branch at

DA-ICT has made consistent efforts to make the students aware of the various opportunities that exist in the field of electronics and electrical engineering through many educational programs. These activities provide a variety of engagement opportunities to students on the campus. Employers look for graduates with leadership and communication skills, which are fostered by the knowledge gained from planning and executing these events.

### STUDENT ACTIVITIES

#### Cultural Committee

##### Janmashtami (19th August 2022)

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-ICT.

##### Teachers Day (5th September 2022)

A good teacher can instil a love for learning in a student as well as ignite their imagination. Teachers' Day is celebrated on 5th September, which is the birth anniversary of Dr. Sarvepalli Radhakrishnan, the second president of India and a well-known scholar. In honour of the occasion, the Cultural Committee hosted a celebration at the OAT. There were several celebrations: music performances by Prof. P S Kalyan Sasidhar & the Music Club, dance performances by Khelaiya Club, Dance Club and a stage play by the DTG.

##### PG Boot Camp (7th September 2022)

During the pandemic, BootCamp was organized in a virtual environment. The Alumni Association initiated the student chapter in the offline mode. The PG BootCamp is an event organized by the Alumni Association student chapter, inviting the alumni of M. Des to share their ideas on design. It was one of the best student-alumni events since the alumni association had invited a large number of design enthusiasts.

##### Ganesh Chaturthi (4th - 8th September 2022)

College students gathered on campus to celebrate Ganesh Chaturthi, a vibrant and joyous festival that lasts for five days. The campus came alive with music, dance, and traditional rituals as students offered prayers and sought blessings from Lord Ganesha. It's a time of unity, cultural richness, and a sense of community as they immerse the idols in water on the final day, marking the conclusion of the festivities.



**Eid (22nd April 2023)**

The festival was celebrated by the Cultural Committee and it was followed by the distribution of sweets.

**Maniere - The Fashion Night (22nd September 2022)**

A fashion-focused gathering, teams of students took part in the event, creating their costumes and accessories based on the overarching concept of "Future meets Retro." Then, they demonstrated their inventiveness by walking across the OAT stage and showcasing their sense of style.

**Tarang 2022: Garba Night (30th September)**

The cultural committee hosted garba nights during Navratri, the festival of nine days and nine nights, which comes as a resurrecting event to kindle our spirits and infuse new confidence in us. Tarang 2022 was organized on the 30th of September 2022.

**Ramleela (19th April 2023)**

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 directed by sophomores and the actors were mostly freshers. For the newcomers, it was a helpful confidence boost. Ravan Dahan, the burning of the effigy of Ravan, the demon king was also carried out after Ramleela. The play was written, directed and performed by the DA-IICT Theatres Group (DTG), which is praiseworthy.

**Diwali (24th October 2022)**

Diwali, the festival of new beginnings, fell during the semester break. The students who stayed

back on campus celebrated the festival according to tradition.

**Rangmanch- Drama night (19th April 2023)**

The drama night had two categories; stage play and a mime performance. Students from all batches participated with great enthusiasm.

**Lohri (13th January 2023)**

Lohri is a popular Punjabi folk-festival celebrated in the northern parts of the country. It heralds the arrival of longer days, the end of the winter season and commemorates the Sun's journey to the northern hemisphere. The students gathered at the venue in large numbers and enjoyed the warmth of the bonfire as well as each other's company.

**Makarsankranti (14th January 2023)**

Makar Sankranti or Uttarayan refers to the specific solar day in reverence to deity Surya (Sun) that is observed in January every year. It marks the transition into Makara (Capricorn), making the end of the month with winter solstice and longer days. The students enthusiastically flew kites and enjoyed the celebration.

**Raaga N' Rhyme (8th - 9th February 2023)**

Raaga and Rhyme is a music and rhyme competition that drew a sizable number of participants. Indian and Western music categories were represented in the solo, duet, instrumental, and ensemble performances at the event.

**International Yoga Day**

An event 'Yoga for Harmony and Peace' was organized on 21st June 2023.

**Sports Committee****Concours 2022: Annual Sports Festival – (3rd-6th November 2022)**

Concours, the annual national sports fest of the Institute, entered its 12th edition this year. It was a 4-day event, held from 3rd-6th November. This year we witnessed participation from around 35 colleges from all over India.

The main idea of the fest is to instil vigour and







honour in the students, which are the qualities that make a winner. As usual, Concoors facilitated healthy competition among the students in nine different sports – badminton, basketball, Chess, carrom, cricket, football, lawn tennis, table tennis and volleyball. It also allowed the students to explore other interests like music, quizzing and online gaming.

### **Freshers' Sports Weekend (19th-20th November 2022)**

The DA-ICT Sports Committee oversees the organization of Fresher's Sports Weekend. The primary goal of the event is to spark interest among the newcomers in the different sports that DA-ICT offers. The competition is open to freshers, making it essentially an inter-freshmen competition.

### **Inter-wing Tournaments (4th-18th February 2023)**

Inter-wing competitions were organized by the sports committee for the HoR Men and HoR Women residents. The main aim of the tournament was to increase student's interest in sports for their overall development. A captain was selected from each wing to form teams. The sports played at the tournament included volleyball, basketball, badminton, chess, lawn tennis, table tennis, and football.

### **DA-ICT Cricket League (5th February-13th March 2023)**

In DCL, prospective club owners begin by placing the highest bid to acquire a team. The owners utilize the points given to them during the auction to purchase players from the list. In the end, eight teams competed against each other to determine the winner.

### **Hostel Management Committee**

#### **Cleanliness Drive (7th-13th February 2023)**

With the participation of residents, the Hostel Management Committee (HMC) worked as an interface between the administration and the hostel residents to keep the hostels clean and promote good hygiene practices among hostels. The HMC members visited rooms, and 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**

#### **HackOut '22 (23rd-25th September 2023)**

A 72-hour hackathon titled HackOut'22 was organized by the Annual Festival Committee (Synapse). It featured creative ideas, and tactical teamwork, and also showcased the transition from project to product and ideas to action. The program featured interactive workshops led by DA-ICT faculty members in addition to other enjoyable activities for attendees.

#### **Youth Run '22 (20th November 2023)**

The Synapse Committee planned Youth Run'22, a 7km long marathon, as a pre-fest event to Synapse'23. The aim of the event was to create awareness about a suitable 'Lifestyle for Environment'. We were glad to receive participation from the CRPF, SAI as well as health enthusiasts from Ahmedabad and Gandhinagar in large numbers.

#### **Synapse 2023 (16th-19th March 2023)**

Synapse, DAIICT's annual cultural fest, brings together artists, designers, and creative minds from all over the world to showcase their work and share their talent with others. The festival's name alludes to the brain's synaptic connections, which served as an inspiration for the organizers to create a space for creative interactions. As night falls, the festival transforms into a celebration, with live music, DJ sets, and dance parties, giving guests a chance to unwind, socialize and celebrate creativity in all its forms.



## CYNOSURE

We witnessed incredible performances by some of the best artists working today! The captivating music and the enthusiastic audience singing along to their favourite tunes made the night unforgettable. The performances were led by well-known artists such as Sachin Jigar, Jonita Gandhi, Aseem Sharma and Vishal Mishra.

## NAACH

The audience witnessed breathtaking performances as the dancers ignited the stage with their talent and skill.

## SHOWDOWN

Aspiring dancers took part in face-to-face battles showcasing their best S-style dance moves to the sound of rap music. The best among them emerged victorious! In a night of electrifying energy, the most prominent DJs from across the nation took center stage, casting a spell on the crowd. The attendees gave in to the beats that filled the air as they became engrossed in pulsating rhythms and melodies. EDM (Electronic dance music) sensation Vanmoon, known for his unique perspective and musical finesse, took charge of the EDM night and left indelible mark through his performance.

## RAMPAGE UNVEILS FUN FUSION OF FASHION AND CREATIVITY –

In a dazzling display of style and innovation, Rampage set the stage on fire with students, faculty and staff participating with equal enthusiasm. The event provided a great platform for emerging young designers to showcase their talent.

## AI Club

**Linear Regression: From 0 —> HERO! (8th**



**November 2022)** The session was conducted for the students of DA-IICT to introduce them to the world of machine learning by teaching them the fundamentals of linear regression.

**Introduction To Python/Numpy (11th January 2023)** The session, designed primarily for first and second-year students, provided them with an introduction to Python and the Numpy library so they could begin further investigations into the field of machine learning and create fascinating projects.

**Hands-on Session on Blockchains (21st February 2023)** Two business speakers from a startup in Ahmedabad were invited to give an informative, hands-on introduction about blockchain and solidity programming.

## Business Club

**DA's Got Talent (6th August 2022)**

We gave the DA-IICT student community a platform to showcase their multiple skills and talents.

**IdeaBazaar (20th August 2022)**

The event is about pitching your creative idea of startup to all the teams and getting the highest valuation by bidding on

**e-Chai (9th February 2023)**

An expert workshop on networking was conducted by inspiring founders and entrepreneurs.

**Mastering Stock Market Event: Unveiling IPO Strategies (19th June 2023)**

The event was conducted for beginners to get an idea about stock market and IPOs.

## Chess Club

**Chess Selection Tournament (25th-28th August 2022)**

**Intra DAIICT Chess Tournament (11th April 2023)**

## Press Club

**Intra-DA Spell Bee** was organized (23 September) with 50 students entering the contest. Dushyant Pathak bagged first place and



Dhruv Charan was declared runner up. Five editions (87 to 91) of the campus magazine, Entelechy, were released during the year (2019-20).

### DA-IICT Theatres Group

**Gender Sensitization Play (11th October 2022)** The play was performed for the freshers to sensitize them about the gender discrimination going on around them. The play had segments covering the topics of homosexuality and abuse. The response from the audience was overwhelming. It concluded with a healthy discussion and engaging interaction among the seniors and juniors

### Stage Play and Street Play (18th-22nd November 2022)

The club gave stage play and street play performances at WAVES '22 BITS Goa. The team secured a spot in the finals for their award-winning street play titled Nasha. One of the members of the club, Darsh Rank, received the Best Actor award.

**Stage Play, Street Play and Mime (16th-19th March 2023)** At Synapse '23, DTG took part in the stage play, street play and mime competition. They secured the first position for their street play and mime performance. The students gave a spectacular performance that left the audience spellbound.

### Sambhav

#### Book Sale Drive (5th April 2023)

We collected books from all students that were no longer relevant to them and resold them at half or a quarter of the MRP. The advantage was two fold- first; the books would be reused instead of being thrown away after only one use. Second, the funds collected would be used to carry out more activities for Sambhav.

### Blood Donation Camp (11th April 2023)

A blood donation camp was organized by the Indian Red Cross. All logistical arrangements were made to ensure that the donors were comfortable. The donors were provided with proper cooling, refreshments as well as a gift

from the Red Cross. Over 100 people donated blood within 5 hours.

### Blood Donation Camp (17th November 2022)

"Give the gift of life": Sambhav club organized a blood donation camp in association with the Civil Hospital, Ahmedabad on 17th November 2022. The donation took place in the faculty mess, and donors were provided food and all the necessary care. The team from the blood bank was accompanied by two air-conditioned mobile vans to help with the donation.

### Programming Club

- Programming hours (30th August 2022, 20th September 2022, 9th November 2022)
- IPC (5th September 2022, 24th November 2022)
- Diwali Long Contest (27th October 2022 - 5th November 2022)
- Where to start and starting C Language (5th December 2022)

### IEEE SB DA-IICT

**Tic-Tech-Toe (8th-9th October 2022)** Tic Tech Toe '22 was organized by IEEE SB DA-IICT in collaboration with WIE AG DA-IICT. It was an exciting hackathon wherein programmers, developers and designers all came together to develop mind-boggling theme-based mobile/web applications within 36 hours. The teams worked tirelessly the whole day and night of the hackathon with a perfect dose of coding, creativity and not to forget the accompanying stimulation, to get the applications ready for use at the end of the adrenaline-pumping 36 hours!





We had a mid-evaluation with the mentors who were professionals in the field and guided the teams to improve their solutions to the problem statement. At the end of 36 hours, there was a presentation round where each team presented their ideas to the judges and the team with the most amazing applications was rewarded with well-deserved cash prizes and certificates. Tic Tech Toe '22 was indeed a home for all the passionate and energetic tech makers to connect and grow together!

### **i.Fest '22 (11th - 13th November 2022)**

During the second week of November 2022, IEEE SB DA-IICT organized one of Gujarat's largest technical carnivals - i.Fest '22 Reality Reloaded! With the energy of resurgence, Team i.Fest '22 came forward to celebrate the revival of the real world with more than 20 technical and cultural events. The festival kicked off on the first day with a lot of enthusiasm and featured a hilarious Stand Up Night with Chirayu Mistry as well as inquisitive events like ioHunt and RoboClash. On the second day, coding events like RepoReboot, i.Relay and Catch the flag (fixing bugs in websites) were held alongside many other cultural events such as i.Clash and SellOut. CryptoTrade - an online trading event of dummy currencies attracted participants in huge numbers. On the third day of the fest, various mindful events like i.Quiz, i.Ganith, Chess64, and i.Bot took place. Ride (a slow cycling event), Paintball and Treasure Hunt were some of the prominent fun events. Apart from this, we also got the opportunity to host several important personalities. We had with us in The Open Box, Mr. Sandeep Jain (Founder of GeeksforGeeks), Roopa Venkatkrishnan (Director at Sapient Wealth) and Ashris



Choudhury (Creator, India in Pixels), who inspired the students to think about the future of technology, the importance of finances and the power of creativity. Mr. Rajeev Jyoti (Director, INSPACE technical) came to acknowledge us about the future of potential start-ups in Space Science and Technology. A rocking Artist Night by the music band When Chai Met Toast added glory to the fun-filled fest. The carnival ended with a joyful and heartwarming event - Drum Circle by Rujul Vora.

### **The Debate Club**

#### **Weekly Debate Session (27th August-1st September 2022, 10th April 2023)**

The club organized turncoat debates in the Asian parliamentary style. The event was attended by 150 students from various batches.

#### **Blockchain 101: The Building Blocks of Decentralised Computing (3rd April 2023)**

This session about Blockchain Development was conducted by Mr. Mukesh Makwana, a leading expert in the field. The session covered the basics of Blockchain technology, its real-world applications, and future potential, and was highly engaging and interactive. Mr. Makwana used practical examples and shared insider tips, making the session highly valuable for attendees interested in the field. The session was followed by a Q&A, allowing attendees to ask questions and clarify their doubts. Overall, the event provided a comprehensive understanding of Blockchain development and was an excellent opportunity for those interested in the field to learn from an expert.

#### **Manual Robotics Workshop (24th April 2023)**

IEEE SB DA-IICT conducted a Manual Robotics Workshop in which the students were provided with kits, and they had to build robocars. We guided them through the process of building the car and acquainted them with Arduino and other useful hardware components (which the kit contained). The participants had to make the car in teams of five people. It was a great event where the participants learned new things and enjoyed the building process.





### **Summer School '23 (3rd-11th June 2023)**

To facilitate the development of students' technical skills, IEEE SB DA-IICT organizes an annual summer school. A comprehensive four-day workshop on machine learning and the fundamentals of neural networks was conducted in 2023. Participants were provided with a set of practice problems to apply the knowledge acquired during the initial phase. This allowed them to reinforce their understanding and gain hands-on experience. Students were assigned a mini-chatbot project to work on, applying their newly acquired knowledge of neural networks. It is noteworthy that the participants did not require any prior knowledge about the subject as the basics of every concept were comprehensively covered during the workshop. This ensured that all participants could benefit from the workshop regardless of their level of expertise on the subject.

### **Headrush Quizzing Club**

We provide a platform for leisurely quizzers to enjoy intense and entertaining weekly quiz sessions ranging across a plethora of topics like entertainment, music, literature, sci-tech, business etc.

- India quiz (13th August 2022)
- Vices quiz (26th August 2022)
- Film quiz (21st September 2022)
- Helm quiz (14th October 2022)
- Freshers quiz (16th August 2022)
- i.quiz (13th November 2022)
- Bollywood quiz (30th January 2023)
- Synapse quiz (19th March 2023)

We secured second prize at WAVES '22 BITS, Goa and second prize at a fest organized by IIT Gandhinagar.

### **Khelaiya Club**

#### **Natyanjali at Waves '22 (18th-22nd November 2022)**

The team secured the first prize as a result of their spectacular performance.

### **Microsoft Student Technical Club (MSTC)**

#### **Introduction to Data Visualization (29th August 2022)**

Exploratory session on Introduction to Data Visualization followed by hands-on data visualization libraries. The session covered a basic introduction to two python libraries - pandas and matplotlib. It was open for all batches.

### **Hacktoberfest Simplified (6th October 2022)**

Introduction to Open-Source and Hacktoberfest.

### **Hands-on Session on Linux and Network Programming (16th November 2022)**

### **Hands-on Session on Introduction to Development (17th November 2022)**

The session provided the attendees a roadmap for development and introduction to various tech stacks.

### **Muse Club**

#### **Figma 101 (23rd September 2022)**

MUSE - the design club hosted a session called Figma 101. The session was led by members of MUSE and aimed to introduce attendees to the basics of Figma, a popular design and prototyping tool. There were approximately 40 participants in attendance, all eager to learn more about Figma and how it could be used in their design work. The speakers began by providing a general overview of Figma and its capabilities, including its collaboration features, design tools, and prototyping capabilities. Throughout the session, attendees were given the opportunity to ask questions and try out Figma for themselves, with the speakers providing guidance and assistance as needed. The speakers also shared their own experiences



using Figma in professional and personal projects, providing valuable insights and tips for attendees.

### Music Club

#### **Waves '22 (18th- 22nd November 2022)**

The club members participated in various musical events including solo, duet, and band performances. The team comprising of Dev Vora, Abhimanyu Negi, Malavika Nair, Isha K, Anjali Jilariya and Vansh Joshi secured first prize in SOTA. In the solo competition, Dev Vora secured second place.

**Flare '23 (14th-16th April 2023)** The band secured first and second position in the Battle-of-Bands competition.

### Photography and Movie Making Club (PMMC)

#### **Independence Day Challenge (15th-16th August 2022)**

It was a 2-day photo-video challenge on the occasion of Independence Day.

#### **Exams: A Photography-Videography Challenge (13th-16th September 2022)**

This was a photography-videography challenge on the theme of Exams. Students submitted their entries and expressed their views on exams in the best way they could. Students captured their memories about different facets of an exam and shared them with all of us.

#### **Product Photography Session (23rd April 2023)**

The PMMC photography club of DA-IICT



recently hosted an engaging product photography session. The session was designed to learn about various styles, techniques, and lighting skills used in product photography. During the session, the attendees were divided into groups, and each group had the chance to practice taking photos in their own unique way. They were provided with various products to photograph, and they were encouraged to experiment with different lighting setups, angles, and compositions. The session was highly interactive, with members discussing their techniques and providing each other with feedback. They gained valuable insights into the intricacies of product photography, and they had the opportunity to hone their skills by trying out various techniques and lighting setups.

### Radio Club

#### **Discussion Forum (3rd September 2022, 8th September 2022, 14th November 2022, 16th April 2023)**

This was an open forum for people to voice their thoughts and opinions on any topic. One of the takeaways of the forum was the understanding that it was not necessary to choose a side before speaking; instead, one should say what he/she feels is right.

**Audio editing, Graphic designing Session (21st November 2022)** A session for students to get acquainted with audio editing and graphic designing.

#### **Weekly Poetry Recitation Competition (9th April 2023)**

It was a stage event held specifically for first-year students and involved four art forms; poetry, storytelling, mimicry, and monologue.

### Research Club

#### **Alumni Lecture Series Talk (31st August 2022)**

Kirtana Phatnani, from the batch of 2016 gave a talk on research areas and guidance regarding research work.



### **A Seminar on Research Internship Opportunities and Their Application Process (2nd February 2023)**

The seminar helped increase student awareness about the various research internship opportunities available to undergraduates at various national and international institutes.

### **Interactive Session on Starting a Research Internship at DA-IICT (8th March 2023)**

Purvi Patel, a PhD scholar at DA-IICT was the speaker for a session which was also an introductory session on VLSI.

### **Cubing Club**

#### **3x3 Rubik's Cube Beginners Workshop (24th November 2022)**

The workshop was conducted to introduce students to speed cubing and to teach them certain beginner skills required to solve a 3x3 Rubik's cube.

### **Developer Student Club**

**Introduction to Git and GitHub (19th January 2023)** The hands-on session was conducted to introduce students to Git and GitHub was attended by more than 200 students of the Institute.

### **SEMESTER LONG PROJECTS 2.0**

The Developer Student Club members hosted Semester Long Projects (SLoP). Interested students from across the country who are passionate about coding and want to contribute to open-source projects were invited to participate.

The program followed the structure of Google Summer of Code (GSoC), a global program that teams students with open-source software and technology-related organizations to develop software. In the course of the project, participants were guided by experienced mentors. Participants collaborated on software development using GitHub. There were exciting cash prizes and goodies for mentors.

### **ALUMNI TALK**

The Alumni Association organized a talk on 29th November 2022. The title of the talk was

"Revealing unseen opportunities with our alumni." Gauravi Dubey (2001-2005 BTech batch) is currently working at Indian Revenue Service- Customs and Indirect Taxes, Irukulapati Naga (2005-2009 BTech batch) currently working at Ericsson Research and a 5G patent holder, Indira Negi (2003-2007 BTech batch) currently working at Bill and Melinda Gates Foundation and Kunal Gupta (2015-2017 MDes batch) currently working at DX/UX Research at Intel Corporation shared their invaluable experiences. The talk was organized in hybrid mode. They made the students recognize that in the technological field, everyone is so focused on getting high packages that they are unwilling to explore other opportunities available to them after college graduation. In this talk, the students were also informed about the various opportunities available to them after graduation and how they could explore these career paths too.

### **EVENTS BY COUNSELLOR**

Zero Anxiety Session, some Techniques of METTA MEDITATION, for staff, students and faculty 28th April 2023, 4.30 pm, by Prof Nandini Banerjee

### **STUDENT ACHIEVEMENTS**

DA-IICT Cricket team performed extremely well in the cricket tournament organised by IIT, Gandhinagar (October, 2022) and reached Men's, Semi-final.

The sports contingent participated in the **Concourse National Sports Festival (03rd-06th November 2022)**.

The results are as follows:

- Volleyball Boys, Runners up
- Football Boys, Semi-finalists
- Cricket, Runners up
- Badminton Girls, Runners up
- Table Tennis Boys, Runners up
- Chess Mix, Runners up
- Carrom Mix, Winner

**The sports contingent performed exceedingly well in the sports festival of GNLU- 'Justice League' (23rd to 26th**



**February 2023).** The results are as follows:

- Carrom, Winner
- Volleyball Boys, Runners up
- Chess Mix, Runners up
- Table Tennis Men's, Semi-finalists
- Cricket Men's, Semi-finalists

The sports contingent participated in the **BITS-SPREE National Sports Festival (11th-16th April 2023)**

The results are as follows:

- Power Lifting 63 Category, Runners-up







## Resource Centre

The Resource Centre (RC) continues to be the preferred place of study for the students. The packed reading areas during examinations are a testimony. Although this was an encouraging sign, it presented a major challenge of space management: increasing the shelving space and increasing the sitting/reading space within the existing area.

### RC Space management

We endeavour to accommodate a maximum number of users without sacrificing reading comfort. The library witnessed a significant increase in its user base post-COVID. Hence, we embarked upon RC space management project to accomplish both challenges. The library users' feedback and suggestions were kept in mind while re-designing the space.

The first step was to integrate all the physical resources in one place. The library now has all the books, daily newspapers and audio-visual material on the ground floor. This also helps users with special needs to browse and use the collection without climbing the stairs.

RC users' long-felt need for a larger reading hall was satisfied when an air-conditioned reading hall in the A-wing was made available to

students. A separate laptop charging bay has been created on the same floor to facilitate quick and easy charging. A similar re-design at the B-wing resulted in additional reading space. The library can now accommodate close to 600 students.

The reception area of the RC was re-designed to provide informal reading space to its users. A separate baggage room was also created where students can safely leave their belongings before entering the library.

### User Engagement

RC continues to use social media intelligently and created various Instagram posts on new books, various events at the library, conducted opinion polls and shared interesting parts of exciting books on different themes.

The new batches of UG, PG and PhD students were given a detailed library orientation that provided insight into services, resources, rules, etc. A guided tour of the RC was also conducted after that. The intention was to generate interest and create awareness about this important facility that will facilitate their learning.

RC introduced students' entry into RC using their



bar-coded identity cards. This enable us with a more accurate footfall to assess library usage.

### RC Resource Enhancement

The RC launched its new website after conducting many user trials. The site has integrated all its services and resources under one link. The site usage has been encouraging since its launch.

Our journey to strengthen e-resources accelerated when we added five e-book readers (Kindle) and a subscription to its unlimited e-library. Additional devices will be added subject to their popularity amongst RC users.

### People Management

After a gap of three years, RC re-started the recruitment of apprentice library trainees. Four library science post-graduate candidates were selected after a written test and a personal interview. The duration of this traineeship is one year.

RC accepted two interns, one from Gujarat University and the other from the Central University of Gujarat, for a one-month project internship.

Swati Mitra, Assistant Officer, completed her Bachelor of Library and Information Science (BLISc) degree.

### Events and Invitations

RC hosted a 2-day book exhibition to celebrate National Library Day. The faculty and students were enthusiastic about browsing and selecting books.

Manish Mankad, Librarian

- Was on the interview panel for the selection of Librarian for GITAM University and PDEU.
- Represented DAIICT at the International Conference of Academic Institutions, Ahmedabad.
- Invited to participate in Springer Nature e-book enclave in New Delhi.

**Table 12 : New Additions to the RC**

Collection Type	Added during 2022-23	Total as of 31 July 2023
Books	834	34027
E-books	5761	67623
CDs/DVDs & AV Collection	0	4037
Theses & Dissertations	85	1087
Bound Volumes of Journals	291	3231

- Invited as host and moderator at the ADINET-DAIICT webinar 'How to prepare for the job interview.'
- Presented a paper 'Refining library spaces' at CEPT University for the Librarians Day Seminar 2022.

Shashikumara AA, Deputy Librarian participated in a five-day workshop on “Geographical Information Systems (GIS)”, organized by Dhirubhai Ambani Institute of Information and Communication Technology (DAIICT) Gandhinagar, from 19-23 September 2022.

### Visitors to the Resource Centre

- Rahul Dubey, ex-faculty DAIICT and currently a member of the technical staff at a global training solutions company.
- Prof. Lakshmivaran, Faculty, University of Oklahoma.
- Dr Sanjay Banavar, Director, Library Operations, Ahmedabad University.
- Dr Hayat Ahmad, Head Librarian, CEPT University.
- Library science students and faculty of Mangalore University.
- 31 students of classes 6 to 8 of Government Primary School, Borij as well as their primary teachers visited the DAIICT campus and the library as part of a NCERT program.



## Infrastructure

### ICT INFRASTRUCTURE

The Information and Communication Technology (ICT) Committee works towards the mission to provide the best computing facilities for faculty research and student learning. During the reporting year, the Institute has invested Rs. 2.17 crore for purchasing and upgrading existing ICT infrastructure including hardware software upgrades and acquiring new hardware and software.

DA-IICT has a modern eco-friendly, fully networked campus through high-end enterprise-grade Layer-3 CO switch with 10G support and with 1Gbps internet bandwidth. Campus LAN infrastructure with 1Gbps optical fibre cable connectivity between various buildings. The students on the campus have access to high-speed Wi-Fi connectivity. This helps them access online class lectures and assignments posted by teachers and instructions issued by the Institute. The Institute's wireless network setup consists of 125 access points spread over various campus locations.

There are around 1350 desktop PCs for lab, staff and faculty use. 70 laptops are deployed for the exclusive use of faculty and staff members. DA-IICT has its data center with 34 servers and with 10G switch for server farms to provide various IT services. The Institute has deployed Moodle

open-source software online learning management for course content hosting and submission of assignments.

The Institute has already deployed the High Performance Computing (HPC) Cluster to meet the computing requirements of the BTech (ICT) Computational Science Program. Another setup of four High-end computing servers is also deployed for research scholars. For efficient use of these servers, provisions were made for off-campus access for faculty and postgraduate students via VPN whenever required.

The Institute has also subscribed to campus-wide licenses of popular scientific software like MATLAB, LabVIEW, Netsim Academic, Netsim Standard, Cadence Electronic Design Automation Suite, Adobe CCT, Turnitin, Grammarly and Microsoft campus software agreement.

It has purchased 125 high-end desktop PCs for the use of Computer Network Labs. The institute has also procured 15 new higher-end laptop for the use of faculty members.

### LABORATORY INFRASTRUCTURE

During the reporting year, Rs. 1,56,11,226 was spent for the procurement of various electronic equipments as well as electronics components for the laboratories.





## CAMPUS INFRASTRUCTURE

The institute planned new infrastructure projects and completed the renovation of existing infrastructure facilities on the campus. The key projects are as follows:

- Rainwater harvesting with two percolation wells at the boys hostel
- Development of two net houses with a plot area of 1200 sq ft (40ft x 30ft) for research/study on the development and growth of special plant species like a banana tree, cotton plants, cumin plants etc. and replacement of damaged plants as well as for new plantation for campus green area.
- Disabled-friendly washrooms on the ground floor of HoR Men, HoR Women and RC Building.
- Extension of the existing solar power plant capacity (20.15 KWp) by installing of new 99.90 KWp solar power plant taking the total capacity to 120.05 KWp.
- Renovation of the 12000 square meter main gate ring road using paver blocks.
- New EVD LAB near staircase area of ground floor of CEP Block and at Lab B of Lab Ext. block of Lab building with 40 seating capacity in each lab.
- New FRP weather shed opposite Food Court No. 5 and near the rear gate of the main canteen.
- New Reading Hall with 200 seating capacity on the first floor of the Resource Center.
- Replacements of existing road signage and building signage (Faculty Blocks, CEP and LAB) with a new design.







## Annexure 1

### MANAGEMENT

#### Academic Council

Prof. K.S. Dasgupta, Chairman	Director, DA-IICT, Gandhinagar
Prof. Ranjan Bose	Director, Indraprastha Institute of Information Technology, Delhi
Prof. Prabir K. Biswas	Professor, IIT Kharagpur
Shri Pavitar Singh	Chief Technical Officer, Sprinklr, Gurugram, Haryana
Shri Tapan Mishra	Distinguished Scientist, Space Application Centre, ISRO, Ahmedabad
Prof. Maniklal Das	Dean (Academic Programs), DA-IICT, Gandhinagar
Prof. Manjunath Joshi	Dean (Research & Development), DA-IICT, Gandhinagar
Prof. Sanjay Srivastava	Professor, DA-IICT, Gandhinagar
Prof. Binita Desai	Professor, DA-IICT, Gandhinagar
Prof. Sunitha V	Professor, DA-IICT, Gandhinagar
Shri Siddharth Swaminarayan, Secretary	Executive Registrar, DA-IICT, Gandhinagar

#### Finance Committee

Prof. K.S. Dasgupta, Chairman	Director, DA-IICT, Gandhinagar
Prof. Manik Lal Das, Member	Dean (Academic Programs), DA-IICT, Gandhinagar
Shri Shrenik Vaishnav, Member	Vice President & Head (Consolidation), Reliance Communications Limited, Mumbai
Shri Siddharth Swaminarayan, Secretary	Executive Registrar, DA-IICT, Gandhinagar

#### Board of Studies – UG Programs

Prof. Manik Lal Das, Chairman	Dean (Academic Programs), DA-IICT (Ex-Officio)
Prof. Anish Mathuria, Member	DA-IICT, Gandhinagar
Prof. M.V. Joshi, Member	Dean (R&D), DA-IICT (Ex-Officio)
Prof. Saurabh Tiwari, Member	(Convenor, PG Programs), DA-IICT (Ex-officio)
Prof. Bhaskar Chaudhury, Member	Associate Dean (Academic Programs), DA-IICT
Prof. Rahul Muthu, Member	DA-IICT, Gandhinagar
Prof. Shefali Jha, Member	DA-IICT, Gandhinagar

### Board of Studies – PG Programs

Prof. Manik Lal Das, Chairman	Dean (Academic Programs), DA-IICT (Ex-Officio)
Prof. Saurabh Tiwari – Convenor	(Convenor, PG Programs), DA-IICT (Ex-Officio)
Prof. Anjan Ghosh, Member	DA-IICT, Gandhinagar
Prof. Manjunath V. Joshi, Member	Dean (R&D), Member, DA-IICT (Ex-Officio)
Prof. Bhaskar Chaudhury, Member	Associate Dean (Academic Programs), Member, DA-IICT
Prof. Madhumita Mazumdar, Member	DA-IICT, Gandhinagar
Prof. P.M. Jat, Member	(Convenor, UG Programs), DA-IICT (Ex-Officio)
Prof. Yash Vasavada, Member	DA-IICT, Gandhinagar

### Internal Quality Assurance Cell

Prof. K.S. Dasgupta	Director, DA-IICT - Chairman IQAC
Dr. Anil Roy	Director IQAC
Shri. Srikant	Reliance Communications – Management Member
Mr. Siddharth Swaminarayan	Executive Registrar, Administrative Member
Prof. Minal Bhise	Convenor, Gender Cell, DA-IICT – Faculty Member
Prof. Maniklal Das	Dean (AP), DA-IICT – Faculty Member
Prof. M.V. Joshi	Dean (R&D), DA-IICT – Faculty Member
Dr. P S Kalyan Sasidhar	Dean (Students), DA-IICT – Faculty Member
Prof. Yash Vasavada	Associate Dean (R&D), DA-IICT – Faculty Member
Prof. P.M. Jat	Associate Professor, DA-IICT – Faculty Member
Prof. Hemant Patil	Professor, DA-IICT – Faculty Member
Prof. Sanjay Srivastava	Professor, DA-IICT – Faculty Member
Prof. Saurabh Tiwari	Assistant Professor, DA-IICT – Faculty Member
Mohal Rajyaguru	SBG Convenor, DA-IICT – Student Member
Dhruval Kukadia	Student, DA-IICT – Student Member
Prarthee Desai	Student, DA-IICT – Student Member
Chetanshi Mehta	Student, DA-IICT – Student Member
Shreya Arora	Student, DA-IICT – Student Member
Anand Jain	Alumnus, DA-IICT – Alumni Member
Shradha Makhija	Alumnus, DA-IICT – Alumni Member
Gunjan Arya	Alumnus, DA-IICT – Alumni Member
Vinit Kumar	Alumnus, DA-IICT – Alumni Member
Mr. Manmeet Purbey	Google India, Member from Employer
Mr. Nilesh Ranpura	eINFOCHIPS-Arrow company, Member from Employer
Mr. Sumeet Singh	Quinbay Technologies, Member from Employer



## INSTITUTE OFFICIALS

### Director

Prof. K S Dasgupta

### Deans

#### Academic Programs

Prof. Manik Lal Das

#### Research and Development

Prof. Manjunath K Joshi

### Students

Prof. Bhaskar Chaudhary

### Acting Registrar

Prof. Ranendu Ghosh

### Head-HR and Administration

Shri Hasendrasinh Jhala

### Librarian

Manish Mankad

## Internal Committees

### Undergraduate Committee

Prof. Aditya Tatu, Convenor

Prof. Mukesh Tiwari – Coordinator, MnC Program

Prof. Srimanta Mandal – Coordinator, ICT Program

Prof. Abhishek Jindal – Coordinator, ICT-minor Program

Prof. Shefali Jha, Member

Prof. Minal Bhise, Member

### Postgraduate Committee

Prof. Saurabh Tiwari - Convener

Prof. Vishvajit Pandya – MDes Coordinator

Prof. Vinay Palaparthi – PhD Program Coordinator

Prof. Tapas Kumar Maiti – MTech ICT Program Coordinator

Prof. Shruti Bhilare - CRRao Inst. CS-ML Program Coordinator

Prof. Priyanka Singh – IIT Jammu Program Coordinator

Prof. Manish Khare – MSc (IT) Program Coordinator

Prof. Bhaskar Chaudhury – MSc (DS) Program

Coordinator

Prof. Ranendu Ghosh – MSc (AA) Program

Coordinator

### Academic Audit Committee for BTech Electives

Prof. Sanjay Srivastava, Convenor

Prof. V Sunitha, UG Convenor, Member

Prof. Vishvajit Pandya, Member

Prof. Biswajit Mishra, Member

Prof. P M Jat, Member, Member

### International Collaborative Academic Program Committee

Prof. Anish Mathuria, Convenor

Dean-AP (ex-officio), Member

Prof. Anjan Ghosh, Member

Prof. Prasenjit Majumder, Member

### Laboratory Committee

Dean (Academic Programs) (ex-officio), Convenor

PG Convenor (ex-officio), Member

UG Convenor (ex-officio), Member

Prof Abhishek Jindal, Member

Lab Superintendent (ex-officio Invitee)

### Research Promotion Committee

Prof. Anjan Ghosh Convenor

Prof. Biswajit Mishra, Member

Prof. Deepak Ghodgaonkar, Member

Prof. Hemant A Patil, Member

Prof. Bhaskar Chaudhury, Member

### ICT Committee

Prof. Kalyan Sasidhar- Convenor

Prof. Vinay Palaparthi- Co-Convenor

Dean (Academic Programs) (ex-officio), Member

Associate Dean (Academic Programs), Member

Prof. Rajib Lochan Das, Member

Executive Registrar (ex-officio), Member

Manager (IT & Systems) (ex-officio), Member

Lab Superintendent (ex-officio), Member

### Placement Committee

Prof. Ahlad Kumar-Convener

Prof. Supantha Pandit, Member

Prof. Nalin Kumar Sharma, Member

MTech Coordinator, (ex-officio)

MSc (IT) Coordinator, (ex-officio)

MSc (DS) Coordinator, (ex-officio)  
 MSc (AA) Coordinator, (ex-officio)  
 BSI Coordinator, (ex-officio)  
 Placement Officer, (ex-officio)

### **Resource Centre Committee**

Prof. Madhumita Mazumdar - Convener  
 Prof. Gautam Dutta, Member  
 Prof. Arnab Kumar Ray, Member  
 Prof. Rutu Parekh, Member  
 Prof. Puneet Bhateja, Member  
 Prof. Ranendu Ghosh, Member  
 Manish Mankad, Member Secretary

### **Campus Learning Management System**

Prof. JayPrakash Lalchandani- Convener  
 Prof. Amit Mankodi, Member  
 Prof. Lavneet Singh, Member  
 Nimesh Shah, Member  
 Timetable Committee  
 Prof. Tapas Kumar Maiti- Convener  
 Prof. Avik Hati, Member  
 Prof. Manish Kumar, Member  
 Prof. Aditya Tatu, UG Convenor, Member  
 Prof. Saurabh Tiwari, PG Convenor, Member

### **Web Committee**

Prof. Bharani Kollipara- Convener  
 Prof. Manish Kumar, Member  
 Prof. Anuj Tawari, Member  
 Nimesh Patel, Member

### **CEP Committee**

Prof. Amit Bhatt- Convenor  
 Prof. Sreeja Rajendran, Member  
 Prof. Arpit Rana, Member  
 Prof. Madhukant Sharma, Member  
 CEP Officer (ex-officio), Member

### **Annual Report Committee**

Executive Registrar- Convenor  
 Dean (Academic Programs), Member  
 Dean (R & D), Member  
 Dean (Students), Member  
 Convenor, Placement Committee, (ex-officio), Member  
 Prof. Anish Mathuria, Member  
 Prof. Shweta Garg, Member  
 Manish Mankad, (Librarian), Member

### **Social Media Committee**

Prof. Amit Mankodi-Convener  
 Prof. Sourish Dasgupta, Member  
 Dy. Registrar (ex-officio), Member  
 Social Media Officer (ex-officio), Member

### **Disciplinary Action Committee**

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

### **Gender Cell**

Prof. V Sunitha- Convenor  
 Prof. Shruti Bhilare, Co-Convenor  
 Dean (Academic Programs) (ex-officio), Member  
 Warden, HOR-Women (ex-officio), Member  
 Ms. Geeta Mehta, Member  
 One representative from NGO, Member  
 One Lawyer, Member  
 One doctor, Member  
 Student Representatives – two nominated students, Member

### **Student Activities Council**

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

### **International Student Cell**

Admissions Convenor- Convenor  
 Prof. Nabin Kumar Sahu, Member  
 Executive Registrar, (ex-officio), Member  
 Dean (Academic Programs), (ex-officio), Member  
 Rural Internship Committee  
 Prof. P. Kalyan Sasidhar- Convenor  
 Prof. Shefali Jha, Member  
 Prof. Nalin Kumar Sharma, Member  
 Prof. Pritam Anand, Member

### **B Tech, MSc, MDes and MTech Project/Thesis Award Committee**

Associate Dean (Academic Programs), (ex-officio), Convenor





Associate Dean (R & D), (ex-officio), Member  
UG Convenor, (ex-officio), Member  
PG Convenor, (ex-officio), Member  
Domain Experts (internal/external), invitee  
Member

### **Data Depository and Management Committee**

Shri Jalpesh Pandya, Deputy Registrar (ADD),  
Convenor  
Shri Shashikumara AA, Deputy Librarian, Co-  
Convenor  
Shri Satyabir Singh, Senior Secretary, Dean AP,  
Member

Shri Santosh Pandit, Assistant Accounts Officer,  
Member  
Shri Gyanesh Pandya, Assistant HR Officer,  
Member  
Shri Rahul Prajapati, Asst Registrar, Member  
Shri Pankit Gandhi, Secretary FB 3, Member  
Shri Jayesh Patel, AIP/CEP officer, Member

### **Director IQAC**

Prof. Anil K. Roy

## Annexure 2

### THESES, PROJECTS AND REPORTS

#### PhD Theses

1. Dave, Viral A., Desertification characterization using predictive soil modelling and pattern recognition; xv, 145 p.; 2023. (Supervisor: Ranendu Ghosh)
2. Mevada, Pratik, Design of Quasi-periodic and Aperiodic Array Lattices to Improve Array Antenna Performance; xii, 81 p.; 2023. (Supervisor: Sanjeev Gupta)
3. Patel, Mayankkumar Lalabhai, Resource Utilization for Raw Data Query Processing: Optimizing Required Resources & Maximizing Utilization of Existing Resources; xviii, 209 p.; 2023. (Supervisor: Minal Bhise)
4. Patil, Ankur T., Handcrafted Features for Anti-Spoofing; xxxv, 276 p.; 2023. (Supervisor: Hemant A. Patil)

#### M.Tech Theses

1. Agrawal, Radha, Privacy-Preserving Iris Based Authentication System; vi, 33 p.; 2023. (Supervisor: Priyanka Singh and Manjunath V. Joshi)
2. Balwani, Shivani, Automated Analysis of Natural Language Textual Specifications: Conformance and Non-Conformance with Requirement Templates (RTs); viii, 60 p.; 2023. (Supervisor: Saurabh Tiwari)
3. Bhandarkar, Vaidehi, Human Activity Recognition using Two-stream Attention Based Bi-LSTM Networks; vii, 37 p.; 2023. (Supervisor: Manish Khare)
4. Bharadwaj, Hemani, Multi-Model Person Re-identification: Combining Facial and Body Features; ix, 43 p.; 2023. (Supervisor: Manish Khare and Bakul Gohel)
5. Dodiya, Krutika, Shadow Detection and Removal from video using Deep Learning; viii, 36 p.; 2023. (Supervisor: Manish Khare and Bakul Gohel)
6. Doshi, Nisarg, Tissue-Specific Analysis of Super Resolution Methods for Medical

Images; xi, 39 p.; 2023. (Supervisor: Bakul Gohel)

7. Gajera, Pinak, Single Image De-raining Using Convolutional Neural Network; viii, 34 p.; 2023. (Supervisor: Rajib Lochan Das and Srimanta Mandal)
8. Gaur, Attendra, Salient Object Super-resolution; ix, 83 p.; 2023. (Supervisor: Srimanta Mandal)
9. Gorasiya, Raghav, Anomalies Detection in Radon Time Series for Earthquake Prediction Using Machine Learning Techniques; x, 93 p.; 2023. (Supervisor: Bhaskar Chaudhury)
10. Hajare, Kavan Vijaybhai, Schema Design and Evaluation for Cassandra; vi, 30 p.; 2023. (Supervisor: P M Jat)
11. Jadiya, Kevin, Location aware tumor segmentation on `MRI images; viii, 30 p.; 2023. (Supervisor: Bakul Gohel)
12. Jain, Shivangi, Self-Calibrating Soil Moisture Sensor for In-Situ Application; x, 30 p.; 2023. (Supervisor: Vinay S. Palaparthi)
13. Jha, Gaurav, Quantile Regression and Deep Learning Models for Air Quality Analysis and Prediction in Delhi City; viii, 40 p.; 2023. (Supervisor: Pritam Anand)
14. Joshi, Yash Kirankumar, Dispersion of Mobile Robots on Triangular Grid; vi, 50 p.; 2023. (Supervisor: Supantha Pandit)
15. Kachchhi, Hardi, Image Processing Using Digital Programming on FPGA; xi, 53 p.; 2023. (Supervisor: Yash Agrawal and Manish Khare)
16. Kollipara, Sai Sree Rohini, Design of 4-bit Barrel Shifter in Quantum Dot Cellular Automata; ix, 38 p.; 2023. (Supervisor: Sreeja Rajendran)
17. Kumar, Rahul, Impact of Image Enhancement on Multi-Object Tracking in Underwater Scenario; vii, 43 p.; 2023. (Supervisor: Srimanta Mandal)



18. Maharaaj, Vinay, Empirical Study Of Sampling Heuristics For Fairness In Ranking; vii, 55 p.; 2023. (Supervisor: Rachit Chhaya and Arpit Rana)
19. Mansuri, Juned, Dynamic User Intent Modeling for Conversational Recommendation using Long Short-Term Memory; viii, 48 p.; 2023. (Supervisor: Arpit Rana)
20. Mavani, Shreyas, Splittable and Highly Connectable Degree Sequences; vi, 43 p.; 2023. (Supervisor: Rahul Muthu)
21. Mehta, Dhara Vipinkumar, Analysis of social interaction, crowd density and mobility pattern using smartphone sensing; vi, 48 p.; 2023. (Supervisor: P. S. Kalyan Sasidhar)
22. Mishra, Rohit Ajaykumar, Model Based Testing and Model Checking: An Efficient Combination; viii, 44 p.; 2023. (Supervisor: Saurabh Tiwari)
23. Modi, Parth, Translation of Hindi in Roman Script into English: Use of Transformer; viii, 28 p.; 2023. (Supervisor: Manjunath V. Joshi)
24. Nagrani, Khyati, Neural Network Architectures for Integrated Circuits; vii, 61 p.; 2023. (Supervisor: Tapas Kumar Maiti)
25. Pandya, Utkarsh Samirbhai, Polarimetric SAR Image Classification using Gaussian Context Transformer in Complex-Valued Convolutional Neural Networks; xi, 81 p.; 2023. (Supervisor: Srimanta Mandal)
26. Patel, Dhairya Bhaveshkumar, Analyzing Functional Connectivity Networks in the Brain and the Relationship of Node-Level Characteristics; vii, 47 p.; 2023. (Supervisor: Mukesh Tiwari and Bakul Gohel)
27. Patel, Vraj, Position Estimation of Intelligent Artificial Systems Using 3D Point Cloud; vii, 56 p.; 2023. (Supervisor: Tapas Kumar Maiti)
28. Pathak, Yash, Explanations by Counterfactual Argument in Recommendation Systems; vii, 43 p.; 2023. (Supervisor: Arpit Rana)
29. Prajapati, Harsh, Semantic Segmentation Based Object Detection for Autonomous Driving; ix, 63 p.; 2023. (Supervisor: Tapas Kumar Maiti)
30. Ratanghayara, Khushali, Automated Handwritten Answer Sheet Evaluation System Using Deep Learning Methods; ix, 472 p.; 2023. (Supervisor: Anil K. Roy and Pritam Anand)
31. Sarvaiya, Maulik Karshanbhai, Investigating Robustness of Face Recognition System against Adversarial Attacks; ix, 38 p.; 2023. (Supervisor: Shruti Bhilare)
32. Savaliya, Harshkumar Mukeshbhai, Uncertainty Modeling in Significant Wave Height Forecast; viii, 36 p.; 2023. (Supervisor: Pritam Anand)
33. Shah, Divya, Automatic localization of anatomical landmarks in 2D MRI localizer sequence using deep convolutional neural network; viii, 34 p.; 2023. (Supervisor: Bakul Gohel)
34. Shah, Vyom Hiteshkumar, Empirical Study Of Smartphones As An Edge Device; ix, 57 p.; 2023. (Supervisor: P. S. Kalyan Sasidhar)
35. Sharma, Devesh, Graph Neural Network Based Semantic Mapping and Classification of Dataset for Robotics Applications; vii, 47 p.; 2023. (Supervisor: P M Jat and Tapas Kumar Maiti)
36. Sharma, Harsh, Non-Homogeneous Haze Removal Using Deep Neural Networks; ix, 55 p.; 2023. (Supervisor: Bakul Gohel and Manish Khare)
37. Sheth, Vinay, Comparative Performance Analysis of Column Family Databases: Cassandra and HBase; viii, 56 p.; 2023. (Supervisor: P M Jat)
38. Sheth, Yash, Design Web Application For IoT Enabled Agriculture Sensor Systems; vi, 36 p.; 2023. (Supervisor: Vinay S. Palaparthi and Saurabh Tiwari)

39. Singh, Mayank, Study of Traffic Simulation Model for Heterogeneous Traffic; vii, 49 p.; 2023. (Supervisor: Archana Nigam and Sanjay Srivastava)
40. Thakar, Swapnil, Analysing User Reviews for Evaluating Game Playability of Mobile Gaming Apps; vii, 47 p.; 2023. (Supervisor: Saurabh Tiwari)
41. Thakkar, Abhishek Mukeshbhai, A Comprehensive Analysis of NFHS-5 data for TB in India; viii, 61 p.; 2023. (Supervisor: Arpit Rana and Tathagata Bandyopadhyay)
42. Thakkar, Jahanvi, Content-Based Video Retrieval Based on Integration of Wavelet Transform, Color and Texture Features; vii, 40 p.; 2023. (Supervisor: Manish Khare)
43. Trivedi, Jaaneel Udayan, Smartphones as Computing Platforms: An all-in-one Mobile Application; viii, 39 p.; 2023. (Supervisor: P. S. Kalyan Sasidhar)
44. Uthiraa, S., Features for Speech Emotion Recognition; xiii, 109 p.; 2023. (Supervisor: Hemant A. Patil)
45. Vaishnavi, A Static Analysis Approach for Ethereum Smart Contracts; x, 73 p.; 2023. (Supervisor: JayPrakash TL)
46. Vansh, Rahul Bhanjibhai, Evaluation of Personalized Summarization; viii, 45 p.; 2023. (Supervisor: Sourish Dasgupta)
47. Vekariya, Jaymin, Unsupervised Cycle GAN based Homogeneous and Non-homogeneous Image Dehazing; viii, 39 p.; 2023. (Supervisor: Srimanta Mandal)
48. Vora, Harshal Rajeshbhai, Evaluation of Eventual Consistency and Linearizability in MongoDB; vi, 37 p.; 2023. (Supervisor: P M Jat)
49. Yagnik, Shrey Devenkumar, On the Robustness of Federated Learning towards Various Attacks; vii, 33 p.; 2023. (Supervisor: Priyanka Singh and Manjunath V. Joshi)

### M.Des Project Reports

1. Bhatt, Devarshi, Victoria Park: An Urban Oasis, An Informative & Interactive Website; 75 p.; 2023. (Supervisor: Nikita Desai)
2. Chandrayan, Vaishnavi and Jain, Muskan, Swacch Indore: A view from the margins; 32 p.; 2023. (Supervisor: Madhumita Mazumdar and Anirban Dutta Gupta)
3. Das, Tanaya and Sharma, Preeti, Mental Health Matters; 53 p.; 2023. (Supervisor: Madhumita Mazumdar)
4. Harikrishnan, V.S., Facing the Sea: The Vanishing Shores of South Kerala; 82 p.; 2023. (Supervisor: Madhumita Mazumdar and Anirban Dutta Gupta)
5. Patel, Dhvani, Green Magic: A Gardening Kit for Kids ; 74 p.; 2023. (Supervisor: Binita Desai)
6. Raval, Rushi, Aankh Micholi: Mapping The Spatial Practices and Visual Identity of The Non-Vegetarianism in The City of Ahmedabad, Gujarat; 68 p.; 2023. (Supervisor: Vishvajit Pandya and Madhumita Mazumdar)
7. Singh, Nehal, Lost Forests of Braj; 77 p.; 2023. (Supervisor: Vishvajit Pandya)
8. Tamilselvan, Koushikram, PURAMPOKKU: The changing interface and role of land and water has put the poor of the city in the path of the Flood and Drought; 39 p.; 2023. (Supervisor: Madhumita Mazumdar and Vishvajit Pandya)
9. Trivedi, Jahnvi, Firki Ni Dori; 60 p.; 2023. (Supervisor: Anirban Dutta Gupta and Binita Desai)
10. Vedula, Sri Gayathri and Kumawat, Kalyani, Amma Ka Dabba: Informative Meal planner to promote nutrition; 77 p.; 2023. (Supervisor: Binita Desai)





## Annexure 3

### FACULTY WITH AREAS OF INTEREST

#### Regular Faculty

Name of the Faculty	Areas of Interest
<b>K S Dasgupta (Director)</b> PhD (Engineering) Indian Institute of Technology, Bombay Technological University	Digital Signal and Image Processing, Digital Communication, Computer Networking and Satellite Communication.
<b>Agrawal, Yash</b> PhD (Electronics & Communication Engineering) NIT, Hamirpur, Himachal Pradesh	Design, modelling and simulation of high performance VLSI interconnects, Nanotechnology
<b>Anand, Pritam</b> PhD (Computer Science), South Asian University, New Delhi	Support Vector Machines, Loss Functions, Regression, Extreme Learning Machines, Quantile Regression
<b>Bandyopadhyay, Tathagata</b> PhD (Statistics), University of Calcutta, Kolkata	Statistical Inference, Survey Sampling, Discrete Data Modeling and Analysis, Applications of Statistical Methodologies in Various Fields
<b>Bera, Sudip</b> PhD (Mathematics), Visva-Bharati University, Shantiniketan, West Bengal	Algebraic And Enumerative Combinatorics, Graph Theory
<b>Bhateja, Puneet</b> PhD (Computer Science) Chennai Mathematical Institute	Formal Methods used for Testing and Verification
<b>Bhatt, Amit</b> PhD (Electrical Engineering) North Carolina State University, USA	Multi-core 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 (IPR)	Computational Science, High Performance Computing, Computational Physics, Modelling and Simulation of Plasmas, Computational Electromagnetics, Parallel Programming, GPU Computing, Plasma electronics
<b>Chhaya, Rachit</b> PhD (Computer Science), IIT Gandhinagar	Coresets for Machine Learning
<b>Das, ManikLal</b> PhD (Information Technology) IIT Bombay	Information Security, Cryptography, System Design and Analysis

<b>Das, Purbasha</b> PhD (History), Jawaharlal Nehru University, New Delhi	History of Transport and Communication, Urban History, Legal and Social History
<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> BFA (Fine Arts) MS University, Baroda, 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, 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	Optical Communication - Fibre 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 (KAIST), 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>Jha, Shefali</b> PhD (Anthropology), University of Chicago, USA	Political Anthropology, Cultural Studies, Feminist Theory, Film Studies, Literary and Visual Cultures in South Asia
<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 in Computer Science Rice University, Houston, Texax, USA	Solar Energy, Engineering Design, Economics
<b>Kadam, Sujay</b> PhD (Electrical Engineering), IIT Gandhinagar	Instrumentation, Systems and Control Theory, Human- Motor Learning, Robotics
<b>Khare, Manish</b> Ph.D (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>Kumar, Manish</b> PhD (Electrical Engineering), IIT Patna	Next-Generation Communication Networks, 5G New Radio, Optimization Techniques.
<b>Kumar, Pankaj</b> PhD (RF & Microwave), NIT Patna	Bio-Inspired Metasurface/Metamaterial Devices, Terahertz Devices, Semiconductor Device Modeling and Simulation, Emerging Devices, JLT, OFET, TFET, FIN-FET, VLSI Design.
<b>Kundu, Prosenjit</b> PhD (Mathematics), NIT Durgapur	Physics and Mathematical Sciences, Applied Mathematics, Complex Networks, Dynamical Systems
<b>Maiti, Tapas Kumar</b> PhD (Electronics & Telecommunication Engineering), Jadavpur University, Kolkata	SPICE 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> PhD DA-IICT, Gandhinagar, Gujarat	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, Calcutta	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>Mishra, Rahul</b> PhD (Computer Science and Engineering), IIT (BHU) Varanasi	Deep Learning, Fog Computing, Internet of Things (IoT), Wireless Sensors Network (WSN), Smart Sensing
<b>Mulherkar, Jaideep</b> PhD (Mathematics) University of California Davis, USA	Mathematical Physics, Quantum Computation and Information
<b>Muthu, Rahul</b> PhD (Computer Science) HomiBhabha 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>Palchoudhry, Ayan</b> PhD (Electronics And Electrical Communication Engineering) IIT Kharagpur	Digital Vlsi Architecture Design, Fpga Architectures, Hardware Description Language, Computer Arithmetic.
<b>Panda, Gopinath</b> PhD (Mathematics), IIT Bhubaneswar	Probability and Statistics
<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>Parekh, Rutu</b> PhD (Electrical Engineering) Sherbrooke University, Sherbrooke, Quebec, Canada	Nanoelectronics, Nano Device-CMOS Hybridization, Design and Simulation, Circuit Design, Modeling and Simulation of Next-Generation Memory (PCM), Nanofabrication





<b>Patil, Hemant</b> PhD (Signal Processing) IIT Kharagpur	Speaker Recognition and Wavelet Signal Processing
<b>Rajendran, Sreeja</b> PhD (Electrical and Electronics Engineering), BITS, Pilani, Dubai Campus	VLSI, Embedded Systems and MEMS
<b>Rana, Arpit</b> PhD (Computer Science), University College Cork, Ireland	Recommender Systems, Human-Computer Interaction, Information Retrieval, and Decision Support Systems, developing Computational Models of Information Recommendation System
<b>Ratna, Bharati</b> PhD (Pursuing), Dr B R Ambedkar University Delhi	Diaspora , Transnationalism, Migrant Subjectivity
<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>Roy, Pratim</b> PhD (Physics), IIT Kanpur	Theoretical Physics, ADS/CFT Duality, Quantum Field Theory
<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>Sharma Madhukant</b> PhD(Mathematics) IIT Madras	Fractional Differential Equations and their applications
<b>Singh, Lavneet</b> M.S. (Software Systems) BITS, Pilani	Cloud Computing, IoT, Software Architecture, Design and Engineering, Enterprise Software Systems.
<b>Singh, Shailendra Kumar</b> PhD(English), Jamia Millia Islamia	Peasant Narratives, Nationalist Fiction, Gender Studies, And South Asian Cinema
<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 & 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>Tawari, Anuj</b> PhD (Theoretical Computer Science), The Institute of Mathematical Sciences, Chennai	Algorithms and Complexity Theory
<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>Vaidya, Gaurav</b> PhD, IIT, Guwahati	Emotional Design, Product Design, Design Education, Form Studies.
<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

Name of the Faculty	Areas of Interest
<b>Banerjee, Nandini</b> M.Phil., PhD R D University, Jabalpur	Economics & General Management
<b>Belkin, Nicholas</b> PhD (Information Studies) University College, University of London	Human-centered Information Retrieval and Development of the Cognitive viewpoint in Information Science
<b>Cyril, Jos</b> PhD (Pursuing), Centre for Development Studies, Trivandrum Affiliated to Jawaharlal Nehru University, India	Applied Economics
<b>Dasgupta, Kuntala</b> B.Sc. Calcutta University	Rabindra Sangeet, North Indian, Classical, India Film Music and History.
<b>Desai, Nikita</b> PhD, DA-IICT, Gandhinagar, Gujarat, India	Design, Culture, Conversation and Display
<b>Devy, Ganesh</b> PhD (English), Shivaji University, India	Romanticism in the Poetry and Literary Criticism of Shri Aurobindo
<b>Duttgupta, Anirban</b> Graduate, NID, Ahmedabad	Visual Communication Design with Specialization in Filmmaking & Communication Design
<b>Korjan, Amay</b> MA (Philosophy)	Philosophy
<b>Kumar, Naveen</b> PhD (CSE), DA-IICT, Gandhinagar	Information security and privacy, Cloud computing
<b>Lalchandani, Jay Prakash</b> PhD, IIT Kharagpur	Slicing UML Models, Software Engineering
<b>Modha, Sandip</b> PhD, DA-IICT, Gandhinagar	Information and Communication Technology
<b>Modi, Amishal</b> PhD (English), Gujarat University	Indian Literature, The English Novel, Sexuality Studies, 19th Century Literature
<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, Calcutta University, India	Synthesis of digital logic circuits MOS
<b>Patel, Narendra</b> Dip. in Fine Arts, Kala Neketan, Jabalpur, Dip. in Visual Communication (Animation Film), NID, 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> M.A.(English) Calcutta University, India	English Literature
<b>Shaikh, Jasmine</b> M.Phil, Gujarat University, Gujarat, India	M.Phil in Fashioning the Self Socio-Economics and Cultural Paradigms in the BBC Television Series
<b>Singh, Gaurav Kumar</b> PhD (Production & Quantitative Methods), IIM Ahmedabad	Data Analysis, Applied Econometrics and Time Series Analysis, Forecasting, Survey Data, Data Science, Empirical Macroeconomics, Expectations Formation and Disagreement in Inflation Expectations.
<b>Singh, Harpreet Jattana</b> PhD - Pursuing (Microelectronics – SOI CMOS Process Integration & Modelling) IIT Roorkee	CMOS Process Development, Device Reliability, CMOS Design, Compound Semiconductors, VLSI Testing & Packaging, Wafer Fabrication
<b>Thomas, Mandl</b> PhD (Information Science) University of Hildesheim, Germany	Information Management
<b>Verma, Grishma</b> NID, Ahmedabad	Post Graduate in Animation Film Design





## Annexure 4

### OFFICERS AND STAFF

#### Acting Registrar

Ranendu Ghosh

#### Academic Programs

Jigar P Yagnik, Deputy Registrar (Academic)  
Jalpesh Pandya, Deputy Registrar (Academic and Data Depository)  
Rahul Prajapati, Assistant Registrar  
Vipul Makwana Media Officer  
Dinesh Prajapati, Senior Programmer  
Nandini Banerjee, Student Counselor  
Nitu Singh Bhadauria, Student Counselor  
Jainik Patel, Senior Academic Assistant  
Bhumi Chavada, Admission Assistant  
Mayuri Mistry, Academic Assistant

#### Administration & HR

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

#### Accounts

Geeta Mehta, Chief Accounts Officer  
Santosh Pandit, Assistant Accounts Officer  
Jaydeep Panchal, Junior Accountant

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

Venugopal PR, Executive Secretary to Director  
Abhilash Bhaskaran, Senior Secretary to Registrar  
Satyabir Singh, Senior Secretary to Dean (AP) & Dean (R&D)  
Pankit Gandhi, Secretary Faculty Block 3  
Deepa Poduval, Secretary Faculty Block 2  
Geeta S Nair, Secretary Faculty Block 4  
Mahendra Solanki, Secretary Faculty Block 1

#### Placement & Continuing Education Program (CEP/AIP)

Sneha Thakker, Manager-Placement  
Anuradha Srivastava, Secretary  
Jayesh Patel, Officer AIP/CEP

#### Resource Centre (Library)

Manish Mankad, Librarian  
Shashikumara A A, Deputy Librarian  
Gautham N, Library Information Officer  
Swati Mitra, Assistant Officer  
Manish Goswami, RC Assistant  
Mukesh Shrimali, RC Assistant  
Pavan Kohli, Library Trainee  
Sachinkumar A Parmar, Library Trainee  
Navdeep B Gandhi, Library Trainee  
Nilesh M Ganeshe, Library Trainee

#### Computer Systems

Nimesh B Patel, Manager (IT & Systems)  
Prabhunath Sharma, Senior Design & Systems Assistant  
Darshan Prajapati, Hardware & Network Engineer  
Priyank Santola, Hardware & Network Engineer  
Chaitanya Bhamare, Project Leader  
Ashvin Chaudhari, System Administrator

#### Laboratory

Rajendra Shah, Laboratory Superintendent  
Ramesh Prajapati, Deputy Laboratory Superintendent  
Sanjay Bariya, Deputy Laboratory Superintendent  
Krunal G Patel, Senior Laboratory Assistant  
Bhargav Patel, Senior Laboratory Assistant  
Naresh Patel, Senior Laboratory Assistant  
Dharmik Mehta, Laboratory Assistant  
Chirag Nayak, Laboratory Assistant  
Govind Prajapati, Laboratory Assistant

#### Sports office

Rahul Rajput, Sports officer  
Shirish Varma, Sports Assistant

#### Hostels

Jitendra Parmar, Senior Hostel Supervisor  
Sawankumar Sachaniya, Hostel Supervisor

## DCEI

### Project Staff

1. Aastha Kachhi, Junior Research Fellow, NLTM BH wef 01 June 2022 [Supervisor: Hemant Patil]
2. Akshat Vora, Junior Research Fellow, NLTM BH wef 25 July 2022 [Supervisor: Hemant Patil]
3. Arpan Shingala, Junior Research Fellow, DSRFIO wef 09 January 2023 [Supervisor: Anish Mathuria]
4. Arth Shah, Junior Research Fellow, NLTM BH wef 25 July 2022 [Supervisor: Hemant Patil]
5. Ashok Jayaram K, Junior Research Fellow, CIIDTLT wef 07 September 2022 [Supervisor: Bhaskar Chaudhary]
6. Darshan Popat, Junior Research Fellow, IKDRC wef 01 May 2023 [Supervisor: Anil K Roy]
7. Devesh Sharma, Junior Research Fellow, NLTM BH wef 01 June 2022 [Supervisor: Hemant Patil]
8. Devkaran V Maru, Junior Research Fellow, ISRO RACS MNIT wef 31 May 2023 [Supervisor: Vinay Palaparthi]
9. Dheerja Vijay Thakur, Junior Research Fellow, DGBINS wef 01 March 2021 [Supervisor: PS Kalyan]
10. Drashti Koladiya, Junior Research Fellow, NLTM BH wef 25 July 2022 [Supervisor: Hemant Patil]
11. Dreamy Pujara, Junior Research Fellow, NLTM DIC wef 01 September 2022 [Supervisor: Prasenjit Majumder]
12. Harsh Buddhdev, Junior Research Fellow, IKDRC wef 01 May 2023 [Supervisor: Anil K Roy]
13. Jui Telavane, Junior Research Fellow, ULPCA wef 15 February 2022 [Supervisor: Bhaskar Chaudhary]
14. Kamlesh Patel, Junior Research Fellow, TIHIOT CHANKYA wef 11 January 2023 [Supervisor: Vinay Palaparthi]
15. Libin Varghese, Junior Research Fellow, CIIDTLT wef 01 September 2022 [Supervisor: B. Chaudhary]
16. Mukesh Chandra Karmi, Junior Research Fellow, DSRFIO wef 01 March 2023 [Supervisor: Nabin Kumar Sahu]
17. Naishal Vora, Junior Research Fellow, GUJCOST MCTOT wef 24 April 2023 [Supervisor: Biswajit Mishra]
18. Naitik Thakor, Junior Research Fellow, KAVACH wef 24 August 2022 [Supervisor: Rutu Parekh]
19. Neha Arora, Junior Research Fellow, MCTOT wef 03 October 2022 [Supervisor: Biswajit Mishra]
20. Nidhi Sindhav, Junior Research Fellow, GNSS wef 10 May 2022 [Supervisor: Sanjeev Gupta]
21. Paavan Parekh, Junior Research Fellow, TIHIOT CHANKYA wef 30 November 2023 [Supervisor: Vinay Palaparthi]
22. Pooja Garg, Junior Research Fellow, TIHIOT CHANKYA wef 12 January 2023 [Supervisor: Vinay Palaparthi]
23. Prabhav Shah, Junior Research Fellow, TIHIOT CHANKYA wef 01 February 2022 [Supervisor: Vinay Palaparthi]
24. Pranav Verma, Junior Research Fellow, DRDO CARS wef 15 December 2022 [Supervisor: Anish Mathuria]
25. Prathmesh Bonde, Junior Research Fellow, NLTM DIC wef 01 September 2022 [Supervisor: Prasenjit Majumder]
26. Priyanka Khaparde, Junior Research Fellow, MSIPDM wef 01 August 2022 [Supervisor: Vinay Palaparthi]
27. Radha Agrawal, Junior Research Fellow, FTLRD wef 01 August 2022 [Supervisor: Priyanka Singh]
28. S. Uthiraa, Junior Research Fellow, NLTM BH wef 01 June 2022 [Supervisor: Hemant Patil]
29. Sameeksha Jain, Junior Research Fellow, DISS wef 02 September 2022 [Supervisor: Manish Khare]
30. Saran Pandian, Junior Research Fellow, TM DIC wef 25 July 2022 [Supervisor: Prasenjit Majumder]
31. Shivani Balwani, Junior Research Fellow, TIHIOT CHANKYA wef 02 May 2022 [Supervisor: Vinay Palaparthi]
32. Siddhant Gupta, Junior Research Fellow, DGBINS wef 16 August 2021 [Supervisor: PS Kalyan]



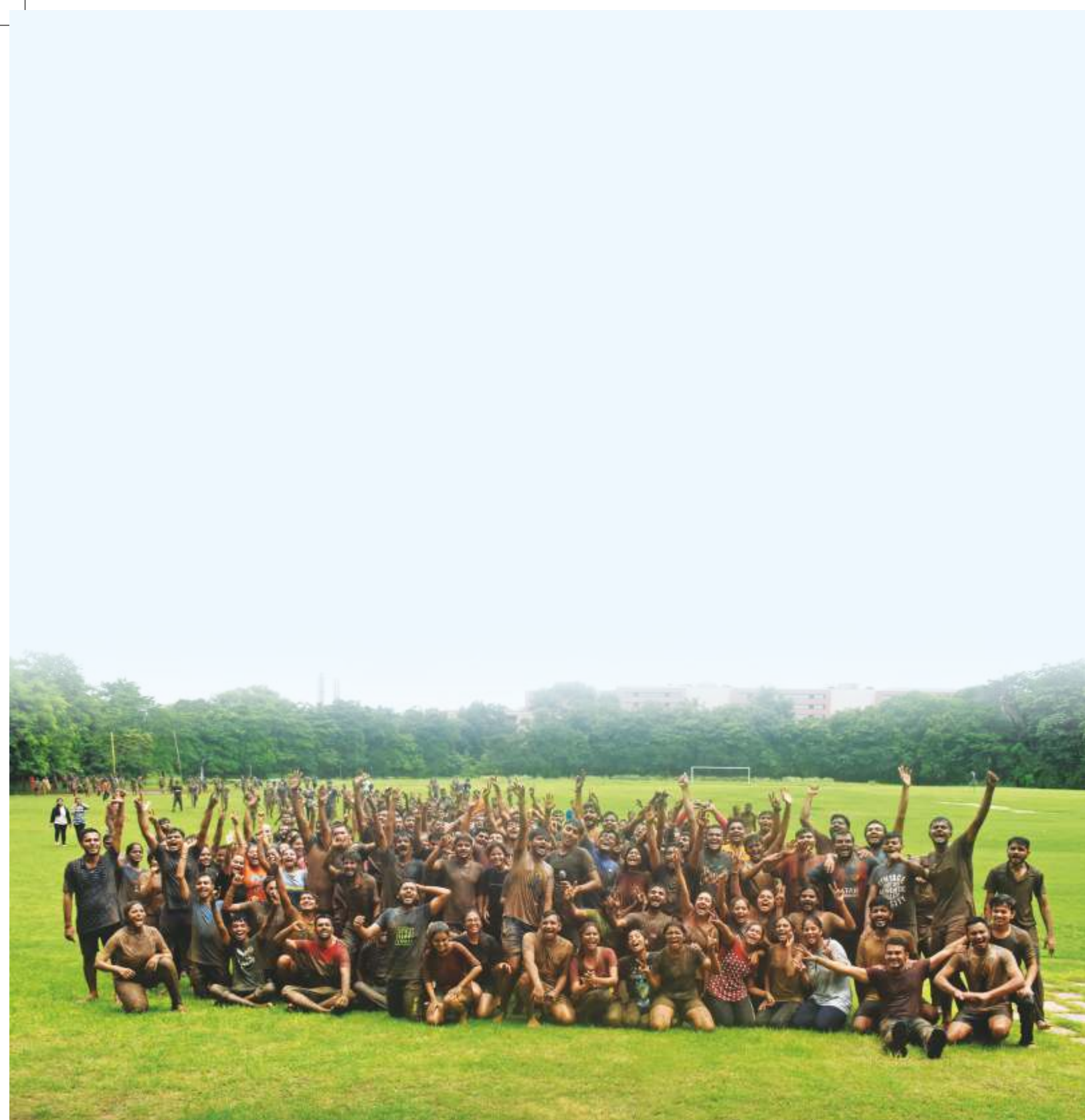
33. Siddharth Rathod, Junior Research Fellow, NLTMBH wef 25 July 2022 [Supervisor: Hemant Patil]
34. Sourav Roy, Junior Research Fellow, SERB CRG Govt of India wef 24 April 2023 [Supervisor: Tapas Kumar]
35. Sri Sai Aditya Puruluri, Junior Research Fellow, NLTMBH wef 01 June 2022 [Supervisor: Hemant Patil]
36. Subhadeep Paul, Junior Research Fellow, PDJRT wef 19 September 2022 [Supervisor: Tapas Kumar Maiti]
37. Subhendu Mohanty, Junior Research Fellow, DSRFIO wef 5 January 2023 [Supervisor: Nabin Kumar Sahu]
38. Sukruti Shah, Junior Research Fellow, TIHIOT CHANKYA wef 31 May 2023 [Supervisor: Vinay Palaparthi]
39. Utkarsh Pandya, Junior Research Fellow, SARNN wef 05 September 2022 [Supervisor: Prasenjit Majumder]
40. Vishesh Kumar, Junior Research Fellow, DSRFIO wef 01 August 2022 [Supervisor: Nabin Kumar Sahu]
41. Yash R Sheth, Junior Research Fellow, TIHIOT CHANKYA wef 11 February 2022 [Supervisor: Vinay Palaparthi]
42. Zeel Raval, Junior Research Fellow, DSRFIO wef 06 January 2023 [Supervisor: Anish Mathuria]

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