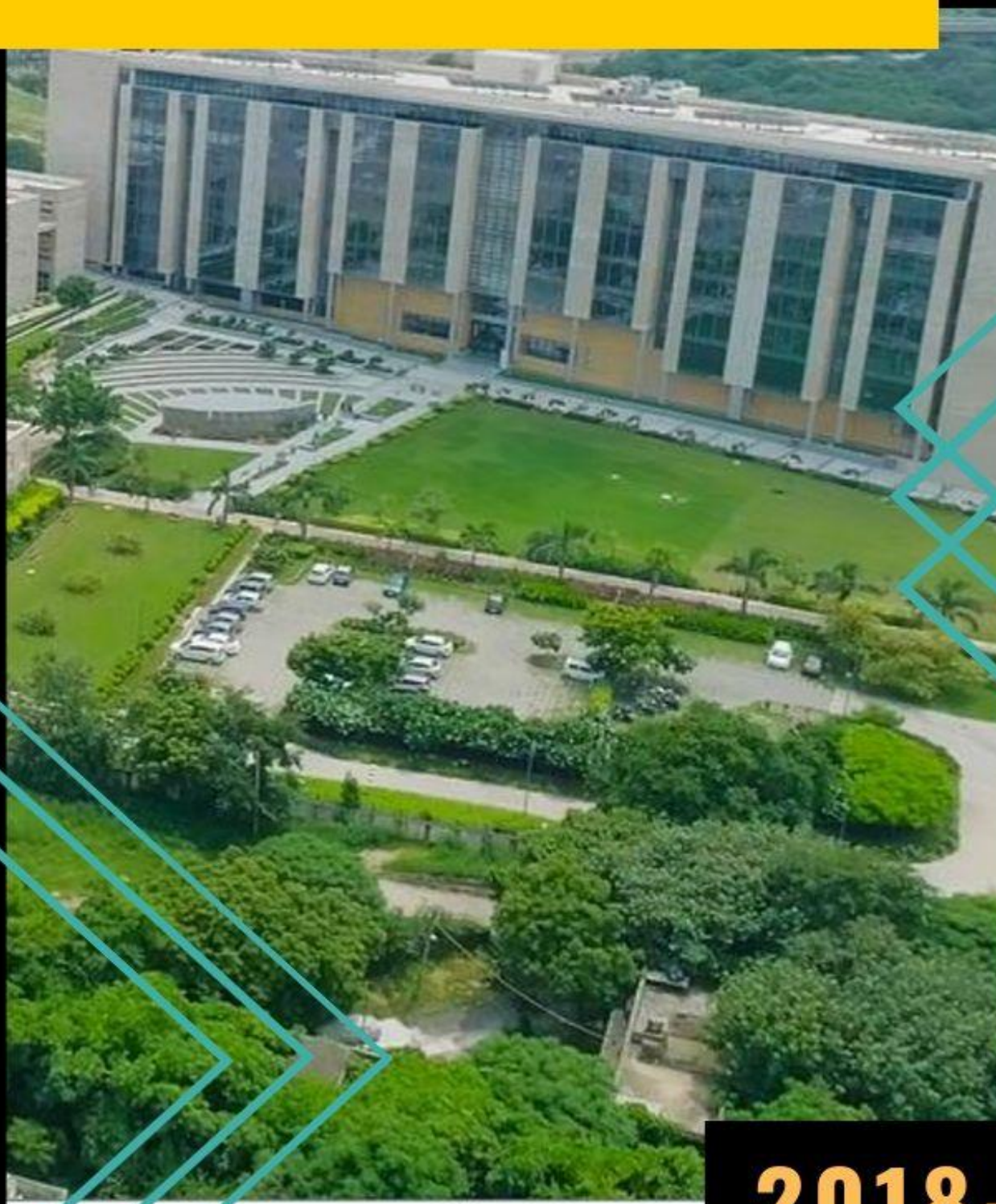


ANNUAL REPORT



2018-19



INDRAPRASTHA INSTITUTE of
INFORMATION TECHNOLOGY **DELHI**

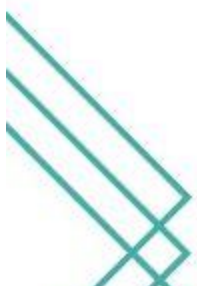




Table of content

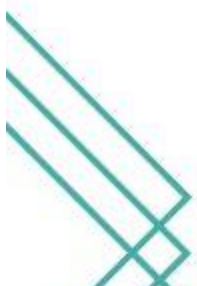
Contents

| | |
|-----------------------------------------------------|----|
| Executive Summary | 2 |
| About Us | 10 |
| Education | 16 |
| Innovation Research and Development | 23 |
| Incubation | 32 |
| Outreach and Professional Services | 38 |
| Awards and Recognitions | 47 |
| Placements and Internships | 52 |
| Student Activity | 60 |
| Alumni Update | 68 |
| Faculty Members and Officers | 72 |
| Appendices | 87 |






Pitch café 2.0





Executive Summary





Since its creation in 2008 through an act of Delhi Government empowering it to do research and grant degrees, IIIT-Delhi has come a long way. In spite of being a young Institute, IIIT-Delhi is seen as a center of excellence for research and education and is recognized globally.

The **QS University rankings** have ranked IIIT-Delhi in top 200 in their **BRICS** edition and in top 50 in India edition. Considering the competition was with universities which are more than a 100-year-old, this is a significant achievement for an Institute which just turned 11 this year. In BRICS survey, QS evaluated 9000 institutions in BRICS countries – putting IIIT-Delhi in the top 2%. The Institute already has NBA accreditation for the B.Tech. (CSE) program, and the UGC 12B and **NAAC 'A' Level** accreditation. This year AICTE has also given the 'letter of approval' under chapter IV of the university system. As per this LOA, all the B.Tech. (except CSAI program) and M.Tech., programs are AICTE approved. The NIRF rankings ranked the Institute at **rank 55**, and the Data Quest T-School Ranking placed the institute at the **second position** on the list of 'Government Technology Schools in India'.

IIIT-Delhi offers **seven B.Tech.** programs, including five interdisciplinary programs (**B.Tech. Computer Science and Artificial Intelligence added this year**), **three PG programs with eight specializations**, and Doctorate in the allied areas of **6 disciplines**. As the pool of the programs is expanding, the entire intake each year is also on the rise. This year **469 students took admission in the B.Tech.** programs; **207 in M.Tech.**; and **27 in the Ph.D.**, making the total **student strength 2,154**. In this year's convocation, the Institute conferred **156 B.Tech.** degrees, **115 M.Tech.** degrees including **1 M.Tech. Dual Degree**, and **14 Ph.D. degrees**.

The Institute's placement record continues to be remarkable - most programs have a **96% to 98% placement** record. Class of 2019 received a total of **443 offers**, which comprises 269 full-time job offers and 174 internship offers. By the percentage of students placed, mean and median offers, the Institute is amongst the top Institutes in the country. The Ph.D. scholars are also getting excellent opportunities. The Ph.D. graduates are working with some top research labs in the country and abroad and also taking up faculty positions at some of the best institutions across the globe.

IIIT-Delhi has always accentuated the importance of higher education. Every year a good number of students go for higher studies like MS and Ph.D. in the Institutes of repute across the globe. This year also a significant number of students have opted for higher education. About 28 students from the graduating batch are going for higher studies out of which 20 are pursuing Masters and 8 are pursuing Ph.D. The students are going to top overseas universities like Georgia Tech, CMU, University of California, Johns Hopkins University, Harvard University, University of Maryland, University of Virginia, University of Kansas, the University of Texas at Austin, and the IITs. To strengthen the bonds with the alumni, the **IIIT-Delhi Alumni Association** has been established and have launched the **IIIT-Delhi Foundation USA**. We also have a functioning **Bay Area alumni chapter**.

Research remains the key focus of the Institute. The faculty members and students are involved in some cutting edge multidisciplinary, socially relevant research. The number of publications last year until April 2019 are; 124 in National and International Journals, 173 in National and International refereed conferences, 22 workshop publications and five as books/book chapters. Some of the papers have been acclaimed and have received best paper and poster awards in prestigious National and International conferences. Many of the Ph.D. students were selected for prestigious research grants and fellowships such as the Prime Minister's Fellowship, Visvesvaraya Fellowship, and TCS Fellowship.

Dedicated faculty members and office staff remains the backbone of the Institute. This year the Institute has recruited 12 regular faculty members, ten visiting faculty members, and about nine office staff members. **21 faculty members received research fellowships this year**. The faculty members were invited to more than **200 venues as speakers**. The faculty members have also received several awards and recognitions in the past year. Some of these are the **Sun Pharma Research Award, elevation to Fellow - International**



Association of Pattern Recognition, DST Swarnajayanti Fellowship, Bill and Melinda Gates Award, Visvesvaraya Young Faculty Fellowship, DST Early Career, IEEE ICASSP Education Innovation Award, URSI Young scientist award, and Google India Faculty Award.

In the R&D efforts, the Institute remains committed to developing technologies that can be transferred for commercial consumption or use by other organizations. This year over **30 tools and technologies** were transferred to over 10 organizations. This year the faculty members and students filed **eight patents** for the technologies developed at the Institute. Sponsored projects are critical for augmenting the research culture of the Institute. This year the Institute received **45 sponsored research projects** (including consultancy projects), for a total sanctioned amount of **around 11 Crores**. Overall, there are about **109 active sponsored projects** in the Institute.

To consolidate the research, and make a stronger impact in targeted areas, IIIT-Delhi's vision is to establish research centres in focused areas. Currently, the Institute has five research centres. Another Research Centre, 'Center of Technology for Policing' has been established at the Institute last year, following the discussions with the Hon'ble Chancellor, Mr. Anil Baijal, Lt. Governor of Delhi. This Centre shall be an advanced resource hub in terms of related research, providing expert help in the prevention and investigation of cybercrime and skill enhancement. The Centre was inaugurated by Hon'ble Chancellor on December 4, 2018.

Collaboration is the key to growth, and the Institute follows this very consistently. IIIT-Delhi recently has signed an MOU with the **Delhi Development Authority (DDA)**, by virtue of which IIIT-Delhi will help strengthen the IT Network infrastructure of DDA. IIIT-Delhi has proactively worked towards establishing strong linkages with industry.


Carrying forward the vision of industry facing, the Institute has initiated many collaborations with the industries this year. The Institute has signed MoU with **STMicroelectronics Pvt Ltd.** for research collaborations. IIIT-Delhi is also setting up a research lab at the campus in **collaboration with Samsung India**.

This year a new vertical was added to the pool of programs 'executive courses for working professionals' under the industry outreach program. The Institute has signed MoU with the **Tech Mahindra Growth Factories Limited**. The Institute will be conducting online weekend courses for the working professionals in areas of Internet of Things and Machine Learning.

IIIT-Delhi has also signed MoU with the **Indian Navy**, which will enable officers sponsored by the Navy to enroll in the M.Tech. (CSE) program. The quest for International collaborations has led to the strengthening of the existing research linkages and the creation of some new ones. IIIT-Delhi has signed MoU with the Queensland University of Technology and Korea University to foster collaborative research and guide joint Ph.D. students.

To foster the spirit of innovation on campus, the **Institute Innovation Council** has been set up. Among other activities, the Institute Innovation Council has been organizing Ideas Pitching events by budding Entrepreneurs. In the event, a wisdom talk series by leading experts in various domains are organized to facilitate the reimagining of the IIIT-Delhi campus as a proving ground of innovative ideas. The primary motivation is to get the spirit of innovation in the DNA of the Institute. With this objective, the Institute **has inaugurated the new facility of the Incubation center in the month of June 2019**. The technology business incubator is supported by DST, Govt. of India and DTTE, Govt. of NCT Delhi. The incubation center has also signed an MoU with Yonsei Enterprise Support Foundation, the Incubation Center of Yonsei University, Korea. Currently, we have 15 startup companies on campus, of which, five are student startups, two are startups by faculty members, four are startups by the alumni, and four are faculty-mentored.

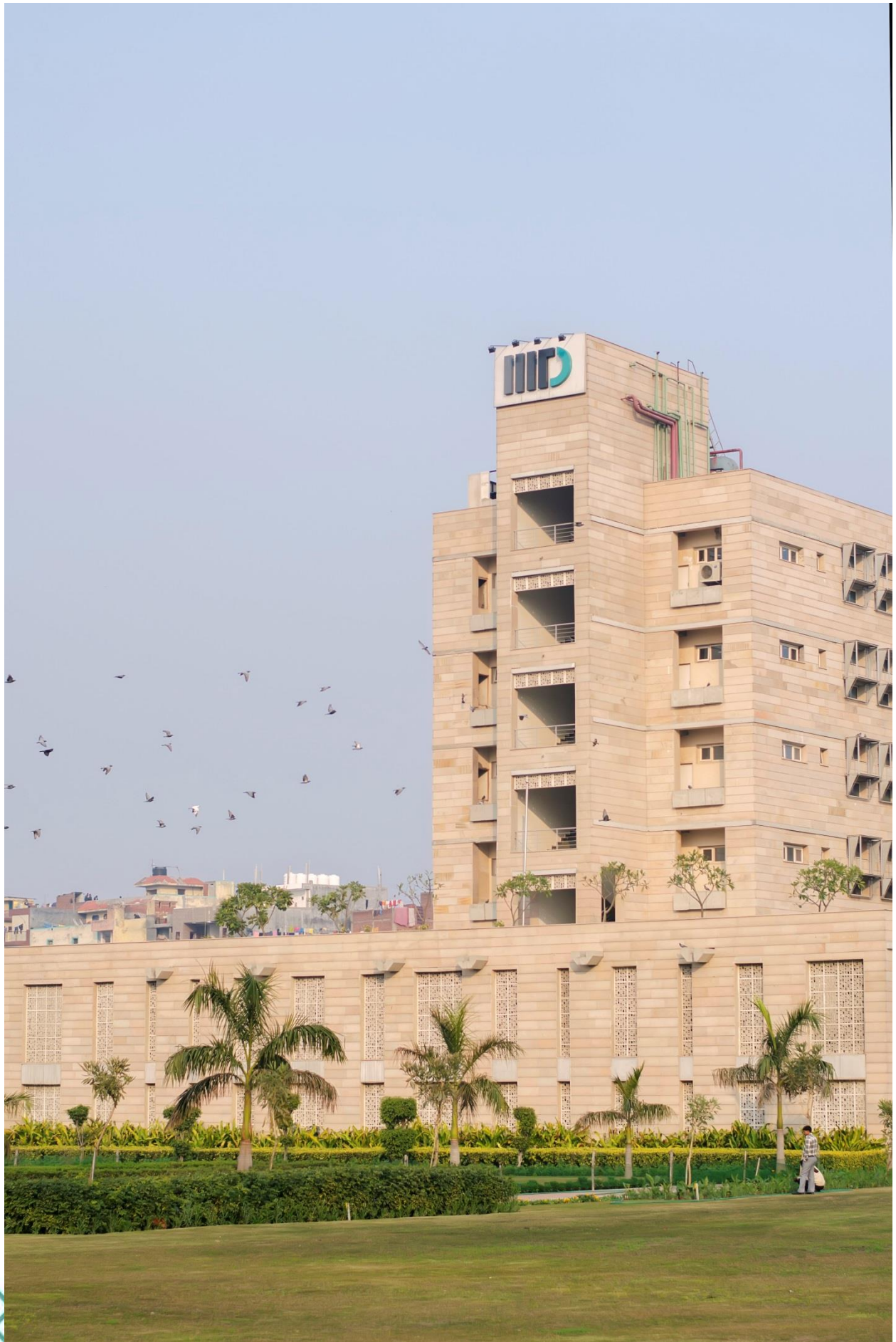
The Institute continues to maintain a clean and green environment and has been ranked 'Fourth' amongst the cleanest Higher Educational Institutions in the country in the category 'Technical Institutions – Universities (Residential)'. With the completion of the Phase II construction, IIIT-Delhi now has a built-up area of 100,000



square meters. This includes a five-storey lecture hall complex, eight-storey R&D Block, modern classrooms, research labs, a four-storey Library and Information Centre, Incubation Centre, newly constructed hostels for boys and girls to accommodate 1800+ students, dining and student activity center, and Faculty residence blocks. The campus also has a multipurpose playing field, a gymnasium, indoor badminton and squash courts, outdoor tennis courts, basketball and volleyball courts and an indoor swimming pool. The campus incorporates several green-building features and is GRIHA rated, zero-discharge campus with sewage treatment plants, rainwater harvesting, heat pumps, and solar power plant on terraces of all new buildings.

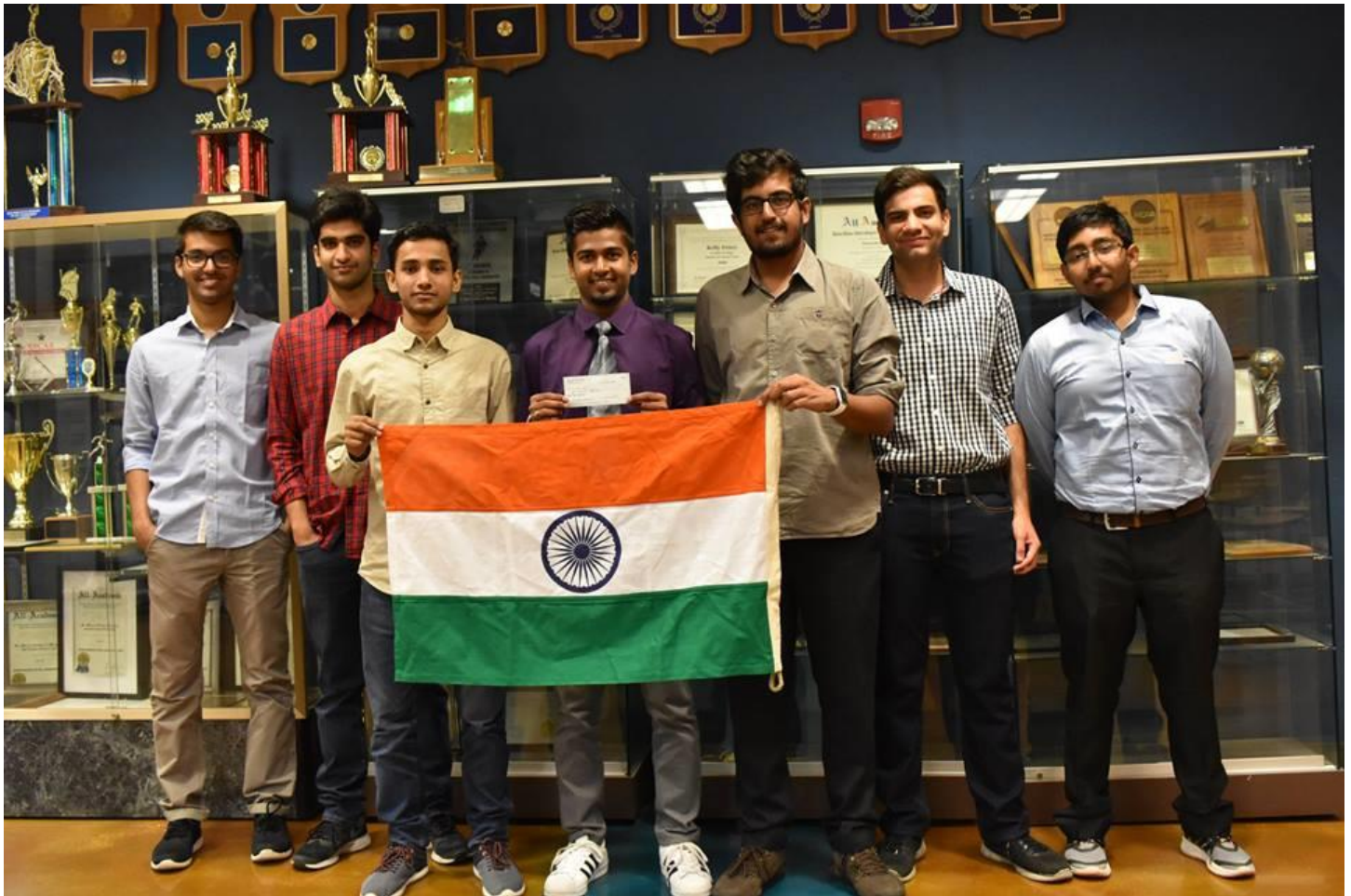
Along with research and education, the students are also involved in many extracurricular and sports activities. The students run as many as 23 clubs and have won several medals/prizes in many external events. Some of the awards won in the last year include the first prize at Angelhack, the first position in Criterium, first in Trashion both in IITD Rendezvous and IITB Mood Indigo, gold medal in the discus throw at IIT Kanpur sports fest, gold medal in girl's football at IIT Roorkee sports fest etc. The IIIT-Delhi cultural fest Odyssey was organized in January 2019 with a massive footfall of over 8000 people on campus.

The students of IIIT-Delhi conducted a summer camp for nearby government school children. The camp had over 170 students from 5 government schools, and a team of 30 UG student volunteers from the Institute ran it for over five weeks. The Department of Mathematics also organized a summer camp for school students of classes between 9-12. Overall the Institute remains focused on its vision statement and continues to impart research-based education which is globally connected, industry-facing and socially relevant.





About Us



Aurora - UAV Team of IIIT Delhi, finished at 6th position in the 16th edition of the coveted Association for Unmanned Vehicle Systems International Student Unmanned Aerial Systems (AUVSI SUAS) Competition held at the US Navy Air Station in Maryland, USA



Establishment and History

Indraprastha Institute of Information Technology Delhi (IIIT-Delhi) was created as a State University by an Act of Delhi Government (The IIIT Delhi Act, 2007) empowering it to do research and development and grant degrees. IIIT-Delhi was officially established in June 2008 and started its academic programs in the same year with its first batch of 60 B.Tech. students.

Since then, it has come a long way, with 70+ faculty members specializing in diverse areas of Computer Science, Electronics, Humanities, Mathematics, Computational Biology, Design, and Social Science & Communications Engineering. It has earned an excellent reputation in India and abroad for being a centre of quality education and research in IT and allied areas.

IIIT-Delhi is an autonomous Institute, with the Board (Chairman Mr. Kiran Karnik) fully authorized to take all important decisions, including student intake and fee structure. The Board is supported by the Academic Senate of the Institute, which is empowered to make all academic policies, and which advises the Board on starting new academic programs.

Our Mission and Vision

The Institute's stated mission is to be a global center of excellence in Information Technology education, training, and research. Its twin aims are:

- To carry out advanced research and development in information and software technologies, and in leveraging IT in specific domain areas.
- To train and educate, at both undergraduate and postgraduate levels, engineers of outstanding ability who can become innovators and new product creators.

The vision of the Institute is to be a world-class R&D-led Institute of higher education in IT and allied areas which:

- Is globally respected for research and education
- Has thriving UG and PG education programs
- Is socially relevant, industry-facing, globally linked

It aims to encourage innovation and Entrepreneurship in specified domain areas of IT. Towards this end, it plans to organize itself as a conglomerate or R&D centers, some of which would be a partnership with different companies and global organization. All centers will also be engaged in teaching and thesis guidance. These centers, with various labs, will be the hub of activity, with active contribution from faculty members and students.

Infrastructure

Building Resources

The Phase I of Institute campus has been operational since August 2012 spread over sprawling 25 acres of land located in the Phase III of Okhla Industrial Area, New Delhi, with a built-up area of 33,000 sqm. This includes amenities: lecture halls, classrooms, research labs, instruction labs, boys' hostel, girls' hostel, dining and student centre, space for student clubs, etc. It also has outdoor sports facilities including general-purpose playing field, tennis courts, basketball court, and volleyball court.

Further, the construction of Phase II of the campus with another 70,000 sqm of built-up area is mostly completed and was inaugurated by the Hon'ble Chief Minister of Delhi, Sh. Arvind Kejriwal in the presence of the Hon'ble Deputy CM and Minister of Education, Delhi, Sh. Manish Sisodia on the 21st August 2018. Overall the Phase II works are completed to extent of around 98% and the status of the works is as under:

- **Research and Development Block** is an 8 storeyed building, with four 100 seater lecture halls, 58 labs, 116 faculty rooms, 24 discussion rooms, 7 meeting rooms, Board and Senate room, and Director and Dean office spaces. All of these spaces are fully operational.
- **Lecture Hall Complex** comprising a six storeyed block, with one 500 seater and two 300 seater stepped lecture theatres, nine classrooms of varying capacities and 13 instruction labs, two meeting rooms and 12 TA rooms and area for the placement office are also completed and being put to use. The Incubation Centre has been developed on the fifth floor of the block.
- **Sports Block** comprising a 4 storeyed block, is complete and operational with works of specialized wooden flooring in badminton and squash courts with rear glass walling in two squash courts. The swimming pool, gymnasium, multipurpose hall, and yoga room, and a 3 star guest house facility areas are complete and fully functional.
- **Residential:**
 - **Faculty Residence** block comprising of 12 storeyed blocks with 44 flats is operationalized.
 - **Hostel block H1**, comprising 11 storeyed block, with 21 married accommodation and 197 double seater rooms has been occupied.
 - **Hostel block H2**, comprising a 11 storeyed block with 227 double seater rooms has been completed and ready for operations.
 - **Hostel extension blocks G1, G2, B1** comprising three blocks, 6-7 storeyed each with a total of 188 double seater rooms is likely to be handed over soon.

Other infrastructure development works

The works of the solar power plant on terraces of all new buildings with a capacity of around 220 KWp have been commissioned and are operational. The augmentation of the electrical substation installations, additional heating ventilation and air conditioning systems and DG set have been commissioned and are currently operational.

IT Resources

IIIT-Delhi has truly world class, campus-wide state of the art information technology tools that are designed to meet the computing and communication needs of the institute, which has a fast, reliable and rugged computer network of more than 4000 Nodes. The Institute has 300+ desktops for lab with dual IOS with i5 7th generation Intel processor and 8 GB ram to provide printing and other facilities. The institute has more than 150 printers and scanners. In order to facilitate proper teaching aid, all classrooms here are equipped with projectors and audio systems. All the hostels, faculty residence blocks, administrative block, library, classrooms and residences, are connected through redundant 10 gigabit fiber backbone network. All the blocks are connected through layer 2 & 3 switches to provide 1Gbps connectivity at the user end. Every hostel room has a dedicated LAN connection to provide round the clock access to resources on the net. Wireless network with 250+ access points is also enabled in the faculty residence block, library, classrooms and hostel blocks.

Internet Access: Through a 1 Gbps Internet leasedline from NKN with a backup connection of 150 Mbps running in failover mode. Internet connection range is provided through both LAN and Wi-Fi in all blocks inclusive of residences, academic, dining, lecture block, R&D block, library and hostels.

Data Centre: IIIT-Delhi has a full-fledged data centre of its own. It hosts 79 physical Servers, 92 VMs and network unified storage of 100 TB each. The data centre is powered by redundant UPS backup to ensure maximum uptime. All servers are connected to Internet by public IPs

IP Telephony: The Campus is equipped with IP telephony. It has 72 IP phones and more than 205 SIP-based phones.

IP Address and IPv6: The institute has its own /24 public IPv4 and /48 IPv6 address block.

Video Conferencing: Polycom HDX7000 VC System is available with optional ISDN line also connected with Internet. Skype, Hangouts are managed through Logitech Group (Video Conferencing System), Logitech Connect

Cisco WebEx: Have Cisco Webex Meeting Center Named Host Capacity 200 with VoIP and Video facility.

VPN: It can be used to access all IIIT-D IT resources from outside campus using any Internet connection.

UPS: 3 x 100KVA (Configured in N+1 in redundant mode) and UPS powering the critical IT infrastructure.

ERP: IIIT-Delhi provides Academic ERP to students and faculty members. For students, ERP provides the facility to register for courses, add-drop courses and view grades. For faculty members, it provides the facility to view the courses they are offering, view list of students enrolled in the courses and enter grades.

Tape Library Backup Solution: The institute Data Centre has an LTO 6 Tape Backup solution deployed for taking onsite and offsite backup of critical data. It consists of a DELL Power Vault TL 2000 Tape Library and a Backup Server. Presently we have one Read-Write Tape Drive with 24 slots in the TL 2000 Tape Library. The Tape Library is directly connected to SAN and provides direct backup from SAN storage, besides allowing us to make any server disk to tape backup through the backup server.

High Performance Computing Facility

The primary mission of the High Performance Computing Facility (HPCF) is the delivery and support of an HPC resource to be used by IIIT-Delhi faculty members, research scholars and students. The HPC system comprises of a modular Blade Chassis with 4 blades populated at present. A separate rack server for GPU processing with Nvidia Tesla V100 , K40 & K20 GPU card of 2496 Cuda cores has also been installed. All servers are connected using 10G interconnect and are also connected to SAN storage. The entire HPC setup currently has 92 CPU Cores and 441 GB RAM with a theoretical TFLOP rating of 1.79. It is a highly scalable setup and is targeted to reach around 1000 cores in near future.

Library Resources

The Library and Information Center of the Institute is housed in a separate building in its campus. It is a user-focused center of learning resources that meet all the requirements of IIIT-Delhi academic and research fraternity regarding learning, teaching, research, and training programs. The Library is fully automated using RFID Technology with EM Security System. The Library is enriched with a vast collection of print and electronic resources in all areas of interest. Also, it provides 24x7 different types of learning spaces to its users.

Library resource update:

IIIT-Delhi Library at a Glance

| S. No. | Resources | Nos. |
|--------|-----------------------------------------------|-------|
| 1 | Books | 10802 |
| 2 | E-Books | 10255 |
| 3 | Kindle E-Books | 716 |
| 4 | Kindle E-Book Readers | 34 |
| 5 | Periodicals (Magazines/Journals/Newspapers) | 27 |
| 6 | Online Journals | 8388 |
| 7 | Theses | 260 |
| 8 | Technical Reports | 43 |
| 9 | CDs/DVDs (Movies, Documentaries, Songs, etc.) | 112 |

Newly subscribed E-Resources

- EPWRF India Time Series Database
- Nature Journal
- Overleaf Pro+ Writing and Publishing System
- Turnitin Plagiarism Check
- Springer eBooks

Newly introduced Library Services

- Live Occupancy in the Library building
- 24x7 Book drop facility
- New 24x7 learning spaces on 2nd & 3rd Floor of the Library building
- Periodic selected articles to all users

Our Management

General Council

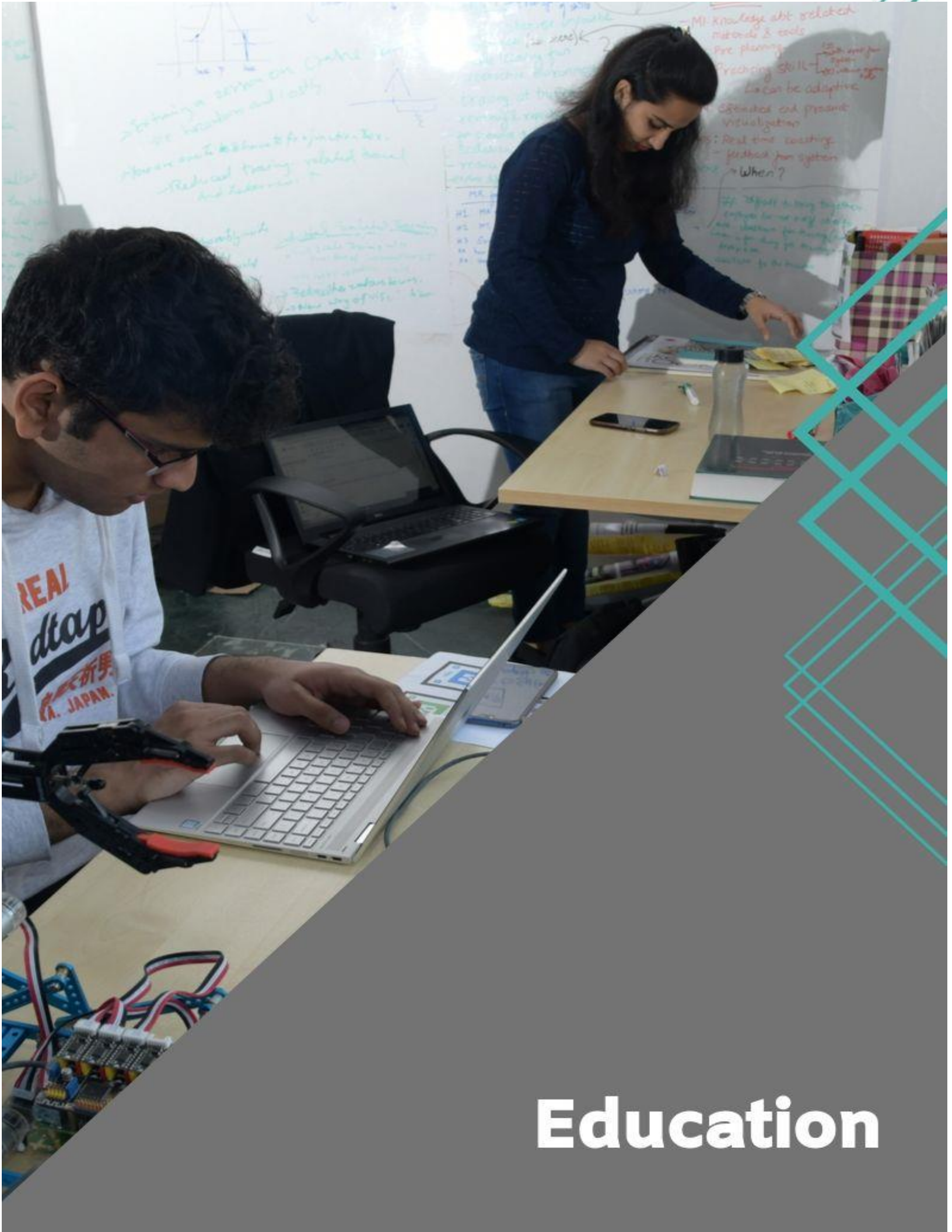
The General Council is the apex body of the Institute, chaired by Hon'ble Lt. Governor of Delhi. The current members of the General Council are:

| | |
|------------------------------------|------------------------------------------------------|
| Hon'ble LG Delhi, Shri Anil Baijal | Chancellor, IIIT-Delhi |
| Mr. Kiran Karnik | Chairman, Board of Governors, IIIT-Delhi |
| Prof. Ranjan Bose | Director, IIIT-Delhi |
| Mr. Sheo Pratap Singh | Principal Secretary (TTE), Govt. of NCT of Delhi |
| Prof. Ashutosh Sharma | Secretary, Dept. of Science & Technology |
| Dr. G. Satheesh Reddy | Head, DRDO & Secretary Defense R&D and DG R&D |
| Ms. Debjani Ghosh | President, NASSCOM |
| Ms. Neeta Verma | Director General, National Informatics Centre |
| Mr. Ajay Prakash Sawhney | Secretary, DeitY |
| Mr. Renu Verma | Principal Secretary (Finance), Govt. of NCT of Delhi |

Board of Governors

The Board is the main policy and decision-making body of the Institute. The current members are:

| | |
|-----------------------|------------------------------------------------------|
| Mr. Kiran Karnik | Chairman, Ex-President NASSCOM |
| Dr. Anand Deshpande | CEO and Founder, Persistent Systems |
| Mr. Arvind Singhal | Founder and CMD, Technopak |
| Mr. S. D. Shibulal | Co-founder and ex-CEO, Infosys |
| Prof. Ranjan Bose | Director, IIIT-Delhi |
| Mr. Praveer Sinha | CEO, Tata Power Delhi Distribution Limited |
| Prof Dinesh Singh | Ex VC Delhi University |
| Prof. Indira Parikh | President Antardisha, Ahmedabad |
| Ms. Renu Verma | Principal Secretary (Finance), Govt. of NCT of Delhi |
| Mr. Sheo Pratap Singh | Secretary (TTE) , Govt. of NCT of Delhi |



Education



Current Academic Programs

The Institute offers seven undergraduate programs leading to B.Tech. degrees in CSE(Computer Science and Engineering), ECE (Electronics and Communications Engineering), CSAM(Computer Science and Applied Mathematics), CSD(Computer Science and Design), CSSS (Computer Science and Social Sciences), CSB (Computer Science and Biosciences), and CSAI (Computer Science and Artificial Intelligence); M.Tech. in CSE (Computer Science and Engineering) / ECE (Electronics and Communications Engineering)/CB (Computational Biology), and specialized M.Tech. degrees under CSE and ECE; in Artificial Intelligence, Mobile Computing, Information Security, Data Engineering, VLSI & Embedded Systems and Communication & Signal Processing; as well as Doctoral programs in Computer Science, Electronics & Communications, Computational Biology, Mathematics, Social Sciences and Humanities, and Human Centres Design. The primary objective is to impart specialized training on the latest technological advancements in Computer Science and allied areas.

Total student strength

| Total Student Strength as on 31st July 2019 | | | |
|---------------------------------------------|--------|-------|------------------|
| Level | Course | Batch | Student Strength |
| B.Tech. | CSE | 2012 | 1 |
| | CSE | 2014 | 7 |
| | ECE | 2014 | 3 |
| | CSE | 2015 | 24 |
| | ECE | 2015 | 13 |
| | CSE | 2016 | 121 |
| | ECE | 2016 | 69 |
| | CSAM | 2016 | 57 |
| | CSE | 2017 | 132 |
| | ECE | 2017 | 75 |
| | CSAM | 2017 | 62 |
| | CSD | 2017 | 45 |
| | CSSS | 2017 | 42 |
| | CSE | 2018 | 125 |
| | ECE | 2018 | 72 |
| | CSAM | 2018 | 61 |
| | CSD | 2018 | 55 |
| | CSSS | 2018 | 37 |
| | CSB | 2018 | 39 |
| | CSE | 2019 | 130 |

| | | | |
|-----------------------------------------------------|------|------|-------------|
| | ECE | 2019 | 97 |
| | CSAM | 2019 | 76 |
| | CSD | 2019 | 57 |
| | CSSS | 2019 | 61 |
| | CSB | 2019 | 58 |
| | CSAI | 2019 | 24 |
| Total number of B.Tech. students on roll | | | 1543 |
| M.Tech | CSE | 2016 | 1 |
| | CB | 2016 | 2 |
| | CSE | 2017 | 3 |
| | ECE | 2017 | 3 |
| | CSE | 2018 | 123 |
| | ECE | 2018 | 70 |
| | CB | 2018 | 18 |
| | CSE | 2019 | 125 |
| | ECE | 2019 | 71 |
| | CB | 2019 | 10 |
| Total number of M. Tech. students on roll | | | 426 |
| Dual Degree | ECE | 2017 | 1 |
| | CSE | 2018 | 1 |
| | ECE | 2018 | 1 |
| Total number of Dual Degree students on roll | | | 3 |
| Ph.D. | CSE | 2011 | 1 |
| | CSE | 2012 | 5 |
| | CSE | 2013 | 8 |
| | ECE | | 3 |
| | CSE | 2014 | 8 |
| | ECE | | 6 |
| | CSE | 2015 | 13 |

| | | | |
|--------------------------------------------|-------------|------|-------------|
| | ECE | | 6 |
| | CB | | 3 |
| | HCD | | 1 |
| | CSE | 2016 | 8 |
| | ECE | | 15 |
| | CB | | 1 |
| | Mathematics | | 2 |
| | CSE | 2017 | 11 |
| | ECE | | 13 |
| | CB | | 8 |
| | Mathematics | | 2 |
| | SSH | | 1 |
| | HCD | | 1 |
| | CSE | 2018 | 21 |
| | ECE | | 11 |
| | CB | | 4 |
| | Mathematics | | 3 |
| | CSE | 2019 | 12 |
| | ECE | | 5 |
| | CB | | 2 |
| | Mathematics | | 6 |
| | SSH | | 0 |
| | HCD | | 2 |
| Total No of Ph.D. Students on Roll: | | | 182 |
| Total No of Students on Roll: | | | 2154 |

Seventh Convocation

The Indraprastha Institute of Information Technology Delhi (IIIT-Delhi) hosted its 7th Convocation Ceremony at Institute's campus in Okhla Phase – III in the presence of **Sh. Rajan Anandan, Vice-President, Google India and South East Asia as Chief Guest, Mr. Kiran Karnik, Chairman, Board of Governors, IIIT-Delhi and Prof. Pankaj Jalote, Director at IIIT-Delhi.** During the convocation ceremony, 152 B.Tech., 109 M.Tech., 1 M.Tech. Dual Degree and 10 Ph.D. degrees were awarded from various branches.

Medals winners (Class of 2018)

| | |
|------------------------------------------------------|------------------------|
| Chancellor's Gold Medal | Rounaq Jhunjhunu Wala |
| All Round Performance | Ambar Pal (CSE) |
| | Akash Deep Singh (ECE) |
| Best Academic Performance in B. Tech. (ECE) | Akshay Sethi |
| Best B. Tech. Project Award (Entrepreneurship Track) | Mukesh Gupta |
| | Sujeet |
| Best B. Tech. Project Award (Engineering Track) | Himanshu |
| | Vahini Ummalaneni |
| Best B. Tech. Project Award (Research Track) | Divam Gupta |
| | Akshay Sethi |
| Gold Medal for Excellent Academic Performance | Ankit Rehani |
| Best M. Tech. Thesis Award in ECE | Ankush Mamgain |
| | Saptak Banerjee |
| Best M. Tech. Thesis Award in CB | Vibhav Tripathi |

Student Graduation

| Programs | Students Graduated (21 st May and 21st August 2019) |
|---------------------------------|-------------------------------------------------------------------|
| B.Tech. (CSE) | 108 |
| B.Tech. (ECE) | 48 |
| M.Tech. (CSE) | 63 |
| M.Tech. (ECE) | 42 |
| M.Tech. (CB) | 9 |
| Ph.D. | 14 |
| Dual Degree | 1 |
| Total Graduated Students | 285 |

Scholarship and Assistantship to Students

Scholarship and Assistantship to B.Tech. Students

The Institute provides following fee waivers.

- Income-based Fee Waiver by IIIT-Delhi:** 100% fee is waived for the students who are below the poverty line. If their family income is up to Rs. 6.0 Lakh p.a. (Rs. 3.60 Lakh p.a. for those having business income) and last school fee paid is less than Rs. 0.45 Lakh p.a, they get 50% of the total tuition fee waived off. If a student's family income is between Rs. 6.0 Lakh and Rs. 8.0 lakh p.a. (Rs. 4.80 Lakh p.a. for those having business income) and last school fee paid is less than Rs.0.60 Lakh p.a., 25% fee is waived off.
- Merit-Based Scholarship:** IIIT-Delhi provides seven Merit-cum-Means scholarships for the meritorious B. Tech. students every year which is sponsored by IGL. Only the ingenious B. Tech. students who come from a financially disadvantaged family are eligible to apply for such scholarships.
- Financial assistance to the meritorious and needy students pursuing higher education in NCT of Delhi:** Delhi Higher Education Trust through Directorate of Higher Education (DHE) GNCTD fully or partially reimburse the tuition fee paid by the students. The extent of reimbursement is in 3 categories.
Category 1: 100% tuition fee is reimbursed for the meritorious students belonging to economically weaker section, i.e. wards of parent/s who are beneficiaries and possess relevant card issued under the National Food Security Scheme.
Category 2: 50% of the tuition fee is reimbursed for the meritorious students having annual family income up to Rs. 2.50 Lakh and not covered under the National Food Security Scheme.
Category 3: 25% reimbursement of tuition fee is reimbursed for the meritorious students having annual income above Rs. 2.50 Lakh but below Rs. 6 Lakh.

Scholarships given to the students

| Batch | No. of students who got 25% waiver | | No. of students who got 50% waiver | | | No. of students who are under BPL (100% Waiver) | | IGL | Total |
|--------------|------------------------------------|-------|------------------------------------|----|-------|-------------------------------------------------|-------|-----|-------|
| | DG | IIITD | DG & IIITD | DG | IIITD | DG | IIITD | | |
| B.Tech. 2015 | 1 | 4 | 1 | 6 | 4 | 2 | 0 | 0 | 18 |
| B.Tech. 2016 | 2 | 12 | 4 | 7 | 12 | 2 | 1 | 1** | 40 |
| B.Tech. 2017 | 6 | 17 | 9 | 12 | 8 | 6 | 4 | 3** | 62 |
| B.Tech. 2018 | 9 | 16 | 8 | 25 | 0 | 22 | 0 | 2** | 80 |
| Total | 18 | 49 | 22 | 50 | 24 | 32 | 5 | 0 | 200 |

**Students got Rs.60000/- from IGL scholarship in the 25% IIIT- Delhi fee waiver category

GATE Scholarship to M.Tech. Students

Financial assistance is available in the form of Teaching Assistantship. The same is paid through AICTE to the M.Tech.(CSE & ECE) students directly and for M.Tech.(CB) Students, it is paid from the grant received from the Department of Biotechnology(DBT), Ministry of Science & Technology. Only full-time regular students are eligible for opportunities of an assistantship. This is viewed as a remuneration for the academic work (teaching/research) being performed for the Institute. Last year a total of 291 Scholarships were granted to the M.Tech. students (106 to ECE students, 167 to CSE students, and 18 to CB students).

Ph.D. Students

The financial assistantship is available for some Ph.D. students in the form of *research assistantship or teaching assistantship*.

Research assistantship. The students under this plan are expected to help the faculty members in various research projects. They may be assigned limited academic duties.

Teaching assistantship. The students under this plan are expected to help the instructors in various courses for the smooth running of the course.

Other than these, the scholars get research grants and scholarships from government funding agencies such as the PM Fellowship, Visvesvaraya, UGC, CSIR, DST-INSPIRE, and DBT as well as Industry funding agencies such as TCS, Cognizant, IBM, and Intel.

Details about fellowship availed by the current Ph.D. scholars are as below:

| Fellowship Head | Total |
|------------------------------|------------|
| PM Fellowship | 3 |
| Visvesvaraya | 25 |
| CSIR | 7 |
| UGC | 16 |
| DBT | 1 |
| DST (INSPIRE) | 3 |
| TCS | 14 |
| INTEL | 1 |
| COGNIZANT | 1 |
| Institute | 51 |
| Research Projects | 28 |
| Sponsored | 19 |
| Joined Job | 13 |
| Total No. of students | 182 |



Innovation and Research



Project Showcase for TCS Delegates

Research Centres

Centre for Design and New Media supported by Tata Consultancy Services

The TCS Centre for Design and New Media (CDNM) at IIIT-Delhi (TCS Foundation initiative, supported by Tata Consultancy Services) has completed its first year of operations. On 22nd August 2018, Distinguished Prof. Pankaj Jalote (Founding Director, IIIT-Delhi) and Mr Ajoy Mukherjee (TCS) signed the MoU in the presence of Prof. Sanjiva Prasad (IIT-Delhi), Prof. PVM Rao (IIT-Delhi), Prof. Ranjan Bose (IIT-Delhi), Mr. Vivek Balaraman (Chief Scientist, TCS), Ms. Niranjana Pedanekar (Principal Scientist, TCS) and Mr. Sandeep Athavale (Principal Scientist, TCS).

In the last year, the centre has shown tremendous growth. This includes faculty strength of 9 core faculty members and 6 adjuncts/visiting faculty members along with 10 PhD and 450+ undergraduate students. With a variety of dynamic faculty members, the Centre has made a substantial contribution in research domains like community healthcare, lifestyle, artificial intelligence in speech recognition, etc. and has published over 40+ Publications in avenues like CHI, IEEE, AAAI, WebSci, ICJAI, ACM, ECIR, CSCW, etc.

In addition to this, the centre has contributed with 3 Patents, 6 Research Labs, 55+ Workshop & Events organised, 4 Books publishes, 2 Media Coverage, 20+ CDNM visitors & 450+ innovative projects by undergraduate students.

TCS Centre for Design and New Media (CDNM) and Department of Game Design and Development in the College of Convergence Engineering of Sangmyung University joined hands for Academic Cooperation and Exchange. As an outcome of the collaboration, Sangmyung University hosted a 4-day “Game Development Hands-on Workshop” at IIIT-Delhi. As a result of collaboration, IIIT-Delhi’s two final year students also went for the Game Development Internship at Sangmyung University, Seoul Campus.

Centre also organised a ‘Tenth International Conference on Information and Communication Technologies and Development (ICTDx 2019)’.


Dr Anind K. Dey (Dean and Professor, University of Washington Department of Human-Centered Design and Engineering) PhD, University of Manchester & Dr Patrick Olivier (Professor, Community Org & Social Informatics of Monash University) Ph D (2000), College of Computing, Georgia Tech are the active Advisory Members for Centre.

Infosys Centre for Artificial Intelligence

Infosys Centre for Artificial Intelligence celebrated its third anniversary this year. The center currently has 18 core faculty members, 25 Ph.D. students, 27 M.Tech. students. This year, the center launched its B.Tech. CSAI program.

Last year, the Infosys Centre for Artificial Intelligence organized a "Summer School on Artificial Intelligence" for students and professionals interested in learning algorithms in machine learning and artificial intelligence, during July - Aug 2018, at IIIT-Delhi campus. On 9th September 2018, Intel organized a one-day workshop on Artificial Intelligence and Machine Learning as part of their AI Academy Program on the campus. The center also hosted the visit of Director-General and the Counsellor and Director, Hsinchu Science Park, Ministry of Science and Technology, Taiwan, Taipei Economic, and Cultural Centre in India. The delegation met and discussed collaborative opportunities in expanding towards the AI industry and the use of AI technologies. On the occasion of the 10th anniversary of IIIT-Delhi, CAI organized a workshop on TRUSTED AI: TRANSPARENCY, EXPLAINABILITY, AND ROBUSTNESS.

This year, the Centre for Artificial Intelligence organized Winter School On Artificial Intelligence (18th – 21st January 2019). A one-day Workshop on AI for Computational Social Systems (ACSS), was held on 2nd February 2019. The Infosys Centre for Artificial Intelligence also hosted the Delhi chapter of Women in Machine Learning



and Data Science (WIMLDS), “Machine Learning Unplugged 2.0” on 30th March 2019. Dr. Tanmoy Chakraborty, Dr. Tavpritish Sethi, and Dr. Richa Singh visited Sweden Embassy for AI events. Dr. Mayank Vatsa was invited to National Defence College (NDC), New Delhi by Vice Admiral Srikant, Commandant at NDC to give a talk on “Artificial Intelligence: What, Why, and How?”.

Centre for Computational Biology

The Centre for Computational Biology (CCB) has completed four years. Centre currently hosts faculty from diverse research areas such as traditional Bioinformatics, Health Informatics, Systems Biology, and Complex systems. In the last years, the centre has grown regarding faculty strength, with ten core faculty members and seven adjunct/visiting faculty members. The centre currently has 18 Ph.D. students and 28 M.Tech. students. Last year the Centre hosted three workshops/symposiums “Data Science using R”; “National Workshop on Computation for Biomedicine and Healthcare”; “One Day Symposium on Computational Gastronomy: The emerging data science of food flavours and health”.

CCB has also focused on research outcomes and the number of publications have increased during the current year. In 2018-19, number of publications are approximately 25. HoD, Prof. GPS Raghava received Sun Pharma Research Awards 2018 and Scientist of the year award by the Organisation of Pharmaceutical Producers of India (OPPI).

CCB has well established computing facilities with support from Department of BioTechnology which includes SNP servers and cluster nodes, comprising of total computing power of approx. 30 Tera Flops and 100 Tb of usable storage. The Centre is in the process to establish a wet lab so that experimental facility is available in campus for educational programs. One of the objective of this centre is to provide services to society and scientific community working in Biological Sciences and Health Sciences.

Centre of Technology for Policing

To strengthen Delhi Police with cutting-edge technology in the field of crime prevention and control, Indraprastha Institute of Information Technology Delhi (IIIT-D) has come up with the ‘Center of Technology for Policing’, which was inaugurated by the Hon’ble Lieutenant Governor of Delhi, Mr. Anil Baijal. This unique research centre is aimed to improve policing in the capital. It will assist the concerned department in criminal’s identification, law and order management, cyber policing, traffic management, and combating terrorist activities using Artificial Intelligence (AI), social media analysis, biometrics, image processing, big data, and network forensics.

The inaugural ceremony was attended by many distinguished personalities of Delhi, including officials from Delhi Police, faculty members and students of IIIT-Delhi, etc. The idea is to research and develop technology and programmes with the use of advanced IT solutions to empower the Delhi Police to help and safeguard the lives of citizens of Delhi. The centre would also train police personnel to acquire knowledge in using the latest tools and techniques to aid other aspects of policing like traffic management, disaster management, urban crime, and terrorism.

Academic Research and Publications

Like every year this year also IIIT-Delhi continues to encourage the faculty members and students to publish their work in top-quality International academic platforms. Until April 2019, there are 124 papers published in National and International journals, 173 papers in National and International refereed conferences, 22 papers in workshops, and five books or book chapters. The detailed list of publications is given in **Appendix A**.

Technologies and Tools Developed and Deployed

The Institute remains committed to developing technologies that can be transferred for commercial and societal use by other organizations. This year, out of many technologies developed at the Institute, 30 new technologies reached the next level. Few of them are listed below, a detail description of all is given in the **Appendix B**

- AASMA: Advanced Application for Social Media Analytics.
- Analytics platform for National Bomb Data Centre / National Security Guard (NSG),
- Face Recognition for Vehicles
- FlavorDB Food Pairing App
- Gesture Recognition for Autonomous Driving
- License to use the software platform for Routing algorithm for ride sharing to Chartr.in
- WhatsFarzi: provides you with instant results regarding the authenticity of text/images you receive on WhatsApp

Patents

This year the faculty members and students filed for eight patents. The patents include inventions like “Eyewear, system and method to facilitate reading for the visually impaired”, “Capacitive energy harvester from ac power lines”, and many more inventions of public use, which are mentioned in **Appendix C** in detail.

Sponsored Research Projects

The faculty members of IIT-Delhi are involved in the collaborative research, funded by the National and International agencies, and strong industrial interactions. The Institute has set up modern laboratories and supporting infrastructure to carry out cutting edge research. The faculty members continuously involve students in the projects to provide them an edge.

The sponsored research has also emerged as a crucial factor in creation of the research infrastructure, while strengthening the facilities in some of the emerging areas of technology. The list of projects that were sanctioned last year and ongoing projects is given in **Appendix D**, and a summary is provided below.

New Sponsored Research Projects (received in this year)

| Funding Agencies | Number of Projects | Total Sanction Amount Rs.(in lakh) |
|-----------------------------------------------|--------------------|------------------------------------|
| DST-SERB | 11 | 291.16 |
| Milinda Gates Foundation | 1 | 65.00 |
| IT Knowledge Park; GC Karnataka | 1 | 10.00 |
| Wuppertal University | 1 | 5.85 |
| DST | 2 | 45.13 |
| The Royal Society | 1 | 5.10 |
| Egrogore Information Services Private Limited | 1 | 3.43 |
| Hike Pvt Ltd | 1 | 3.25 |

| | | |
|----------------------------------------------------|-----------|---------------|
| Jini Info Co. Ltd. | 1 | 1.59 |
| Norma Inc. | 1 | 0.96 |
| Indo-US | 1 | 10.00 |
| Nexustech | 1 | 1.58 |
| Yamaha Motors | 1 | 3.84 |
| Delhi Govt of NCT | 1 | 5.40 |
| National Innovation Foundation | 1 | 0.60 |
| Google | 1 | 14.10 |
| Department of Biotechnology | 1 | 30.60 |
| Indian Army | 1 | 5.00 |
| ABB Global Industries and Services Pvt Ltd. | 1 | 14.92 |
| ICMOID & SANDEE | 1 | 7.70 |
| Delhi Government | 1 | 1.00 |
| Humonics Global | 1 | 8.64 |
| Ministry of Electronics and Information Technology | 1 | 35.88 |
| Goldsmith University of London | 1 | 8.15 |
| European Commission /ERASMUS | 1 | 120.00 |
| Total | 36 | 699.00 |

New Consultancy Projects (received in this year)

| Funding Agency | Number of Projects | Total Sanction Amount Rs.(in lakh) |
|----------------------------------------------------|--------------------|------------------------------------|
| Flipkart | 1 | 3.20 |
| IEEE | 1 | 2.24 |
| Continental | 1 | 9.26 |
| CAI Budget | 1 | 3.00 |
| GAIL India | 1 | 0.10 |
| IEEE Biometric Council | 1 | 4.04 |
| PCRA (Petroleum Conservation Research Association) | 1 | 5.28 |
| Humonics Global | 1 | 8.00 |

| | | |
|----------------------------|-----------|--------------|
| DIMTS | 1 | 1.50 |
| My col (My Circle of Life) | 1 | 1.77 |
| Deep Blue Insight | 1 | 5.00 |
| Total | 11 | 43.39 |

External Collaborations

The Institute has an exceptional reputation for its external collaborations. Strong working relationships with a wide range of professionals, universities, research councils, and policymakers ensure that we have up-to-date and relevant course structure.

We run a wide range of highly successful initiatives, including contract research, in-house training, consultancy, and conferences. Sharing this expertise, we have formed strong working relationships with academic and non-academic organizations.

MOU with Sangmyung University for Academic Cooperation and Exchange

The Centre for Design and New Media at IIIT-Delhi and Department of Game Design and Development in the College of Convergence Engineering of Sangmyung University has joined hand for Academic Cooperation and Exchange. As an outcome of the collaboration, Sangmyung University hosted a 4-day “Game Development Hands-on Workshop” at IIIT-Delhi from 26th February to 1st March 2019.

The collaboration will bring together the professors and students from both the institutions together to research game development to other software development and ICT topics. The alliance will explore the theories and applications to plan, design, develop, and use game software based on the knowledge in culture and art such as social sciences, characters, storytelling, and animation, engineering such as math, programming, material structure, software Engineering, etc. and planning, psychology, and contents business.

IIIT-Delhi students will go for a fully-funded Summer Internship Program at Sangmyung University for co-project in Game Development. Students can research games systematically through the organic and intensive connection of master’s and doctoral degree courses offered in the Department of Game. From IIIT-Delhi, the Head of Centre for Design and New Media, Dr. Pushpendra Singh, signed the MoU, the signatory from Sangmyung University, Seoul, Korea was Prof. Juno Chang, Dean, College of Convergence Engineering.

MoU with Velmenni

IIIT-Delhi has signed an MoU with Velmenni, a pioneer in light communication technology with interests in optical as well as wireless communication. Velmenni will be offering paid internships to students from IIIT-Delhi on academia and industry in the areas of Visible Light Communication (VLC), Optical Wireless Communication (OWC). Mr. Deepak Solanki, Director, Velmenni and Prof. Anand Shrivastav, Dean IRD, IIIT-Delhi signed the MoU.



Tech Mahindra Growth Factories Ltd to Offer Online Executive Courses

IIIT-Delhi and Tech Mahindra Growth Factories Limited (TMGFL) have collaborated to offer executive courses for working executives to up-skill themselves as they advance in their careers. The Memorandum of Understanding was signed by Dr. Ashok Kumar Solanki, Registrar IIIT-Delhi & Mr. Vivek Chandok, VP Tech Mahindra & CEO Tech Mahindra Growth Factories Ltd.

Certification Courses in Artificial Intelligence & Machine Learning, and The Internet of Things are planned to be the first two executive program offerings of this collaboration based on the present and future market demand.

In the collaboration, TMGFL will acquire the participants, provide the online interactive platform while IIIT-Delhi will be responsible for designing the course content, modules. The award-winning faculty of the Institute will be delivering the virtual lectures as a part of the executive program offering. Post successful completion of the program, a certificate will be issued by IIIT-Delhi.

MOU with the Indian Navy for Academic Collaboration

The Indraprastha Institute of Information Technology (IIIT-Delhi) has signed a Memorandum of Understanding with the Indian Navy for academic collaboration. The MoU records mutual intent of academic cooperation between the Indian Navy and IIIT-Delhi for the educational advancement of B.E./B.Tech. qualified officers of the Indian Navy, by providing them with an opportunity to pursue Master of Technology Programmes in the fields of mutual interest and convenience. A ceremony marking the partnership program was attended by invited guests, Navy officers, Faculty Members, and Ph.D. students. In line with multi-stakeholder Task Force report on 'Strategic Implementation of Artificial Intelligence for National Security and Defence' and Govt. of India/ Ministry of Defence order on implementation of AI in Armed Forces, Indian Navy has been continually pursuing capacity building as well as projects in the field of BDA and AI.

Faculty Collaborations

Our faculty members have been collaborating with colleagues in other institutions in the country, as well as institutions across the world. Almost all the faculty members were involved in external collaboration with scientists, industries, and research labs across the country and overseas. The faculty members were engaged in more than **250 collaborative projects** with people outside the Institute. Out of these collaborations, **52** were with industry and **210** were with the academicians and universities across the globe. The details of all the faculty collaborations are given in **Appendix E**.

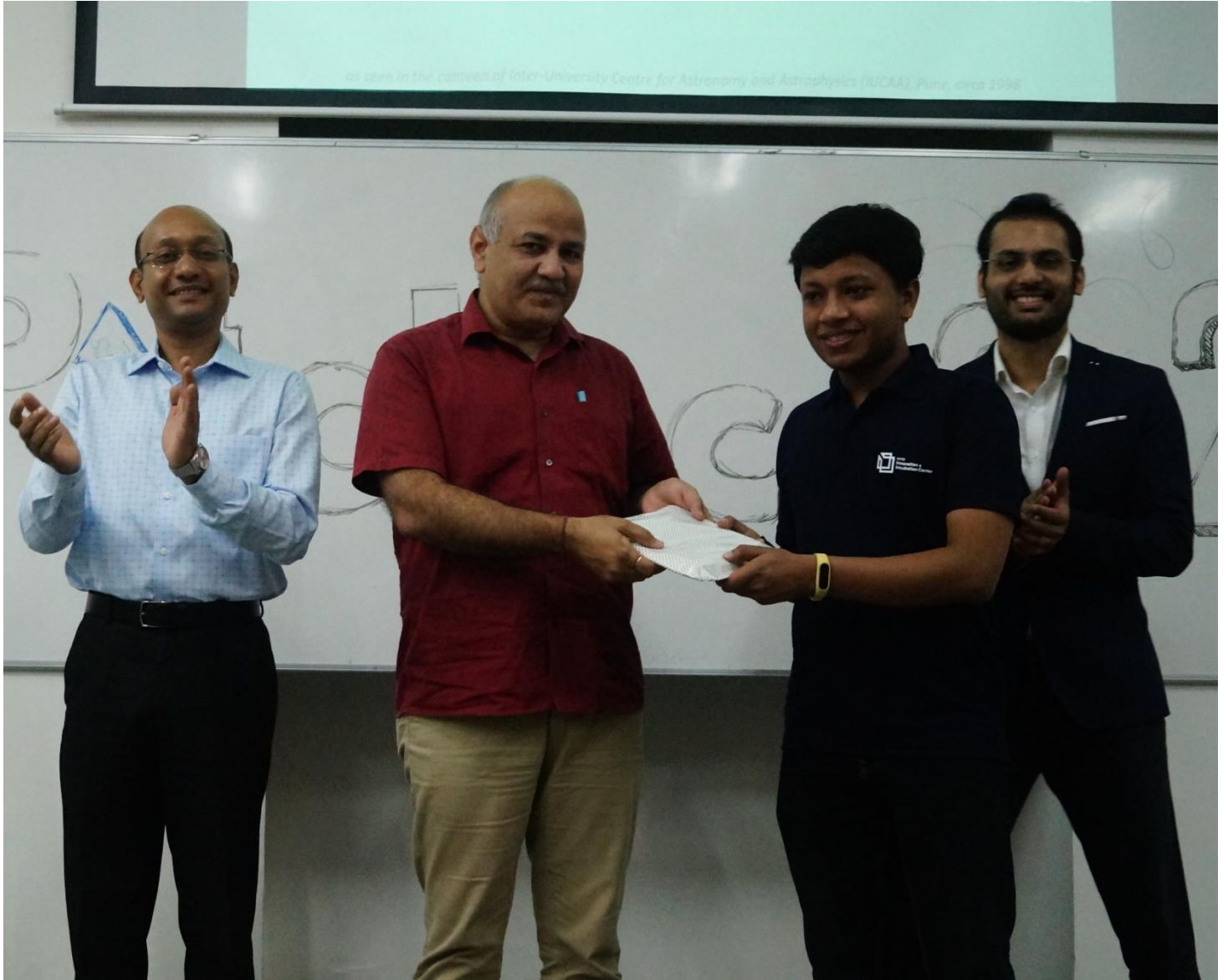


IIIITD Innovation & Incubation Center


Technology Incubator
sponsored by DST, Govt of India and DTTE, Govt of Delhi



Incubation



Pitch café 2.0



To have IIIT-Delhi Incubation and Innovation Centre as the top name associated with entrepreneurship, we continuously strive to provide entrepreneurship opportunities to the student and other incubatees at the centre. The Institute has made this possible by backing purpose-driven Entrepreneurs, harnessing the power of technology to solve some of India's toughest problems using business models that are specific to India.

With the vision of creating a vibrant ecosystem of Innovation and Entrepreneurship in the country, IIIT- Delhi has set up an entity IIIT-Delhi Innovation and Incubation Centre (aka IIITDIC). It is a non-profit Section-8 company, created for fostering innovation by supporting start-ups in the Institute. IIITDIC is recognized by Delhi Government and the Department of Science and Technology, Government of India.

This year the Institute inaugurated the phase II facility of the incubation centre. The new facility was inaugurated by Prof. Ashutosh Sharma, Secretary, Department of Science & Technology, Govt. of India, and the function was presided over by Mr. Kiran Karnik, Chairman, IIIT-Delhi. The new facility is highly spacious with all the modern amenities and has a capacity of 90 work spaces.

Since its inception, IIITDIC is actively involved in developing the paradigm of an entrepreneurial mindset at the Institute. It is focused on fostering the ground-breaking spirit, abilities and promotes ideas and research activities into entrepreneurial ventures. It provides a shared working platform regarding guidance, mentoring, value-based collaboration, incubation, physical co-working spaces. It aims at driving the students towards innovation excellence to convert path-breaking business ideas into self-sustaining business ventures. IIITDIC being a part of a research-based technical institution, has technology focused theme areas to support the Start-ups viz. Artificial Intelligence and Machine Learning, Health Technologies and Computational Biology, Data Science and Mobile Computing, Cyber Security and Online Networking, ICT, Robotics and HCI and technology for social good.

IIITDIC has been established as a separate company with its Board and highly experienced Advisory Committee to steer its operations. The Company promotes Entrepreneurship activities and encourages innovation. The mission of IIITDIC is to cultivate and catalyze innovative thinking, and to pursue ideas into products. The incubation centre also focuses on accelerate the creation of sustainable, scalable, innovative solutions into successful start-ups that have a significant social and economic impact.

Facilities and Offerings:

- Seed funding to startups
- Tinkering lab empowered with latest 3D Printers and devices
- Student, alumni and faculty mentors
- Co-working space and office space
- High Speed Wired and Wireless Internet
- Round the clock operational ecosystem, with all amenities and facilities including safety,
- Power backup facilities, etc
- Meeting rooms and conference rooms with video conferencing and similar other facilities
- Technical Guidance, Mentorship and Advisory
- Professional Shared services, such as IPR, Legal, and Accounting
- Financial Support – Fellowships, etc
- Institute Innovation Council
- E-Cell for student start-ups
- Additional Support and Services
 - Accessibility to Hi-Tech Labs
 - Interns for Incubatee companies
 - Library Services
 - Hostel ; Guest House Facilities

- Recreational Activities & Eatery
- Access to Educational Resources
- Industry Compatible IT Infrastructure
- Access to facilities for organizing workshops/seminars etc.

1. Advisory Members

- Alok Nikhil Jha
- Anupam Saronwala
- Anand Srivastava
- Ashok Mittal
- Hemant Kumar

2. Board of Directors

- Ranjan Bose
- Ashok Mittal
- Anand Srivastava
- Anupam Saronwala

3. Team

- Hemant Kumar , CEO
- Alok Nikhil Jha COO
- Geeta Gupta, CFO
- Naresh Sood, Manager (Administration)
- Prasannajeet Sinha, Manager (Incubation)

4. Events

- Pitch Cafe
- Inception for first year
- Snack Chats with first year students, Ecell members, and on Social Startup
- Wisdom talk on IPR, Company creation
 - DST and National Innovation Foundation for training of students from North India selected for Innovation
 - Incubation Company

Student Incubatees

- GoBikes
- Swapeco
- Zaillet
- W3Dev
- Ostwald Labs
- MyWanderlust
- Mouve
- Blazing Studio
- Tweek
- Gastronomica
- Ampviv

External Incubatees with Faculty Mentors

- Circle of Life
- TNine Infotech
- Artovation
- Well-o-Wise
- Pricely

Start-ups on board



Incubation Alumni



JUST CLING
DATING APP FOR LGBT



EDIOME
IoT INITIATIVE



BRANDOVE
INVITE-ONLY, SOCIAL MOBILE APP FOR BRAND LOVERS



ZENATIX



FESTAVESTA
ONLINE TICKETING



BACKPACK
LMS



CUSTTAP
ANALYTICS SOLUTION



FINDAWAY
SOCIAL ENTREPRENEURSHIP



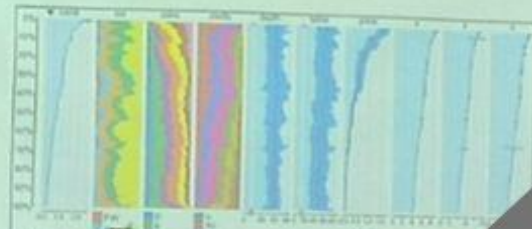
MERI AWAAZ

Partners





Get a table plot



Outreach and Professional Services



Poster presentation by students

Conference/Short Courses/ Seminars /Workshops organized at IIIT-Delhi

IIIT-Delhi has organized many conferences, seminars, workshops, short courses in the past academic year. Some of these are highlighted below:

Seminars

| Title | Date | Speaker |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------|
| Relevant Research: Doing state of the art with locally inspired problems | 2nd April 2018 | Prof. D. Manjunath, Indian Institute of Technology, Bombay |
| ASSISTECH work on affordable solutions for the visually impaired and challenges in building a high quality technical institution in India | 5th April 2018 | Prof. M. Balakrishnan, Indian Institute of Technology, Delhi |
| How Good is Drift-Plus-Penalty Algorithm for Solving Distributed Stochastic Optimization Problems? | 5th April 2018 | Dr. B. N. Bharath, Indian Institute of Technology, Dharwad |
| Randomized techniques in algorithm design | 6th April 2018 | Prof. Sandeep Sen from, Indian Institute of Technology, Delhi |
| A double-auction mechanism for mobile data-offloading markets with strategic agents | 12th April 2018 | Dr. K. P. Naveen from Indian Institute of Technology, Tirupati |
| An Overview of Domain Decomposition Method in Modeling and Simulation of Fluid Flows and Heat Transfer | 19th April 2018 | Dr. B.V. Rathish Kumar from Indian Institute of Technology, Kanpur |
| Multi-twisted codes over finite fields and their dual codes | 26th July 2018 | Varsha Chauhan, IIIT-Delhi |
| Cultural Evolution: Morphological evolution of the violin. | 6th August 2018 | Dr. Ganesh Bagler, IIIT-Delhi |
| Planar support for non-piercing regions and applications | 10th August 2018 | Dr. Rajiv Raman, IIIT-Delhi |
| Infection spread and stability in random graphs | 21st August 2018 | Dr. Ghurumuruhan Ganesan, The Institute of Mathematical Sciences |
| Development of Some Newer Algorithms for Improved Protein Tertiary Structure Prediction. | 27th August 2018 | Dr. Rahul Kaushik, IIIT |
| ECE seminar series on "Idea to product" | 30th August 2018 | Mr. Raunaque Mujeeb, STMicroelectronics |
| A visual-search model observer for detection-localization tasks in nuclear medicine | 4th September 2018 | Dr. Anando Sen, University of Texas |
| Security Analytics - The New Frontier in Cyber Security ? | 6th September 2018 | Prof. Rakesh Verma, University of Houston |

| | | |
|-----------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------|
| Broadband Switchable Microwave Absorber Exploiting Adaptive Ground Plane | 12th September 2018 | Dr. Saptrishi Ghosh, Indian Institute of Technology, Indore |
| ECE seminar series on "The Theory and Practice of Quantum Key Distribution (QKD)" | 13th September 2018 | Dr. Anil Prabhakar, Indian Institute of Technology, Madras |
| The Theory and Practice of Quantum Key Distribution (QKD) | 13th September 2018 | Dr. Saptarshi Ghosh, Indian Institute of Technology, Indore |
| Evolutionary Algorithms | 13th September 2018 | Priyadarshini Rai, IIIT-Delhi |
| Tsirelson's problems and non-closure of the set of quantum correlations | 24th September 2018 | Jitendra Prakash, University of Waterloo |
| ECE Seminar series on "Wavelet Transform Learning and Applications" | 27th September 2018 | Dr. Anubha Gupta, IIIT-Delhi |
| Decoding ourselves and digital health: The future of medicine | 27th September 2018 | Prof. Samir K. Brahmachari, CSIR-Institute of Genomics & Integrative Biology |
| Connecting the dots longitudinally with Temporal Abstraction and Time Intervals Analytics. | 28th September 2018 | Robert Moskovitch, Ben Gurion University |
| Recent Advances in IoT & M2M security: Trends and Future Directions | 4th October 2018 | Dr. Rajeev Shorey, TCS Research & Innovation labs |
| Rectilinear Crossing Number of Uniform Hypergraphs | 5th October 2018 | Rahul Gangopadhyay, IIIT-Delhi |
| Symmetrically-Normed Ideals and Characterizations of Absolutely Norming Operators | 9th October 2018 | Dr. Satish K. Pandey, University of Waterloo |
| Models and Algorithms for space efficient algorithms | 11th October 2018 | Dr. Venkatesh Raman, Institute of Mathematical Sciences |
| Using AI to save the environment | 11th October 2018 | Chitrita Goswami, IIIT-Delhi |
| What is Logic? | 22nd October 2018 | Prof. Mihir Chakraborty, Jadavpur University, Kolkata |
| Finite Element Methods for Elliptic Distributed Optimal Control Problems with Pointwise Control and State Constraints | 23th October 2018 | Dr. Kamana Porwal, Indian Institute of Technology, delhi |
| Indian Household Finance: An analysis of Stocks vs. Flows | 24th October 2018 | Dr. Pawan Gopalakrishnan, Reserve Bank of India |
| Light-mediated Control of Protein Cargo in Hippocampal Neurons | 25th October 2018 | Dr. Tanveer Ahmad, Jamia Millia Islamia |

| | | |
|----------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------|
| Is it difficult to be ethical and successful as an engineer ? | 25th October 2018 | Dr. Subrat Kar, Indian Institute of Technology, Delhi |
| Light-mediated Control of Protein Cargo in Hippocampal Neurons | 25th October 2018 | Dr. Tanveer Ahmad, Jamia Millia Islamia |
| Carbon Nanotubes for Printed Electronics Applications | 26th October 2018 | Prof. Franklin, Duke University |
| NGS Based Approaches For Sequence Analysis: Some Applications | 26th October 2018 | Prof. Alok Bhattacharya, Jawaharlal Nehru University |
| Democracy, Development, & Identity in India | 1st November 2018 | Prof. Amit Prakash, Jawaharlal Nehru University |
| The algorithm which took us to the moon | 2nd November 2018 | Dr. Sanat K Biswas, IIIT-Delhi |
| Perfect Powers in Binary Recurrence Sequences | 9th November 2018 | Dr. Shanta Laishram, Indian Statistical Institute |
| Enumeration formulae for self-dual, self-orthogonal and complementary-dual cyclic additive codes | 15th November 2018 | Dr. Anuradha Sharma, IIIT-Delhi |
| Generating entangled photons in different degrees of freedom and their characterization | 15th November 2018 | Dr. Ravindra Pratap Singh, South Asian University |
| Opportunities and challenges facing a modern telecoms company | 16th November 2018 | Larry Stones, BT India |
| IEEE SPS Distinguished Lecture by Prof. Vivek Goyal, Fellow IEEE, Associate Professor, Boston University | 26th November 2018 | Prof. Vivek Goyal, IIIT-Delhi |
| Structural invariants in street networks | 3rd January 2019 | Dr. Gourab Ghoshal, The University of Rochester |
| Puff Talk on Semi-Supervised Clustering using Neural Networks | 16th January 2019 | Ankita Shukla, IIIT-Delhi |
| Modi, Trump, Twitter, and the Dark Horizons of Globalizing Populism | 24th January 2019 | Prof. Ralph Schroeder, Oxford Internet Institute |
| Future of Learning | 24th January 2019 | Amit Goyal, edX |
| Enterprise Grid Computing in ECAD environment - Problems, Scale and Solutions | 31st January 2019 | Srinivasan Viswanatha |
| The Banach-Tarski paradox | 1st February 2019 | Dr. Sankha Basu, IIIT-Delhi |
| Puff talk on "Learning representations for molecular sequences" | 1st February 2019 | Dhananjay Kimothi, IIIT-Delhi |
| Greedy Pursuit algorithms for Sparse Signal Processing | 6th February | Prof. K.V.S.Hari, IISc Bangalore |

| | | |
|--------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------|
| | 2019 | |
| Toolbox for Inventive Problem Solving - A brief Introduction | 14th February 2019 | Dr. Anuj Grover, IIIT-Delhi |
| Towards Meaningful, Enriching and Discovery-led Artificial Intelligence for Medicine | 14th February 2019 | Dr. Tavpritesh Sethi, IIIT-Delhi |
| Neuroimaging using MRI | 17th January 2019 | Dr. Shilpi Modi, Institute of Nuclear Medicine and Allied Sciences |
| Kalman Filters: Where and How to apply them | 28th February 2019 | Dr. Sanat K. Biswas, IIIT-Delhi |
| Performance Improvement in Adaptive Control: An Initial Excitation based Framework | 28th February 2019 | Dr. Sayan Basu Roy, IIIT-Delhi |
| Aspects of Pluralism in Mathematics | 6th March 2019 | Prof. Mihir Chakraborty, Jadavpur University, Kolkata |
| Online algorithms for packing and covering problems | 7th March 2019 | Prof. Amit Kumar, Indian Institute of Technology, Delhi |
| Endomorphism Rings of Finite Drinfeld Modules | 8th March 2019 | Sumita Garai, The Pennsylvania State University |
| Talk on Brainstorming in silicon | 11th March 2019 | Dr. Rajiv Joshi, T. J. Watson Research Center |
| The lens of complexity | 13th March 2019 | Maya Saran, Ashoka University |
| Subordinated Stochastic Processes and Continuous Time Random Walks | 14th March 2019 | Arun Kumar, Indian Institute of Technology, Ropar |
| Puff talk on "TS-MC: Two stage Matrix completion algorithm for various real world applications." | 15th March 2019 | Neha Jain, IIIT-Delhi |
| Towards Explainable Deep Learning: Adding Why to What | 28th March 2019 | Vineeth N Balasubramanian, Indian Institute of Technology, Hyderabad |
| Stochastic Nash games under chance constraints | 28th March 2019 | Vikas Vikram Singh, Indian Institute of Technology, Delhi |
| Talk on Basics and Applications of Guidance for Autonomous Vehicles | 29th March 2019 | Dr. Satadal Ghosh, Indian Institute of Technology, Madras |
| Structural and dynamical insights into mammalian circadian clock proteins | 1st April 2019 | Dr. Ashutosh Srivastava, Institute of Transformational bio-Molecules, Nagoya University |

| | | |
|-------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------|
| Talk on "Cooperative UAV Localization in Partially GNSS Denied Environments" | 5th April 2019 | Dr. Salil Goel, Indian Institute of Technology, Kanpur |
| Probabilistic Methods in combinatorics (Hypergraph 2-coloring) | 11th April 2019 | Rahul Gangopadhyay, IIIT-Delhi |
| Path to 5G – A Review from Energy Consumption perspective | 11th April 2019 | Mr. Ramakrishna Sethuraman, Maxfluence Technologies Private Limited |
| Puff talk on "Processing-In-Memory: Mechanisms, Challenges and Opportunities" | 12th April 2019 | Sri Harsha Gade, IIIT-Delhi |
| A model theorists tale about the square-free integers | 20th May 2019 | Neer Bhardwaj, University of Illinois at Urbana-Champaign |
| On the Structure and distances of repeated-root constacyclic codes | 24th July 2018 | Tania Sidana, IIIT-Delhi |
| Space Exploration: Underlying biological challenges | 20th August 2018 | Omkar Chandra, IIIT-Delhi |

Workshops and Courses

| Title | Date |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Composite Heritage As A Tool For Conflict Transformation And Violence Prevention In Society | 20th August 2018 |
| Photography As A Medium To Document, Communicate And Create Photographic Imagery | 27th-29th August 2018 |
| Workshop on FPGA design flow | 1st-2nd September 2018 |
| Photography As A Medium To Document, Communicate And Create Photographic Imagery | 5th-8th September 2018 |
| Moving Images: Concept Development, Storyboarding, Video Shooting And Video Editing | 10th-12th September 2018 |
| Game Design Hackathon' organized by Placement cell, IIIT -Delhi & Supported by TCS Centre for Design and New Media | 28th-30th September 2018 |
| Global Achievers Alliance Award 2018 - "The Pride of Asia - Lifetime Achievement Award" | 6th October 2018 |
| Computer Vision Syndrome eye screening camps | 5th November 2018 |
| Half Day Workshop On Interaction With Industry Expert Professional Assessment Of App Design & Development | 12th November 2018 |
| Full Day Sessions: END TERM JURY VDC & DPP | 30th November & 1st December 2018 |

| | |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Faculty Development Program workshop | 18th-23rd December 2018 |
| Symposium on Computational Gastronomy: The emerging data science of food flavors and health: Season 2 | 8th December 2018 |
| National Workshop on Computation for Biomedicine and Healthcare | 10th -14th December 2018 |
| Data Science using R | 15th December 2018 |
| Remote Sensing, GIS and Machine Learning Methods for Environment, Natural Resource and Agricultural Economists | 4 th -5 th January 2019 |
| The Tenth International Conference On Information And Communication Technologies And Development (ICTDX 2019) | 4th – 7th January 2019 |
| Winter School on Artificial Intelligence | 18th-21st January 2019 |
| AI for Computational Social Systems | 2nd February 2019 |
| 'Game Development Hands-on Workshop' | February 26th to March 1st 2019 |
| Philosophy and Cyber-Technology | 11th-13th February 2019 |
| WhatsApp as a communication tool for public health management in India | 13th-15th February 2019 |
| Addressing Students and Parents at Eicher School on annual day as a Guest of Honour | 30th March 2019 |
| NGWiN: Next-Generation Green Wireless Networks | 8th-9th March 2019 |
| Laser Designing Workshop | 9th March 2019 |
| Workshop on 'Portfolio Creation in Design' | 15th March 2019 |
| One Day Workshop On Illustration & Design (1) Character Development As A Technique To Get Insights Into Users | 16th March 2019 |
| Autodesk on first-ever 'Future of Hardware' meetup along with Social Hardware. | 19th March 2019 |
| Half Day Workshop On Illustration & Design (2) Using Caricatures As Technique To Get Insights Into Users | 29th March 2019 |
| One Day Workshop On Narratives Storytelling As A Tool To Enhance User Experience | 31st March 2019 |
| Inaugural Workshop Women in Math Association | 13th April 2019 |
| Math Olympiad for school students | 10th May 2019 |

Faculty Outreach Initiatives

The IIIT-Delhi encourages faculty members to take Outreach Initiatives and organize workshops, seminars and courses in the Institute and outside the Institute as well. Last year the faculty members were involved in around 100 such activities including Workshop on AI for Computational Social Systems, workshop on “NGWiN: International Workshop on Next Generation Wireless Networks, Foundation of IIIT-D chapter of Women in Math Association and many more, mentioned in **Appendix J** in detail.

Summer Camp

This year the Institute organised the 4th edition of the month-long Summer Camp for the students of Government schools at its campus. It is an exciting venture by the students and officers of IIITD, wherein students from nearby Government Schools join and get up-skilled by IIIT-Delhi students in academic and extra-curricular activities. Four coordinators and around 30 undergraduate students volunteered to engage themselves in building a curriculum that provides the students with the hands-on learning experience, making the learning process interactive and absorbing.

The goal of the summer camp is to focus on building school students’ confidence and aspirations, developing necessary skills like communication, problem-solving, and computer skills. In the Summer Camp, a perfect balance is maintained between lessons and enjoyment throughout. This year the camp had more than 170 students from five Government Schools in Delhi - RPKV Lajpat Nagar, School of Excellence Kalkaji, GBSS Harkesh Nagar, GBSS DDA Flats Kalkaji and GGSSS No. 3 Kalkaji.

Subjects such as Computer Science, Maths and Problem Solving, Science, General Knowledge, and Personality Development and Communication Skills were taught to the students. Apart from this, students were engaged in fun activities such as Theatre, Dance, Music, Art and Craft and Sports. All these co-curricular activities encourage students to unfold their hidden talents and nurture them in the future. Interactive Sessions were also conducted to help students generate creative ideas and thoughts.



The Valedictory Ceremony of Summer Camp 2019 was held on 14th June 2019, which officially marked the end of this fun-filled endeavour. The ceremony was graced by the presence of the Director, Prof. Ranjan Bose and Prof. Anubha Gupta (DoAA), along with a few other faculty members and officers. The students presented enthralling dance, music and theatre performances in the ceremony, which they had prepared with the help of the volunteers.



Startup Fair

Like every year this year's start-up fair was an excellent opportunity for junior undergrad, and grad students to bag paid internships in some amazing start-ups offering exciting projects. Both technical and non-technical profiles were on offer during the fair.

Start-Up Fair 2019 concluded on a successful note on Saturday 6th April. The fair was open to all students from 1st year to 3rd year. Many promising & established start-ups like iNICU', Little Black Book, Cisco Cyber Security, Elucidata, My Advo, and Insta Fitness participated.

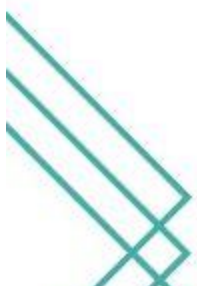
To boost the participating Start-up's this time, Angel Networks was invited to guide them funding factors, like amount, timelines, project, and stage.



Events/Workshop organized by Library and Information Centre:

The Library and Information Center of the Institute organized the following events for the students –

- Annual Book Exhibition
- Workshop on Scientific Data Visualization
- Workshop on Effective Reading
- Book Exchange Week: Give your books, take others books
- Workshop on "Research Referencing"
- Workshop on "How to Write a Research Blog"





Awards and Recognitions



Distribution of the Teaching Excellence Awards on Foundations Day

Faculty Awards and recognitions

Our faculty members have received several popular awards for their papers and posters. Many have also been granted prestigious research grants and fellowships. This year Prof. Mayank Vatsa, Professor and Head of Infosys Centre for AI, has been selected for the prestigious Swarnajayanti fellowship award Instituted by the Department of Science and Technology. Prof. Mayank Vatsa was selected for the award in the Engineering Sciences discipline.

The detailed list is given in **Appendix F**

| | |
|--------------------------------------------|----|
| Awarded By Government (Swarnjayanti Award) | 1 |
| Recognised By Government | 4 |
| Awarded By Industries | 5 |
| Innovation Award | 2 |
| Best Paper/Poster/Demo Award | 19 |
| Research Awards and Fellowships | 21 |
| Teaching Excellence Award | 9 |
| Outstanding Educator Award | 10 |

Faculty Members Invited in National and International Seminars and as Speaker

Our faculty members were invited to numerous Institutes and conferences across the globe in last year. Apart from the technical talks the faculty members was also invited for the TEDX talks in various platforms. The detailed list is given in **Appendix G**, and a summary is given below:

| | |
|-------------------------------------------------------|-----|
| Invited talk/lecture at an Indian Institute/ industry | 124 |
| Invited talk at foreign institute/ industry | 25 |
| Workshop/ showcase/ presentation at the country | 34 |
| Workshop/ showcase/ presentation overseas | 8 |
| Lecture/ talk in National conference | 13 |
| Lecture/ talk in International conference | 10 |

Professional Services by Faculty Members

Our faculty members chaired and were members of several committees in National & International conferences. Many of the faculty members are part of Editorial Boards and regularly serve as reviewers of National & International journals. The list is given in **Appendix H**, and a summary is given below:

| | |
|--------------------------------------------------------------------------------------|-----|
| VP/Chair/Co-Chair/ Editor/ of Journals | 87 |
| Chair/Co-Chair/Task-Force/Committee Member of National and International conferences | 159 |
| Reviewer of Conferences / Journals / Papers / Books | 230 |
| Advisory for Government/ Industry | 41 |
| Organised National and International Workshop | 17 |
| External Examiner/ Curriculum Development Committee Member/ Jury | 25 |

Impact on Society, Government, and Industry

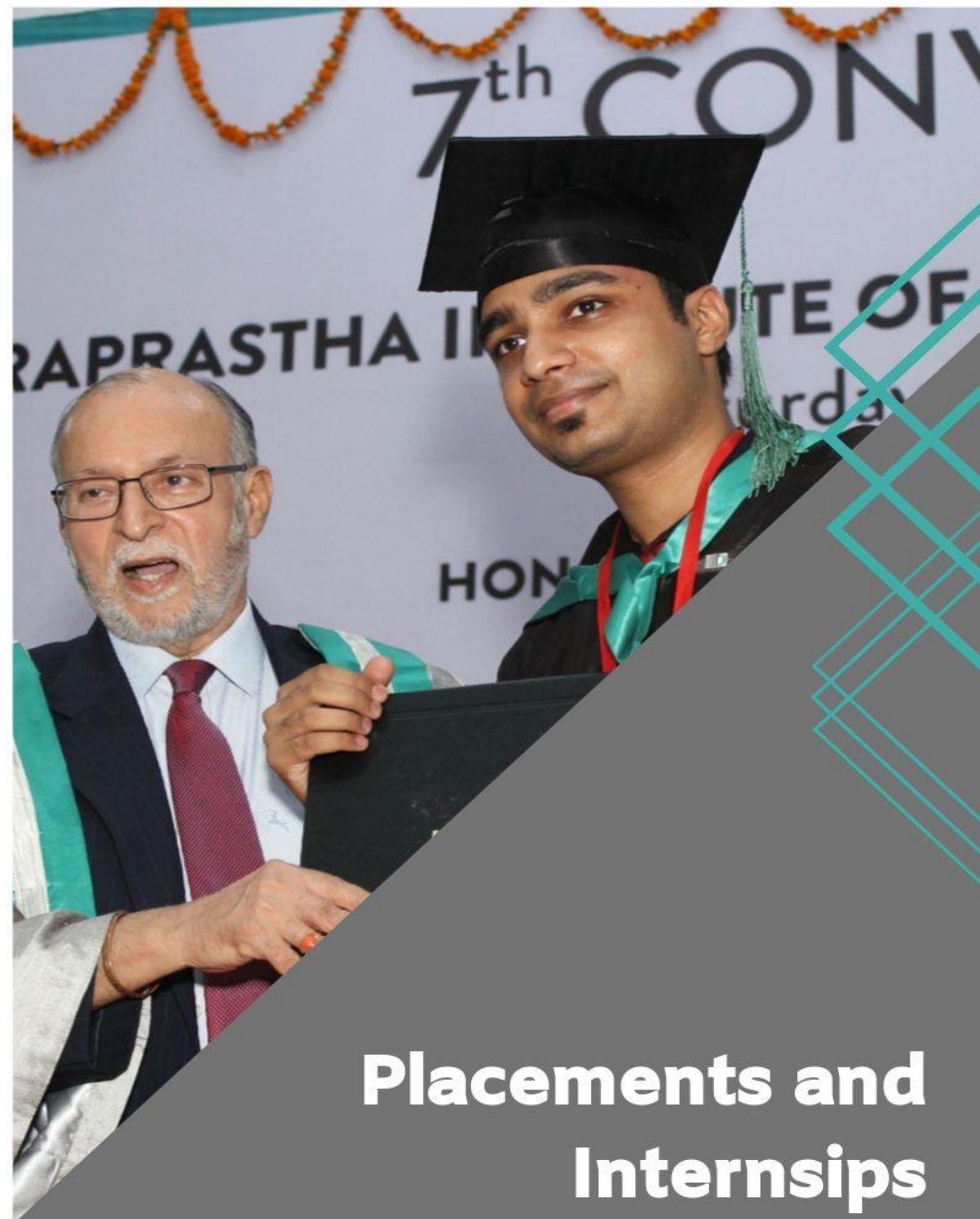
The demand for universities to demonstrate their impact on the society and the lives of people of the country is a relevant issue. The discussion often focuses on publication output and economic benefits (e.g. numbers of spin-offs, patents, gross value added, jobs created). These are relatively easy to measure. It is much trickier to answer, especially with facts and figures, this thorny question: “What are universities doing that brings societal benefits?”

The societal impact has come to the forefront of the agenda today, riding on the wave of dramatic societal changes related to globalization, competition, and pressing problems such as ageing populations, global warming and migration. The positive impact that an educational Institute has on people's lives in the county and internationally reveal how important the Institute is to the society.

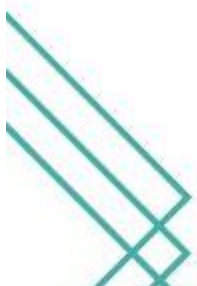
As stated in the mission statement, the goal is to provide quality education with programs that are socially relevant, industry-facing, and globally connected. The faculty members and students are involved in multiple collaborative projects that involve other, non-academic stakeholders in the process of knowledge production, some examples of which are included below and a detailed report are in **Appendix I**

Dr. Anubha Gupta developed a cancer diagnostic tool that has been deployed at AIIMS, New Delhi. Currently, the tool is being validated rigorously. Dr. Debarka Sengupta developed first of its kind AI-backed antibiotic prescription engine called ZEVAC to battle antimicrobial resistance. Dr. P B Sujit developed an end-to-end communication system for disaster management. Dr. Rajiv Ratn Shah is working on automatic speech recognition from speech (called, ASR) and from silent videos (called, VSR) which have a significant impact on society and help patients with speech disorder to communicate effectively.





Placements and Internships



Placements

IIIT-Delhi is an Institute which assures practical employability of the students. Most of the courses involve projects which in turn ensures a hands-on knowledge of the area/technology. This makes them highly employable as compared to any other Institute. IIIT-Delhi students enjoy the best combination of strong technical background and excellent soft skills. The placements cell do take a comprehensive examination of the students at the very beginning of the 6th semester, which includes courses from all five semesters, to fill the gaps in what they have studied so far.

The placement cell organizes CV writing workshops, mock interviews, Group Discussions to prepare every student for the actual interview. Then, we also have mentorship programs where the alumni mentor 3rd and 4th-year students. The Placement Office is run and managed by an efficient team of office staff and students that handles all aspects of placements at IIIT-Delhi, right from contacting companies to managing all the logistics and arranging for the tests, pre-placement talks and conduct of final interviews.

The students are encouraged to do multiple projects which give them hands-on to apply the skill they have learned. Because of all this, the percentage of students going for higher studies is higher. Hence, it is observed that the fraction of students going for a technical career is higher over students going for a non-technical profession or service industry is too high. Placement statistics of 2019 graduating batch is given below:

Percentage – Overall – 96.20%

- **M.Tech.: Overall** - 94.23%, **Branch Wise** - CSE – 100%, ECE – 87.50% and CB – 71.43%
- **B.Tech.: Overall** – 97.74%, **Branch Wise** – CSE – 98.96% and ECE – 94.59%
- The campus received **4 International offers** with 580000 JPY (Rs. 40.72 Lacs)
- The campus has so far hosted **100+** full time companies
- Highest Compensation overseas **Rs. 40.72 lacs**
- Highest Compensation Indian **Rs.39 lacs** in both B.Tech. and M.Tech.
- Average compensation of **Rs.16.04 lacs** and Median of **Rs. 14.00 Lacs**, including all UG & PG programs
- This placement season, a total of **440 offers** were made, which comprised of **266 Full Time job offers** and **174 Internship** offers for final year
- Amongst the full time job offers, **189 A+ offers** with CTC=> Rs 10 Lakh and **77 A** offers with CTC ranging between Rs.10 to 6 Lakh
- The companies which emerged as the biggest recruiter for 2019 season were Qualcomm, Microsoft, Goldman Sachs followed by Dell, Mathworks, TCS Research, idfy, UNIQLO, NXP, Reliance Jio, Telstra, etc.

B.Tech. 2019 Graduating Batch Placement Statistics:

- Highest CTC Indian: CSE- 39.00 LPA, ECE- 27.00 LPA (**Overall – 39.00 LPA**)
- Highest CTC Overseas: CSE- 40.72 LPA, (**Overall – 40.72 LPA**)
- Average CTC: CSE - 17.41 LPA, ECE – 11.30 (**Overall – 15.80 LPA**)
- Median CTC: CSE - 13.00 LPA, ECE – 13.00 (**Overall – 13.00 LPA**)
- **Total offers 161 offers:** >10 LPA A+ category (CSE-79 & ECE-19) & <10 LPA A category (CSE- 43 & ECE-20).

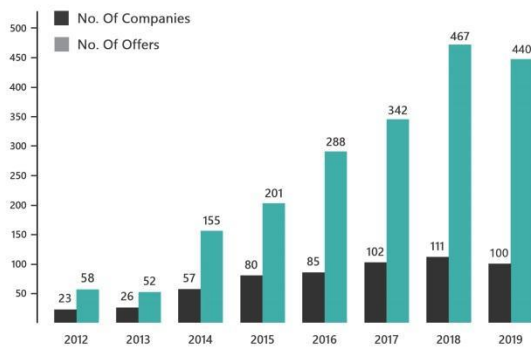
M.Tech. 2019 Graduating Batch Placement Statistics:

- Highest CTC Indian: CSE-39 LPA, ECE-21.36 LPA, CB-13.00 LPA (**Overall – 39.00 LPA**)
- Average CTC: CSE- 16.27 LPA, ECE – 17.68, CB – 10.30 LPA (**Overall – 16.37 LPA**)
- Median CTC: CSE – 14.50 LPA, ECE - 19.15 LPA, CB – 9.00 LPA (**Overall – 15.00 LPA**)

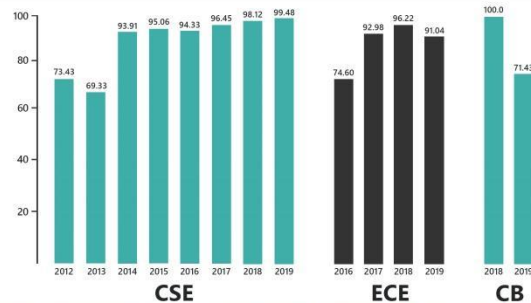
- Total offers 105 offers: ≥ 10 LPA A+ category: CSE-62, ECE-27 & CB-2 & < 10 LPA A category: CSE-10, ECE-01 & CB - 3

COMPARISON OVER THE YEARS

NO. OF OFFERS VS COMPANIES



PERCENTAGE OF STUDENTS PLACED



PLACEMENT STATS 2018-19

2019 GRADUATING BATCH

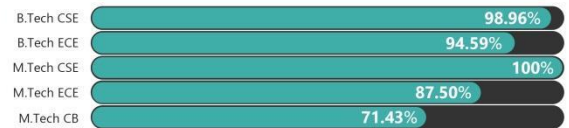


TOTAL COMPANIES 100+

A+ Offers | CTC ≥ 10 LPA
A Offers | 10 LPA $>$ CTC ≥ 6 LPA

| | AVERAGE PACKAGE | HIGHEST PACKAGE | MEDIAN PACKAGE |
|---------|-----------------|-----------------|----------------|
| B.Tech | 15.80 lakhs | 40.72 lakhs | 13.00 lakhs |
| M.Tech | 16.37 lakhs | 39.00 lakhs | 15.00 lakhs |
| Overall | 16.04 lakhs | 40.72 lakhs | 14.00 lakhs |

PERCENTAGE OF STUDENTS PLACED



Internships

The summer internship program at IIIT-Delhi continues to grow every year. In addition to having the students continue working on a project/research topic, through this program we also give opportunities to students from other Institutions to work in IIIT-Delhi.

Students at IIIT-Delhi can opt for following kinds of internships:

1. Summer Internship (May-July)
2. Semester Internship (4-6 months); this is not a mandatory part of the curriculum. If any B.Tech. student proceeds for the same, it will be deemed as a semester break and M.Tech. Students need to take prior permission from their mentors for the same.

The internship offers at IIIT-Delhi had a significant rise both in the average stipend and in the number of companies participating. With the highest stipend ranked at Rs. 1 Lakh per month, the average stipend offered was at Rs. 25K per month.

Internships – 2018-2019

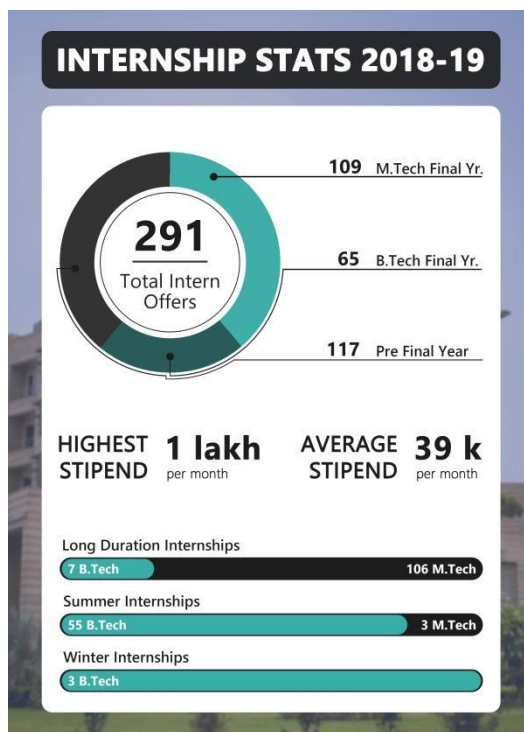
174 internship offers were received by final year students graduating 2019.

Highest Stipend received for the batches graduating 2019, **1 Lac** and average is **39 k** per month.

117 Internship offers secured by B.Tech. and M.Tech. Pre final batches (CSE/ECE/CB/CSAM) graduating 2020

B.Tech.. Pre final batches (CSE/ECE/CSAM) graduating 2020 have so far received Highest Stipend **80 k** & Average Stipend of **41 k**

| | |
|-------------------------|---------------------------------------------------------------------------------------------------------------|
| Total Offers | 291 |
| Long Summer Internship | 126 |
| Summer Internship | 162 |
| Winter Internship | 3 |
| Roles | Software Developer, Data science, Web developer, Java Developer, Analyst etc |
| Highest Stipe | 1 Lakh per month |
| Overall Average Stipend | 40 k per month |
| Final Offers | 174 |
| Recruiters | Amazon, Adobe, Myntra, Mathworks, GoldmanSachs, IBM, Microsoft, Expedia, MMT, RelianceJio, NXP, Synopsys etc. |



Core CSE Recruiters



Core ECE Recruiters



Non-Tech Recruiters

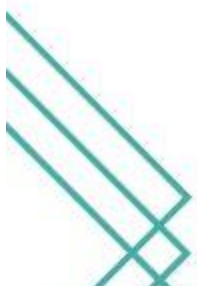



Industry Outreach Program

The IOP office aims to engage with industries in four major domains i.e. sponsored research, industry sponsored Ph.D. fellowships, courses for industry professionals, and M. Tech. thesis for the students. GoP (Govt. agencies Outreach Program), is managed by the team IOP, along with taking valuable inputs from faculty members time to time. The aim is to engage with government agencies to secure funding for research projects, establishment for CoEs, Ph.D. fellowships etc.



Student Activities





IIIT-Delhi students make a major contribution to the objectives of creating, synthesizing, and disseminating knowledge. There are lots of great opportunities for students to participate in leading-edge research. Participating in research is an excellent way for students to learn about technology, solving problems and develop new technologies.

We encourage people from all backgrounds and perspectives to join in the studies as research participants, to help us develop a rich and complete understanding of technology. Not only this but we encourage the students to be all-rounder personalities and inspire them to take on hobbies, and play sports.

Student Governance

IIIT-Delhi supports two active student bodies, namely the Student Council and Student Senate. The Student Council gives the elected student representatives a chance to articulate their views and ideas in all student-related matters of the Institute along with academic and extra-curricular activities within the context of the Institute. The Student Senate focuses on the academic issues being faced by students and voices the concerns to the Institute's authorities responsible for the same.

Student Senate

The Student Senate (SS) has one elected student representative from each branch for every UG and PG batch. Once selected, just like the Council, the representatives elect a Secretary and a Senate coordinator. The Senate coordinator is responsible for the representation of the Student Senate in the Student Council, the UGC and the Institute's Senate. The secretary is responsible for internal coordination within the Senate. The SS meets regularly to discuss various student activities and issues. It encourages all initiatives taken up by students towards creating a better and more involving academic atmosphere. It also manages the student self-help groups, also called Confabs, by allocating mentors and looking after its smooth functioning.

Objectives of the Student Senate:

- To provide an advisory opinion to the Institute in the formulation of significant student related policies.
- To facilitate communication between students, faculty members, and administration of the Institute.
- To represent the interests and concerns of students to the Institute.
- To improve the quality of student life at the Institute.

Student Council

The Student Council (SC) has two-three representatives from each branch for every UG and PG batch who are elected every year. Once elected the representatives elect a Secretary and a Treasurer who are members of the Council. The SC then proceeds to appoint a Cultural Coordinator, a Sports Coordinator and a Technical Coordinator. These coordinators are responsible for running various extra-curricular activities in the campus.

The SC meets regularly to discuss various student activities and issues. Along with designing the non-academic calendar of the Institute in consultation with the Dean of Student Affairs, the Student Council manages existing clubs through budgets and annual reports. It also decides which clubs to start, after reviewing the necessary applications. Objectives of the Student Council:

- to safeguard and promote academic interests of the students
- to advise the UGC and council - and to that extent influence academic policy
- to maintain and assist active engagement for students in academics

Sports and Recreational Facilities



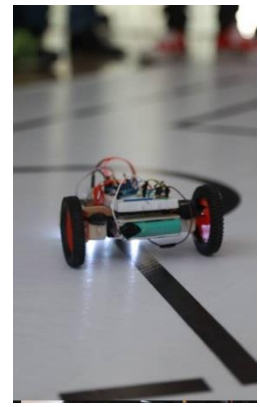
Sports enthusiasts will find plenty to engage themselves at IIIT-Delhi. The institute is building sports culture and participation among students from intra-college events like football, table tennis, Badminton, Pool tournaments and the Intramural, to the external involvement in the sports events of IIT Kanpur, IIT-BHU, IIT Roorkee, IIT Delhi, SNU, DTU, Delhi Half Marathon and Twaran, the inter-college sports meet. Triquetra, a collaborative sports meet, is a joint initiative by officials and students of IIIT-Delhi, NSIT and DTU. It is an effort by these three leading technical Institutes of the NCT of Delhi to jointly organize high-quality sporting events in Delhi for providing a platform to college students to showcase their sporting talent.

The Institute is equipped with several indoor and outdoor sports facilities. Institute's new sports complex is equipped with badminton court, Table Tennis tables, Pool tables Squash courts, and Swimming pool, while Chess boards and Carom boards are available in the hostel common rooms. The Institute also has a multi-purpose sports field, two tennis courts, a basketball court, a volleyball field with lighting facilities at the courts. Institute has also provided coach facility for students; Institute self-growth activities include active participation from the students under various sports activities. On various occasions, IIIT-Delhi invited other college teams for friendly/practice matches, including those from G.B.Pant Engineering College, College of Vocational Studies, Kirorimal College, Jamia Millia Islamia etc.



IIIT-Delhi Fests

There are two main student festivals - the technical festival '*Esya*', held in August, which has now become one of the most vibrant tech-fests in Delhi, and the cultural festival '*Odyssey*', held in January every year. Both these festivals have sizeable external participation and have various contests. Students are also organizing the TEDxIIITD event for the last five years, which has been hugely successful with excellent young inspirational speakers. It has now become a regular event



Research Showcase and other tech events also demonstrate student capabilities. The cultural fest '*Odyssey*' saw a footfall of 8000 visitors in 2019. Activities (arts and literary) for the year are planned together by the Student Council and the Cultural Secretary. In all, a good number of extra-curricular activities take place on the campus throughout the year. '*Esya*' which means a journey, an adventure - exploring Infinity and beyond, is the IIIT-Delhi's TechFest, and is one of the most significant events organized annually on the campus. *Esya* opens as the platform to not only showcase technical expertise but also integrate technology with social causes. After five successful years that saw promising talents and immense reception, *Esya*'18 saw even more extensive participation. The two-day festival included a series of unique and challenging events such as Data Hackathon, Hardware Hackathon, HuntIT, RoboWars, Chess, and Circuitrix. The cultural activities (arts and literary) for the year are planned together by the Student Council and the Cultural Secretary. In all, a good number of extra-curricular activities take place on the campus throughout the year.



Student Clubs

At IIIT-Delhi, a major portion of students' time goes in academics as it requires hard work and focused effort. Nonetheless, there are many facilities and 22+ clubs to grow in various ways. Students take part in several social and cultural activities. If they want to pursue a hobby, they just need to find some likeminded people to start their own club (if not already in existence) in the Institute. These clubs not only improve leadership skills but also help in building team spirit. Several student clubs in the Institute enable students to enhance their talent in areas beyond academics.

The clubs at IIIT-Delhi are based on adventure, music, software development, community work, dramatics, Entrepreneurship, electronics, programming, game development, dance, painting, design, photography, chess, quizzing, sightseeing, public speaking, eco-development and more. These clubs enable students to share knowledge and mentor those who seek to explore the field. These clubs not only help in honing their leadership skills but also help in instilling team spirit. Last year, student bodies organized as many as 105 events.

Several student clubs in the Institute enable them to enhance their talent in areas beyond academics. Clubs already in existence at IIIT Delhi are Quiz Club - Trivialis, Machaan, Astronauts, Design Club - Ink, Dance Club - MadToes, Byld, Women in Tech(WiT), Music Club - Audio Bytes, Photography Club - Tasveer, the Literary Club, Eco Club and Computer Security club, FooBar, E-cell, Muse, Math club and many more.



These clubs enable students to come together, share knowledge and mentor those looking to enter into the field. Students can also suggest books for the library to organize a blood donation campaign, an adventure trip

during summer holidays or purchase a new instrument for the music room. Over 400 students participated in sports activities, 200 in cultural activities, 50 in quiz contests, and 400 in technical events.

Students are also encouraged to help the society in some way or the other. Almost every student is involved with various NGOs all over the country. The Institute also has its own home-grown NGO of students called 'FindAWay', which helps the children in need.

Community Work and Self Growth

Students are encouraged to help the society in some way or the other. Almost every student is involved with NGOs spread all over the country. Students are also encouraged to learn activities like Bird Watching, Basketball, Table Tennis, Swimming, Cooking, Painting, Yoga, Aerobics, and Foreign Language for their personal growth and development. It is also mandatory for every undergrad student to earn two credits of Community Work and two credits of Self Growth by working for 70-80 hours for each. Students are encouraged to help the society in some way or the other.

Community work provides students with a chance to build and strengthen a broader connection with the society and the self. At IIT Delhi, students are required to do about 80-90 hours of community work. This activity teaches students about their rights, duties and responsibilities as citizens, and their ability to bring about meaningful change through advocacy and service. It enables students to applying skills and content knowledge to real needs in their local community. Students are encouraged to give back to the society through compulsory community work credits.



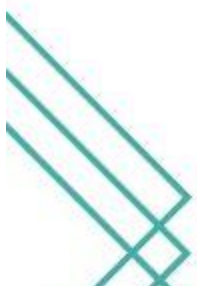
Well-Being Cell

Well-Being Cell offers **free** and **confidential** psychological support to all the students and staff members of the university. This is a kind of support system in which professionally trained and widely experienced Counselling Psychologists, who are accustomed in helping people from many different backgrounds and cultures with a wide range of issues, provides special assistance to individuals in dealing with behavioural concerns.

The main focus of these counselling services is to provide timely psychological support to all at IIT-Delhi to help them gain understanding and insight into difficulties & challenges they may be experiencing, to develop emotional resilience, enabling them to fulfil their academic and personal potential. To help a student cope with stress, professional counsellors are available at the Institute for sessions and meetings with students. Such sessions and meetings are strictly private and confidential.



Alumni Update



| Programs | Alumni of class of 2019 | Total alumni till last year |
|---------------------------------|-------------------------|-----------------------------|
| B.Tech.(CSE) | 108 | 658 |
| B.Tech.(ECE) | 48 | 99 |
| M.Tech.(CSE) | 63 | 344 |
| M.Tech.(ECE) | 42 | 165 |
| M.Tech.(CB) | 9 | 16 |
| Ph.D. | 14 | 31 |
| Dual Degree | 1 | 10 |
| Total Graduated Students | 285 | 1323 |


For any university, their Alumni is an important stakeholder. The Alumni members are the flag bearers of the Institute, they are the ones who spread the name of the Institute where ever they are placed. Alumni can play a very active role in voluntary programs like mentoring students in their areas of expertise. They also are also significant partners in contributing scholarships to deserving students. The networking resources, alumni provide is unmatched. This year we are happy to announce two major advancements:

1. Alumni Association
2. Alumni Chapter- USA

Alumni Association

The Alumni office and Alumni network collaboratively have formed Alumni Association, after the approval from the Board of Governors of IIIT-Delhi. The hope is that this would facilitate a more coherent and structured functioning of the alumni body and more active interaction between the Alumni and the Institute. We have all witnessed the growth of IIIT-Delhi since its inception. However, we still have a long way to go and this journey cannot be made without active participation from the Alumni - the students of this Institute.

The Association will expand the alumni's role in improving the networking, building more career opportunities for the current students as well as past ones, startup incubation activities and several others that we hope will



evolve along the way. All the positions in the Alumni Association are filled through the nomination and election by alumni:

President: Raghav Sethi (UG, Class of 2013)

Vice President: Utkarsha Bhardwaj (UG, Class of 2014)

Secretary: Megha Arora (UG, Class of 2016)

Treasurer: Bavneet Singh (UG, Class of 2016)

Joint Secretary: Harsh Manocha (UG, Class of 2016)

Five Executive Members: Jayasi Mehar (UG, Class of 2015), K Bharat (PG, Class of 2016), Kshitiz Bakshi (UG, Class of 2014), Agam Singh Bajaj (UG, Class of 2018), Sanchit Saini (UG, Class of 2015)

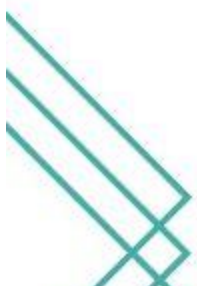
Alumni Chapter USA

The Alumni in USA bay area has taken the initiative to form IIIT-Delhi Alumni Chapter USA; The legal formalities are getting completed. Once established they will do the following activities

- Chapters will publish their calendar of activities on the alumni association website.
- Chapters are authorized to plan and organize their activities. However, alumni association can mandate certain everyday activities to be organized by every Chapter. Alumni association might also provide designs and resource material for such common activities.



Faculty and Officers



As on 21st August 2019

Regular Faculty Members

A V Subramanyam

Ph.D. (2012), Nanyang Technological University, Singapore
Research Interests: Multimedia Security, Information Hiding, Forensics
Write to Subramanyam: subramanyam@iiitd.ac.in
Read more: <https://iiitd.ac.in/subramanyam>

Aasim Khan

Ph.D., King's College London
Research Interest: Themes related to internet and citizenship, civic media and digital journalism in South Asia.
Write to Aasim: aasim@iiitd.ac.in
Read More: <http://iiitd.ac.in/aasim>

Aman Parnami

Ph.D. (2017), Georgia Institute of Technology, USA
Research Interests: Wearable Computing, Design Research, Education Technology
Write to Aman: aman@iiitd.ac.in
Read More: <https://iiitd.ac.in/aman>

Amarjeet Singh (Presently on Leave)

Ph.D. (2009), University of California, Los Angeles, USA
Research Interests: Sensor Networks, Data Analytics, Energy Efficiency, Health Informatics, Internet of Things.
Write to Amarjeet: amarjeet@iiitd.ac.in
Read more: <https://iiitd.ac.in/amarjeet>

Angshul Majumdar

Ph.D. (2012), University of British Columbia, Canada
Research Interests: Sparse Recovery, Low-rank matrix completion, Medical Imaging, Biomedical Signal Processing, Hyper-spectral Imaging, Collaborative Filtering.
Write to Angshul: angshul@iiitd.ac.in
Read more: <https://iiitd.ac.in/angshul>

Anand Srivastava


Ph.D. (2003), Indian Institute of Technology, Delhi
Research Interests: OFDM based Optical Core and Access Networks, Long Reach PONs, Optical Wireless Communication Systems, Fi-Wi Architectures, Optical Signal Processing,
Write to Anand: anand@iiitd.ac.in
Read more: <https://www.iiitd.ac.in/anand>

Anuradha Sharma

Ph.D. (2006), Panjab University, Chandigarh, India
Research Interests: Algebraic Coding Theory, Number Theory, and Algebra
Write to Anuradha: anuradha@iiitd.ac.in
Read more: <https://www.iiitd.ac.in/anuradha>

Anuj Grover

Ph.D. (2015), IIT-Delhi, India



Research Interests: Ultra Low Power In-Memory Compute for edge computing and machine learning applications; safety and security in hardware; and Error resilient energy efficient systems

Write to Anuj: anuj@iiitd.ac.in

Read more: <https://iiitd.ac.in/anuj>

Anubha Gupta

Ph.D. (2006), Indian Institute of Technology, Delhi, India

Research Interests: In Engineering: Signal modeling, multi resolution/ multiscale signal processing, and applications, Wavelet Transform: Design and Applications, Biomedical Signal Processing: Computational neuroscience, ECG, and EEG signal processing, Biomedical Image processing: microscopic image analysis, fMRI signal processing, MRI image processing, Statistical Signal Processing

Write to Anubha: anubha@iiitd.ac.in

Read more: <https://iiitd.ac.in/anubha>

Arjun Ray

Ph.D. (2018), CSIR-IGIB, India

Research Interests: Deciphering the mechanism of CRISPR-Cas9, Elucidating molecular interactions in the reverse cholesterol pathway, structural genomic problems

Write to Arjun: arjun@iiitd.ac.in

Read more: <https://iiitd.ac.in/arjun>

Arun Balaji Buduru

Ph.D. (2016), Arizona State University, USA

Research Interest: Cyber security, reinforcement learning, and stochastic planning.

Write to Arun: arunb@iiitd.ac.in

Read More: <http://iiitd.ac.in/arunb>

Ashish Kumar Pandey

Ph.D. 2018, University of Illinois at Urbana-Champaign, USA

Research Interests: Partial Differential Equations (PDEs)

Write to Ashish: ashish.pandey@iiitd.ac.in

Read more: <http://iiitd.ac.in/ashishk>

Debajyoti Bera

Ph.D. (2009), Boston University, USA

Research Interests: Algorithms, Complexity Theory, Quantum Computing.

Write to Debajyoti: dbera@iiitd.ac.in

Read more: <https://iiitd.ac.in/dbera>

Debarka Sengupta

Ph.D. (2014), Jadavpur University, India

Research Interest: Applied machine learning and genomics

Write to Debarka: debarka@iiitd.ac.in

Read More: <http://iiitd.ac.in/debarka>

Dong Hoon Chang


Ph.D. (2008), Korea University, Korea

Research Interests: Cryptography, Cryptanalysis, Cyber Security, Information Theory.

Write to Chang: donghoon@iiitd.ac.in

Read more: <http://www.iiitd.ac.in/donghoon>

Ganesh Bagler



Ph.D. (2007), CSIR-Centre for Cellular and Molecular Biology, India
Research Interests: Complex Systems, Computational Biology, Complex Networks, Bioinformatics, Modeling and analysis of biological data
Write to Bagler: bagler@iiitd.ac.in
Read more: <https://www.iiitd.ac.in/bagler>

Gaurav Arora

Ph.D. (2017), Iowa State University, USA
Research Interest: Natural Resource & Agricultural Economics, Ecological Economics, Applied Econometrics, Industrial Organization, Applied Game Theory, Spatial Analyses, Remote Sensing.
Write to Gaurav: gaurav@iiitd.ac.in
Read More: <http://iiitd.ac.in/gaurava>

Gaurav Ahuja

Ph.D. (2015), University of Cologne, Germany
Research Interests: Identification, deorphanization and characterization of ectopically expressed GPCRS
Write to Gaurav: gaurav.ahuja@iiitd.ac.in
Read More: <https://iiitd.ac.in/gauravahuja>

G.P.S. Raghava

Ph.D. (1996), Institute of Microbial Technology, India
Research Interest: Bioinformatics Application on Protein Modelling/ Engineering, Genomics and Informatics Solutions for integrating Biology (GENESIS), Integrative approach for designing biomolecules for cancer therapy, Application of bioinformatics in System Biology
Write to Raghava: raghava@iiitd.ac.in
Read More: <https://iiitd.ac.in/raghava>

Gourab Ghatak

Ph.D. (2019), CEA-LETI and Telecom ParisTech, France
Research Interests: Stochastic geometry, millimeter-wave communications, 5G network planning, and positioning in 5G
Write to Gourab: gourab.ghatak@iiitd.ac.in
Read more: <https://iiitd.ac.in/gourabg>

Grace Eden

DPhil (2012), University of Oxford, UK
Research Interests: Human-Centred Robotics and Artificial Intelligence, Design Methodology, and Participatory Innovation of Emerging Technologies
Write to Grace: grace@iiitd.ac.in
Read more: <https://iiitd.ac.in/grace>

Kaushik Kalyanaraman

Ph.D. (2015), University of Illinois at Urbana-Champaign, USA
Research Interests: Discretizations of exterior calculus, discrete differential geometry, computational electromagnetics, applied and computational topology.
Write to Kaushik: kaushik@iiitd.ac.in
Read More: <http://iiitd.ac.in/kaushik>

Kiriti Kanjilal

Ph.D. (2018), Washington State University, USA

Research Interests: Microeconomics, game theory, industrial organization, environmental economics and behavioral economics

Write to Kiriti: kanjilal@iiitd.ac.in

Read More: <http://iiitd.ac.in/kanjilal>

Manohar Kumar

Ph.D. (2013) LUISS University, Rome

Research Interests: Moral and Political Philosophy, Digital dissent, digital citizenship, whistleblowing, civil disobedience, democratic secrecy, and epistemic injustice.

Write to Manohar: manohar.kumar@iiitd.ac.in

Read More: <http://iiitd.ac.in/manohark>

Mayank Vatsa

Ph.D. (2008), West Virginia University, USA

Research Interests: Biometrics, Image Processing, Information Fusion, Forensics

Write to Mayank: mayank@iiitd.ac.in

Read more: <https://iiitd.ac.in/mayank>

Mohammad Hashmi

Ph.D. (2009), Cardiff University, UK

Research Interests: Advanced RF Technology, Passive and Active RF Circuits, Green Communication, Highly Linear and Efficient Transmitter Design

Write to Mohammad: mshashmi@iiitd.ac.in

Read more: <https://iiitd.ac.in/mshashmi>

Monika Arora

Ph.D. (2018), Old Dominion University, Virginia, USA

Research Interests: Count data and statistical modeling

Write to Monika: monika@iiitd.ac.in

Read More: <http://iiitd.ac.in/monika>

Mukulika Maity

Ph.D. (2016), IIT Bombay, India

Research interests: Wireless Networks, Mobile Computing, and Systems.

Write to Mukulika: mukulika@iiitd.ac.in

Read More: <https://iiitd.ac.in/mukulika>

Ojaswa Sharma

Ph.D. (2010), Technical University of Denmark, Denmark

Research Interests: computer graphics, and computational geometry.

Write to Ojaswa: ojaswa@iiitd.ac.in

Read more: <https://iiitd.ac.in/ojaswa>

P B Sujit

Ph.D. (2006), Indian Institute of Science, Bangalore, India

Research Interests: Unmanned aerial vehicles, underwater vehicles, multi-robot systems, guidance and control, and human-robot interaction.

Write to Sujit: sujit@iiitd.ac.in

Read more: <https://iiitd.ac.in/sujit>

Pankaj Jalote

Ph.D. (1985), University of Illinois at Urbana Champaign, USA

Research Interests: Software Engineering, Software quality, process improvement, service oriented computing, software architecture, Fault-tolerant computing.

Write to Pankaj: jalote@iiitd.ac.in

Read more: <https://iiitd.ac.in/jalote>

Paro Mishra

Ph.D. (2017), IIT Delhi, India

Research Interests: Demographic Anthropology, Family and Kinship, Transnationalism, Gender and Technology and Media Representation.

Write to Paro: paro.mishra@iiitd.ac.in

Read more: <https://iiitd.ac.in/paro>

Piyus Kedia

Ph.D., IIT Delhi, India

Research Interests: system security, safe languages, virtualization and dynamic/static techniques to build systems

Write to Piyus: piyus@iiitd.ac.in

Read More : <http://iiitd.ac.in/piyus>

Ponnurangam Kumaraguru

Ph.D. (2009), Carnegie Mellon University, USA

Research Interests: Privacy, e-Crime, Online Social Media, and Usable Security

Write to Ponnurangam: pk@iiitd.ac.in

Read more: <https://iiitd.ac.in/pk>

Pushpendra Singh

Ph.D. (2004), Inria-Rennes, Université de Rennes 1, France

Research Interests: Mobile Systems and Applications, Middleware, ICT for Development.

Write to Pushpendra: psingh@iiitd.ac.in

Read more: <https://iiitd.ac.in/pushpendra>

Pravesh Biyani

Ph.D. (2012), Indian Institute of Technology Delhi, India

Research Interests: Optimisation for signal processing and communications, machine learning, and transportation.

Write to Pravesh: praveshb@iiitd.ac.in

Read more: <https://iiitd.ac.in/praveshb>

Rahul Purandare

Ph.D. (2011), University of Nebraska - Lincoln, USA

Research Interests: Program Analysis, Software Security, Automatic Program Repair, Program Comprehension, Specification Mining, Wireless Sensor Networks

Write to Rahul: purandare@iiitd.ac.in

Read more: <https://iiitd.ac.in/purandare>

Rajiv Raman

Ph.D. (2007), University of Iowa, USA

Research Interests: Algorithms, Combinatorial Optimization, Graph Theory, discrete and computational geometry

Write to Rajiv: rajiv@iiitd.ac.in



Read more: <https://iiitd.ac.in/rajiv>

Rajiv Ratn Shah

Ph.D. (2017), National University of Singapore

Research Area: His main research interests focus on the multimodal analysis of user-generated content in the support of social media applications. Since his past research closely related to social media data, he started exploring characteristics of social networks in his current research. Currently, he is doing cross-platform social media analytics for event recommendation.

Write to Rajiv: rajivratn@iiitd.ac.in

Read More: <http://iiitd.ac.in/rajivratn>

Rakesh Chaturvedi

Ph.D. (2015), Pennsylvania State University, USA

Research Interests: Communication and Cooperation in Games, Political Economy and Market Design

Write to Rakesh: rakesh@iiitd.ac.in

Read More: <http://iiitd.ac.in/rakesh>

Ranjan Bose

Ph.D. (1995), University of Pennsylvania, Philadelphia, USA

Research Interests: Secure communications, coding theory, 5G security, wireless security, physical layer security and broadband wireless access

Write to Ranjan: bose@iiitd.ac.in

Read more: <https://iiitd.ac.in/bose>

Richa Singh

Ph.D. (2008), West Virginia University, USA

Research Interests: Pattern Recognition, Machine Learning, Biometrics

Write to Richa: rsingh@iiitd.ac.in

Read more: <https://iiitd.ac.in/richa>

Saket Anand

Ph.D. (2013), Rutgers University, USA

Research Interests: Geometric Computer Vision, Semi-supervised learning, Robust methods, Scene understanding

Write to Saket: anands@iiitd.ac.in

Read more: <https://iiitd.ac.in/anands>

Sanjit Krishnan Kaul

Ph.D. (2011), Rutgers University, USA

Research Interests: Optimization of Wireless Networks, Enterprise 802.11 (WiFi) networks, Vehicular Networks, Anomalous activity detection using mobile phones.

Write to Sanjit: skkaul@iiitd.ac.in

Read more: <https://iiitd.ac.in/skkaul>

Sambuddho Chakravarty

Ph.D. (2014), Columbia University, USA

Research Interests: Network Anonymity and Privacy, Network Surveillance and Anti-Censorship and Network and Distributed Systems Security

Write to Sambuddho: sambuddho@iiitd.ac.in

Read more: <http://www.iiitd.ac.in/sambuddho>

Samrith Ram

Ph.D. (2012), Department of Mathematics, IIT Bombay, India

Research Interests: Finite Fields and Combinatorics

Write to Samrith: samrith@iiitd.ac.in

Read More: <https://iiitd.ac.in/samrithram>

Sanat K Biswas

Ph.D.(2017), The University of New South Wales

Research Interests: Space vehicle guidance, navigation and control, orbit determination, GNSS-based navigation, non-linear dynamics and estimation algorithms

Write to Sanat : sanat@iiitd.ac.in

Read More : <http://iiitd.ac.in/sanat>

Sankha S Basu

Ph.D.(2013), The Pennsylvania State University, USA

Research Interests: Mathematical Logic - intuitionistic logic and paraconsistent logics

Write to Sankha: sankha@iiitd.ac.in

Read More: <http://iiitd.ac.in/sankha>

Sarthok Sircar

Ph.D. (2009), University of South Carolina, USA

Research Interest: developing multiscale models and robust numerical algorithms for complex systems

Write to Sarthok: sarthok@iiitd.ac.in

Read More: <http://iiitd.ac.in/sarthok>

Sayan Basu Roy

Ph.D. (2019), IIT-Delhi, India

Research Interests: Adaptive control for uncertain switched systems, online approximate optimal control using reinforcement learning based solutions, adaptive backstepping control

Write to Sayan: sayan@iiitd.ac.in

Read more: <https://iiitd.ac.in/sayan>

Shilpak Banerjee

Ph.D. (2017), Pennsylvania State University, USA

Research Interests: Dynamical systems and ergodic theory

Write to Shilpak: shilpak@iiitd.ac.in

Read More: <http://iiitd.ac.in/shilpak>

Shobha Sundar Ram

Ph.D. (2009), University of Texas at Austin, USA

Research Interests: Electromagnetic sensor conceptualization, model and design, sensor circuit design and signal processing algorithms

Write to Shobha: shobha@iiitd.ac.in

Read more: <https://iiitd.ac.in/shobha>


Sneh Saurabh

Ph.D. (2012), IIT Delhi, India

Research Interests: Nanoelectronics, Exploratory Electronic Devices, Energy-Efficient Systems, VLSI Design and Verification and CAD for VLSI

Write to Sneh: sneh@iiitd.ac.in

Read more: <https://www.iiitd.ac.in/sneh>



Sneha Chaubey

Ph.D. 2018 University of Illinois at Urbana-Champaign (UIUC), USA

Research Interests: Number theory and its interactions with geometry and dynamics

Write to Sneha: sneha@iiitd.ac.in

Read More: <http://iiitd.ac.in/sneha>

Sonia Baloni Ray

Ph.D. (2012), Georg August University, Goettingen, Germany

Research Interests: Role of attention in visual processing, studying mechanisms of emotion and motion perception

Write to Sonia: sonia@iiitd.ac.in

Read more: <https://iiitd.ac.in/sonia>

Sriram K.

Ph.D. (2004), Indian Institute of Technology Madras, India

Research Interests: Systems biology, Cell division cycle, Circadian rhythms, Computational cognitive neuroscience

Write to Sriram: sriramk@iiitd.ac.in

Read more: <https://iiitd.ac.in/sriram>

Subhabrata Samajder

Ph.D. (2017) Indian Statistical Institute, Kolkata

Research Interests: Symmetric-key Cryptanalysis, lattice-based cryptography, blockchains and random graphs

Write to Subhabrata: subhabrata@iiitd.ac.in

Read more: <https://iiitd.ac.in/subhabrata>

Sujay Deb

Ph.D. (2012), Washington State University, USA

Research Interests: design of novel interconnect architectures for multicore chips

Write to Sujay: sdeb@iiitd.ac.in

Read more: <https://iiitd.ac.in/sdeb>

Sumit J Darak

Ph.D. (2013), Nanyang Technological University (NTU), Singapore

Research Interests: Reconfigurable filter and filter banks for multi-standard wireless communication receivers, Dynamic Spectrum Learning, Tunable Bandwidth Access and RF Harvesting in Green Cognitive Radios.

Write to Sumit: sumit@iiitd.ac.in

Read more: <http://www.iiitd.ac.in/sumit>

Syamantak Das

Ph.D., IIT Delhi, India

Research Interests: Intersection of theoretical computer science and discrete optimization

Write to syamantak: syamantak@iiitd.ac.in

Read More: <http://iiitd.ac.in/syamantak>

Tanmoy Chakraborty


Ph.D. (2015), IIT Kharagpur, India

Research Interests: Network Science, Data Mining, and Data-driven cyber security

Write to Tanmoy: tanmoy@iiitd.ac.in

Read More: <https://iiitd.ac.in/tanmoy>

Tavpritesh Sethi (Presently on Leave)



Ph.D. (2013), CSIR-IGIB, India

Research Interests: Big -data for clinical decision support, machine learning for critical care and community medicine, human physiology

Write to Tavpritesh: Tavpritesh@iiitd.ac.in

Read more: <https://www.iiitd.ac.in/tavpritesh>

Venkata Ratnadeep Suri

Ph.D. (2013), Indiana University, Bloomington, Indiana

Research Interests: ICTs and Society, Information Literacy, Data Literacy, E-Health, M-health, Social media for Health, ICTs and Health behavior, ICTs and Development.

Write to Ratnadeep: ratan.suri@iiitd.ac.in

Read More: <https://iiitd.ac.in/ratan>

V. Raghava Mutharaju

Ph.D. (2016), Wright State University, Dayton, OH, USA

Research Interests: Knowledge Graphs/Semantic Web, Ontology modeling and reasoning, Linked Data, Big Data

Write to Raghava: raghava.mutharaju@iiitd.ac.in

Read more: <https://iiitd.ac.in/raghavam>

Vibhor Kumar

Ph.D. (2007) from Helsinki University of Technology (now Aalto),

Research Interest: Genomics, Computational Biology, and Statistical Signal processing.

Write to Vibhor: vibhor@iiitd.ac.in

Read More: <https://iiitd.ac.in/vibhork>

Vikram Goyal

Ph.D. (2009), Indian Institute of Technology Delhi, India

Research Interests: Data Mining, Databases, Spatial Data Analytics

Write to Vikram: vikram@iiitd.ac.in

Read more: <https://iiitd.ac.in/vikram>

Vivek Bohara

Ph.D.(2011), Nanyang Technological University, Singapore

Research Interests: Cognitive Radio, Cooperative wireless communication, and Digital Predistortion Techniques.

Write to Vivek: vivek.b@iiitd.ac.in

Read more: <https://iiitd.ac.in/vivek>

Vivek Kumar

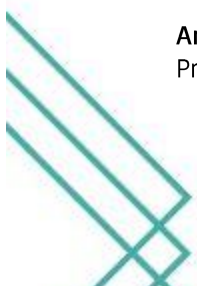
Ph.D. (2014), Research School of Computer Science, Australian National University

Research Interest: Parallel programming models and runtime systems.

Write to Vivek: vivekk@iiitd.ac.in

Read More: <https://iiitd.ac.in/vivekk>

Deans and Registrar



Anubha Gupta

Professor(ECE)



Dean of Academics

Ponnurangam Kumarguru
Associate Professor (CSE)
Associate Dean of Student Affairs

Anand Srivastava
Professor (ECE)
Dean of IRD

Sanjit Krishnan Kaul
Associate Professor (ECE)
Associate Dean of IRD

Richa Singh
Professor (CSE)
Dean of Alumni and Communications

Ashok Kumar Solanki
Registrar

Visiting Faculty Members

Abhijit Mitra
Ph.D. (2017), under joint Indo-UK collaboration between IIT Delhi and British Telecom (BT), UK in the area of Elastic Optical Networks

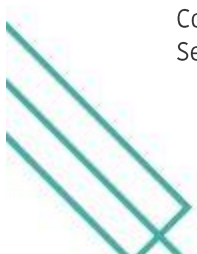
Acushla Saraswat
Ph.D. (2018), University of Mumbai
Differential Geometry, with an emphasis on the study of the Laplacian

Amrit Srinivasan
Ph.D., University of Cambridge, UK
Recipient of the Commonwealth Scholarship Award, the Shastri Indo Canadian Fellowship Award, the Charles Wallace India Trust Award and the ICCR's Visiting Chair in Humanities & Social Sciences Award

Anoop Ratn
BFA, Mahatma Gandhi Kashi Vidhyapeeth, Varanasi.
Animation Film Making, Gaming, Concept Arts

Anupam Saronwala
MS in Computer Engineering from Syracuse University
Charter Member of TIE and a member of Indian Angel Network

Bijendra Nath Jain
(Visiting Distinguished Professor)
Ph.D. (1975) SUNY, Stony Brook (NY)
Computer Networks and Systems, including Wireless Networks, Ad hoc and Sensor Networks and in Information Security





Brijesh Eshpuniyani

Ph.D. (2003), Purdue University
Fluid Mechanics, Transition & Turbulence

C. Anantaram

Ph.D., IIT Bombay, Mumbai
Knowledge systems, Natural language processing for business applications, Artificial development, and Formal concept analysis

G.S. Visweswaran

Retired Professor from IIT-Delhi
CAD of VLSI, Design of Digital, Analog and Mixed Signal VLSI Circuits

Indrani De Parker

Ph.D. (per.), Design Education in 21st Century India, IIT, Mumbai
Indrani De Parker is an alumna of the National Institute of Design (NID), Ahmedabad. She is a communication designer and design educator.

Manohar Khushalani

Bachelor in Civil Engineering from BITS Pilani Courses on 3D Modelling and Finite Element analysis from IIT, Delhi
Former Director, Environment, and Sociology, at the National Water Academy, Khadakwasla, & Member Secretary, National Environmental Monitoring Committee for River Valley Projects

Naveen Prakash

Ph.D. (1980) IIT Delhi
Data Warehouse Requirements Engineering, Information Systems for the Internet of Things, and Business Rules for Requirements Specification

Pankaj Vajpayee

President Value Research India (P) Ltd. MBA (Finance) - University of Delhi; 1993 B.Tech.. - IIT Delhi - 1990
Has over 24 years of corporate experience primarily in the field of investment banking and portfolio investment advisory activities.

**Payel C Mukherjee
(Lecturer - SSH)**

Ph.D. (2016), IIT Gandhinagar
Theories of Cosmopolitanism, Home, and History of Ideas in South Asian Studies

Rahul Mohanani

Ph.D. (Candidate), empirical software Engineering group (M3S) at the University of Oulu, Finland
Human aspects of Software Engineering, Intertemporal Preferences in Technical Debt

Raj Ayyar

Full-time Assistant Professor, East Florida State University
Adjunct Faculty, West Valley College and Laney College MA (Philosophy), St. Stephen's College, Delhi MA (Philosophy), Southern Illinois University, USA

Samaresh Chatterji

Ph.D. (1979), Mathematics, Wayne State University, Detroit
Former Dean - Academic Programs, DA-IICT, Gandhinagar Abstract Algebra, Graph Theory

Shweta Singh
(Lecturer-SSH)

Theories of reasons in moral decision making, Interplay of moral particularism in Buddhist Ethics, and philosophy of critical thinking

Sumit Mediratta

Ph.D. from University of Southern California (USC), Los Angeles

At USC ISI, he made strong contributions in the advanced computer architecture applied research. At NVIDIA Graphics, he was involved in the development of cutting edge Media and Communications Processors, and Graphics Processing Units (GPUs)

Swapna Purandare

(Ramanujan Fellow SERB-DST)

Ph.D. (2014), Biological Sciences (Ecology, Evolution, Behavior), University of Nebraska-Lincoln, USA
Evolutionary Ecology, Biodiversity Conservation, Bioinformatics, NGS, eDNA, Metagenomics

Swati Mantri

(Lecturer-SSH)

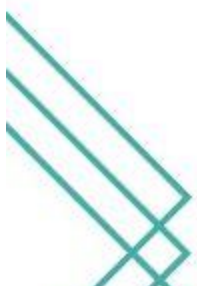
Ph.D. (2019), IIT-Delhi

Identity Studies, Urban Sociology, Migration Studies, Visual Anthropology, Media and Society, Sociology of Space and Food

Administrative Officers

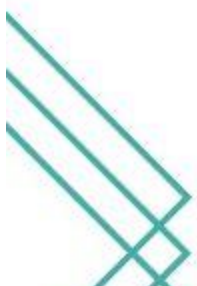
| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| DIRECTOR'S OFFICE Vinod Kumar | CONSTRUCTION PROJECT Anurag Tyagi Sanjay Roy Umesh |
| REGISTRAR'S OFFICE Aarti Yadav | RESEARCH & PROJECTS Nidhi Yadav Imran Khan |
| ACADEMICS & ADMISSIONS Anshu Dureja Ashutosh Brahma K.P.Singh Nisha Narwal Prachi Mukherjee Priti Patel Roshan Kumar Mishra Sheetu Ahuja | RESEARCH LAB Abhijeet Mishra Abhishek Kumar Khagendra Joshi Rahul Gupta Sana Ali Naqvi |
| CORPORATE COMMUNICATION & ALUMNI RELATIONS Pallavi Kaushik | STUDENT AFFAIRS Khushpinder Pal Sharma Rahul Ravi Bhasin Sonal Garg |
| FACILITY MANAGEMENT AND SECURITY SERVICES Arun Verma | SYSTEMS & NETWORKING Abhinay Saxena Adarsh Kumar Agarwal Bhawani Shah Rahul Verma Yogesh Sangwan |
| FINANCE & ACCOUNTS Amit Shankdher Kapil Chawla Paridhi Rawat Priya Khandelwal | WEB DEPARTMENT Ankit Agarwal |
| HUMAN RESOURCES AND GENERAL ADMINISTRATION Aakriti Sinha Gursevak Singh Nayana Samuel Vinod Kumar | CENTRES & DEPARTMENTS Binoj Baby Jyoti Singh Pooja Priti Patwal Risha Lal Sanjna Khosla Shaheen Siddiqui Shipra Jain |
| INCUBATION CENTRE Alok Nikhil Jha | |
| LIBRARY & INFORMATION CENTRE Rajendra Singh Rakibul hasan Mondal | |
| MATERIAL MANAGEMENT AND DEVELOPMENT Ajay Kumar | |
| PLACEMENTS Harish Meghwani Navin Kumar Gaur Rashmil Mishra Sanjay Chauhan | |








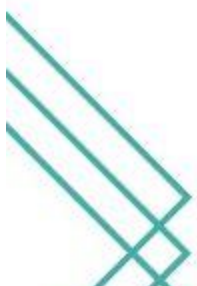
Appendices


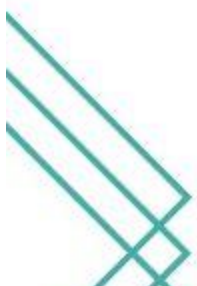



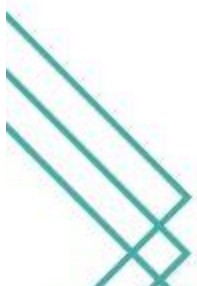
Appendix A: Publications


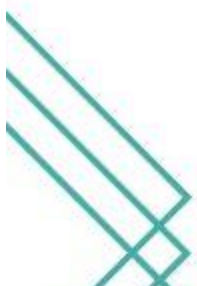
Journal Paper


1. S. Saxena, D. Bera, V. Goyal, “Modeling location obfuscation for continuous query,” *Journal of Information Security and Applications*, 2019, vol. 44, pp. 130-143, doi: 10.1016/j.jisa.2018.12.001, I.F.: 1.54
2. A. Jindal, P. Gupta, Jayadeva, D. Sengupta, “Discovery of rare cells from voluminous single cell expression data”, *Nat Communication*, 2018, vol.9 , issue 4719, pp. 9:4719 , doi:10.1038/s41467-018-07234-6, I.F.: 11.88
3. S. Lall , D. Sinha, S. Bandyopadhyay, D. Sengupta, “Structure-Aware Principal Component Analysis for Single-Cell RNA-seq Data”, *Journal of Computational Biology*, 2018, vol.25 , doi: 10.1089/cmb.2018.0027, I.F.: 1.19
4. D. Srivastava, A. Iyer, V. Kumar, D. Sengupta, “CellAtlasSearch: a scalable search engine for single cells”, *Nucleic Acids Research*, 2018, vol. 46, issue 1, pp. 141-147. doi: 10.1093/nar/gky421, I.F.: 11.147 .
5. D. Sinha, D. Sengupta, S. Bandyopadhyay, “ParSel: Parallel Selection of Micro-RNAs for Survival Classification in Cancers”, *Molecular Information* 2017, vol. 36 issue 1600141, doi: 10.1002/minf.201600141, I.F.: 1.647
6. H. Li, ET Courtois, D. Sengupta, Y. Tan, KH Chen, JLL Goh, SL Kong, C Chua, LK Hon, WS Tan, M Wong, PJ Choi, LJK Wee, AM Hillmer, IB Tan, P. Robson, S. Prabhakar, “Reference component analysis of single-cell transcriptomes elucidates cellular heterogeneity in human colorectal tumors” *Nature Genetics* 2017, vol. 49, issue 5, pp. 708-718 doi: 10.1038/ng.3818. Erratum in: *Nat Genet.* 2018; 50(12):1754, I.F.: 27.125.
7. D. Chang, M. Ghosh , A. Jati, A. Kumar, S. K. Sanadhya, “A Generalized Format Preserving Encryption Framework Using MDS Matrices,”, *Journal of Hardware and Systems Security*, 2019, vol. 3, issue 1, pp. 3- 11, doi: <https://doi.org/10.1007/s41635-019-00065-x>.
8. M. Agrawal, D. Chang, J. Kang, “Deterministic Authenticated Encryption Scheme for Memory Constrained Devices,” *Cryptography* 2018, vol. 2, issue 4, pp. 37; doi: <https://doi.org/10.3390/cryptography2040037>.
9. M. Agrawal, T. K. Bansal, D. Chang, A. K. Chauhan, S. Hong, J. Kang, S. K. Sanadhya, “RCB: Leakage-Resilient Authenticated Encryption via Re-keying”, *Journal of Supercomputing*, 2018, vol. 74, issue 9, pp. 4173-4198. doi: <https://doi.org/10.1007/s11227-016-1824-6> I.F.: 0.858.
10. M. Singh, R. Singh, M. Vatsa, N. Ratha, R. Chellappa, “Disguised Faces in the Wild”, *IEEE Transactions on Biometrics, Behavior, and Identity Science*, 2019, vol. 1, issue 2, pp. 97-108 doi: 10.1109/TBIOM.2019.2903860.
11. M. Singh, S. Nagpal, M. Vatsa, R. Singh, “Are you eligible? Predicting adulthood from face images via class specific mean autoencoder”, *Pattern Recognition Letters*, 2019, vol. 119, pp. 121-130, doi: <https://doi.org/10.1016/j.patrec.2018.03.013>, I.F.: 2.810
12. A. Sethi, M. Singh, R. Singh, M. Vatsa, “Residual Codean Autoencoder for Facial Attribute Analysis”, *Pattern Recognition Letters*, 2019, vol. 119, pp. 157 - 165, doi: <https://doi.org/10.1016/j.patrec.2018.03.010>, I.F.: 2.810
13. A. Agarwal, R. Keshari, M. Wadhwa, M. Vijh, C. Parmar, R. Singh, M. Vatsa, “Iris Sensor Identification in Multi-Camera Environment”, *Information Fusion*, 2019, vol. 45, pp. 333-345, doi: <https://doi.org/10.1016/j.inffus.2017.11.004>, I.F: 10.716.


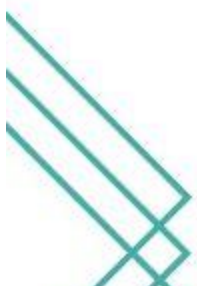
- 
14. N. Kohli, D. Yadav, M. Vatsa, R. Singh, A. Noore, "Supervised Mixed Norm Autoencoder for Kinship Verification in Unconstrained Videos", *IEEE Transactions on Image Processing*, 2018, vol. 28, issue 3, pp. 1329 - 1341, doi: 10.1109/TIP.2018.2840880, I.F.: 6.79.
 15. A. Shankar, M. Vatsa, P. B. Sujit, "A Low-Cost Monocular Vision-Based Obstacle Avoidance Using SVM and Optical Flow", *Unmanned Systems*, 2018, vol. 06, issue 04, pp. 267-275, doi: <https://doi.org/10.1142/S2301385018500097>.
 16. T. I. Dhamecha, M. Shah, P. Verma, R. Singh, M. Vatsa, "CrowdFaceDB: Database and Benchmarking for Face Verification in Crowd", *Pattern Recognition Letters*, 2018, vol. 107, pp. 17-24, doi: <https://doi.org/10.1016/j.patrec.2017.12.028>, I.F.: 2.810.
 17. P. Chhokra, A. Chowdhury, G. Goswami, M. Vatsa, R. Singh, "Unconstrained Kinect Video Face Database", *Information Fusion* 2018, vol. 44, pp. 113-125, doi: <https://doi.org/10.1016/j.inffus.2017.09.002>, I.F.: 10.716.
 18. O. Sharma, J. Pandey, H. Akhtar, G. Rathee, "Navigation in AR based on digital replicas," *The Visual Computer*, 2018, vol. 34, issue 6-8, pp. 925-936, doi: 10.1007/s00371-018-1530-x, I.F.: 1.145.
 19. E. Lancaster, T. Chakraborty, V.S Subrahmanian, "MALTP: Parallel Prediction of Malicious Tweets", *IEEE Transactions on Computational Social Systems*, 2018, vol. 5, issue 4, pp. 1096 - 1108, doi: 10.1109/TCSS.2018.2869171.
 20. T. Chakraborty, S. Ghosh, N. Park, "Ensemble-based Overlapping Community Detection using Disjoint Community Structures", *Knowledge-Based Systems*, 2018, vol. 163, pp. 241-251, doi: <https://doi.org/10.1016/j.knosys.2018.08.033>, I.F.: 4.515.
 21. T. Chakraborty, S. Jajodia, N. Park, A. Pugliese, E. Serra, V.S. Subrahmanian, "Hybrid Adversarial Defense: Merging Honey Pots and Traditional Security Methods", *Journal of Computer Security*, 2018, vol. 26, issue 5, pp. 615-645, doi: 10.3233/JCS-171094.
 22. S. Dutta, K. Mehra, V. Chandra, A. K. Das, T. Chakraborty, S. Ghosh, "Ensemble Algorithms for Microblog Summarization", *IEEE Intelligent Systems* 2018, vol. 33, issue 3, pp. 4-14, doi: 10.1109/MIS.2018.033001411, I.F.: 2.374.
 23. T. Maheshwari, A. N. Reganti, U. Kumar, T. Chakraborty, A. Das, "Revealing Psycholinguistic Dimensions of Communities in Social Networks", *IEEE Intelligent Systems*, 2018, vol. 33, issue 4, pp. 36-48, doi: 10.1109/MIS.2018.111144400, I. F.: 2.374.
 24. T. Chakraborty, S. Nandi, "Universal Trajectories of Scientific Success", *Knowledge and Information Systems*, 2018, vol. 54, issue 2, pp. 487-509, doi: 10.1007/s10115-017-1080-y, I. F.: 2.004.
 25. A. V. Subramanyam, V. Gupta, R. Ahuja, "Robust Discriminative Subspace Learning for Person Reidentification," *IEEE Signal Processing Letters*, 2019, vol. 26, issue 1, pp. 154 - 158 DOI: 10.1109/LSP.2018.2882301, I.F.: 3.268.
 26. K. Kansal, A. V. Subramanyam, "Hdrnet: Person Re-Identification Using Hybrid Sampling in Deep Reconstruction Network," *IEEE Access*, 2019, vol. 7, pp. 40856 - 40865, DOI: 10.1109/ACCESS.2019.2908344, I.F.: 4.098.
 27. A. Mehrish, A. V. Subramanyam, S. Emmanuel, "Joint Spatial and Discrete Cosine Transform Domain-Based Counter Forensics for Adaptive Contrast Enhancement," *IEEE Access*, 2019, vol. 7, pp. 27183-27195, DOI: 10.1109/ACCESS.2019.2901345, I.F.: 4.098.
 28. K. Saini, K. Kansal, A. V. Subramanyam, "Airborne visual tracking and reidentification system," *Journal of Electronic Imaging*, 2019, vol. 28, issue 2, doi: 10.1117/1.JEI.28.2.023003, I.F.: 0.924.
- 


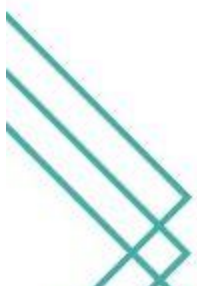
- 
29. K. Kansal, A. V. Subramanyam, D. K. Prasad, M. Kankanhalli, "CARF-Net: CNN attention and RNN fusion network for video-based person reidentification," *Journal of Electronic Imaging*, 2019, vol. 28, issue 2, doi: 10.1117/1.JEI.28.2.023036, I.F.: 0.924.
 30. D. Sitani, A. V. Subramanyam, A. Majumdar, "Online single and multiple analysis dictionary learning-based approach for visual object tracking," *Journal of Electronic Imaging*, 2019, vol. 2, issue 1, doi: 10.1117/1.JEI.28.1.013004, I.F.: 0.924.
 31. A. Mehrish, A. V. Subramanyam, Sabu Emmanuel, "Robust PRNU estimation from probabilistic raw measurements," *Signal Processing: Image Communication*, 2018, vol. 66,, pp. 30-41, doi: 10.1016/j.image.2018.04.013, I.F.: 2.814.
 32. J. Maggu, V. Singhal, A. Majumdar, "Simultaneous Detection of Multiple Appliances from Smart-meter Measurements via Multi-Label Consistent Deep Dictionary Learning and Deep Transform Learning" *IEEE Transactions on Smart Grid*, 2019, vol. 10, issue 3, pp. 2969 - 2978 , doi: 10.1109/TSG.2018.2815763, I.F.: 7.3.
 33. S. Singh, A. Majumdar, "Analysis Co-Sparse Coding for Energy Disaggregation", *IEEE Transactions on Smart Grid*, 2019, vol. 10 , issue 1, pp. 462-470, doi: 10.1109/TSG.2017.2743763, I.F.: 7.3.
 34. S. Singh, A. Majumdar, "Deep Sparse Coding for Non-Intrusive Load Monitoring", *IEEE Transactions on Smart Grid*, 2019 , vol. 10, issue 5 , pp. 4669 - 4678 , doi: 10.1109/TSG.2017.2666220, I.F.: 7.3.
 35. A. Mongia, D. Sengupta, A. Majumdar, "Mclmpute: Matrix completion based imputation for single cell RNA-seq", *Frontiers in Genetics*, 2019, vol. 10, doi: <https://doi.org/10.3389/fgene.2019.00009>, I.F.: 4.1.
 36. D. Talwar, A. Mongia, D. Sengupta, A. Majumdar, "AutoImpute : Autoencoder based imputation of single-cell RNA-seq data", *Nature Scientific Reports*, 2018, vol. 8, issue 1, pp.16329 , doi: 10.1038/s41598-018-34688-x, I.F. 4.1.
 37. V. Singhal, A. Majumdar, "Row-Sparse Discriminative Deep Dictionary Learning for Hyperspectral Image Classification", *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 2018, vol. 11, issue 12, pp. 5019 - 5028 , doi: 10.1109/JSTARS.2018.2877769, I.F.: 2.7.
 38. A. Majumdar, "Graph Structured Autoencoder", *Neural Networks*, 2018, vol. 106, pp. 271 -280, doi: <https://doi.org/10.1016/j.neunet.2018.07.016>, I.F.: 7.1.
 39. M. Gupta, A. Majumdar, "Disaggregating Transform Learning for Non-Intrusive Load Monitoring", *IEEE ACCESS*, 2018, vol. 6, issue 2169-3536, pp. 46256 - 46265 , doi: 10.1109/ACCESS.2018.2850707 , I.F.: 3.2.
 40. D. J. Lewis, V. Singhal, A. Majumdar, "Solving Inverse Problems in Imaging via Deep Dictionary Learning," *IEEE Access*, 2018, vol. 7, issue 2169-3536 , pp. 37039 - 37049, doi: 10.1109/ACCESS.2018.2881492, I.F.: 3.2.
 41. A. Majumdar, "An Autoencoder Based Formulation for Compressed Sensing Reconstruction", *Magnetic Resonance Imaging*, 2018, vol. 52, pp. 62 -68, doi: <https://doi.org/10.1016/j.mri.2018.06.003>, I.F.: 2.5.
 42. A. Majumdar, "Blind Denoising Autoencoder", *IEEE Transactions on Neural Networks and Learning Systems*, 2019, vol. 30, issue 1, pp. 312 - 317, doi: 10.1109/TNNLS.2018.2838679 , I.F.: 7.9.
 43. V. Singhal, H. Agrawal, S. Tariyal, A. Majumdar, "Discriminative Robust Deep Dictionary Learning for Hyperspectral Image Classification", *IEEE Transactions on Geosciences and Remote Sensing*, 2018, vol. 55, issue 9, pp. 5274 - 5283, doi: 10.1109/TGRS.2017.2704590, I.F.: 4.6.
 44. P. Aggarwal, T. Kabra, R. Ahmad, V. A. Bohara, A. Srivastava "Adaptive learning architecture-based pre-distorter for nonlinear VLC system" *Photonic Network Communications*, 2019, vol. 38, issue 2, pp. 258-269, doi: <https://doi.org/10.1007/s11107-019-00848-w>, I.F.: 1.32.
- 


- 
45. G. Kaur, R. Gupta, N. Mathur, L. Rani, L. Kumar, A. Sharma, V. Singh, A. Gupta, O.D. Sharma, "Clinical impact of chromothriptic complex chromosomal rearrangements in newly diagnosed multiple myeloma." *Leukemia research*, 2019, vol. 76, pp. 58-64 doi: 10.1016/j.leukres.2018.12.005 I.F.: 2.319.
 46. N. Ansari, A. Gupta, "WNC-ECGlet: Weighted non-convex minimization based reconstruction of compressively transmitted ECG using ECGlet", *Biomedical Signal Processing and Control*, 2019, vol. 49, pp. 1 - 13, doi: <https://doi.org/10.1016/j.bspc.2018.10.005> , I.F.: 2.943.
 47. S. Sharma, A. Gupta, V. Bhatia, "Compressed Sensing Based UWB Receiver Using Signal-Matched Sparse Measurement Matrix," *IEEE Transactions on Vehicular Technology*, 2019, vol. 68, issue 1, pp. 993 - 998, doi: 10.1109/TVT.2018.2881509, I.F.:5.339.
 48. A. Gupta, P. Mallick, O. Sharma, R. Gupta, R. Duggal, "PCSeg: Color model driven probabilistic multiphase level set based tool for plasma cell segmentation in multiple myeloma," *PLoS ONE*, 2018, vol. 13, issue 12: e0207908, doi: 10.1371/journal.pone.0207908, I.F.: 2.766.
 49. P. Aggarwal, A. Gupta, "Low rank and sparsity constrained method for identifying overlapping functional brain networks," *PLoS ONE*, 2018, vol. 13, issue 11: e0208068, pp. 1 - 19, doi: 10.1371/journal.pone.0208068, I.F.: 2.766.
 50. S. Sharma, V. Bhatia, A. Gupta, "Joint Symbol and ToA Estimation for Iterative Transmitted Reference Pulse Cluster UWB System," *IEEE Systems Journal*, 2018, vol. 13 , issue 3, pp. 2629 - 2640, doi: 10.1109/JSYST.2018.2879650, I.F.: 4.337.
 51. A. Gupta, S. D. Joshi, P. Singh, "On the approximate discrete KLT of fractional Brownian motion and applications," *Journal of the Franklin Institute*, 2018, vol. 355, issue 17, pp. 8989 - 9016, doi: 10.1016/j.jfranklin, I.F.: 3.576.
 52. S. Sharma, A. Gupta, V. Bhatia, "IR-UWB Sensor Network Using Massive MIMO Decision Fusion: Design and Performance Analysis," *IEEE Sensors Journal*, 2018, vol.18, issue 15, pp. 6290 - 6302, doi: 10.1109/JSEN.2018.2844832 I.F.: 2.617.
 53. A. Gupta, P. Singh, M. Karlekar, "A novel Signal Modeling Approach for Classification of Seizure and Seizure-free EEG Signals", *IEEE Transactions on Neural Systems and Rehabilitation Engineering (IEEE TNSRE)*, 2018, vol. 26, issue 5, pp. 925-935, doi: 10.1109/TNSRE.2018.2818123, I.F.: 3.41.
 54. M. Hedayat, D. Banerjee, M. S. Hashmi, "An Enhanced Frequency-Ratio Coupled-Line Dual-Frequency Wilkinson Power Divider," *IEEE Transactions on Circuits and Systems (TCAS-II)*, 2018, vol. 65, issue 7, pp. 888-892, doi: 10.1109/TCSII.2017.2749407, I.F.: 3.25.
 55. D. Banerjee, A. Saxena, M. S. Hashmi, "A Novel Concept of Virtual Impedance for High Frequency Tri-Band Impedance Matching Networks," *IEEE Transactions on Circuits and Systems (TCAS-II)*, 2018, vol. 65, issue 9, pp. 1184 - 1188, doi: 10.1109/TCSII.2018.2797129, I.F.: 3.25.
 56. N. Anandakumar, M. P. Das, S. Sanadhya, M. S. Hashmi, "Reconfigurable Hardware Architecture for Authenticated Key Agreement Protocol over Binary Edwards Curve," *ACM Transactions on Reconfigurable Technology and Systems*, 2018, vol. 11, issue 2, pp. 12.1:12.19 , doi: 10.1145/3231743, I.F.: 1.409.
 57. R. Gupta, M. S. Hashmi, "High Impedance Transforming Simplified Balun Architecture in Microstrip Technology," *Wiley Microwave and Optical Technology Letters (MOTL)*, 2018, vol. 60, issue 12, pp. 3019-3023 , doi: <https://doi.org/10.1002/mop.31450> , I.F.: .0.93.
 58. R. Gupta, M. H. Maktoomi, V. V. Singh, M. S. Hashmi, "High Impedance Transforming Dual-Band Balun with Isolation and Output-ports Matching", *Journal of Progress in Electromagnetics (PIER)*, 2019, vol. 81, , pp.121-126 , doi: 10.2528/PIERL18111604 , I.F.: 2.45.
 59. D. Rano, M. S. Hashmi, "A modified inter-digital EBG reflector for wireless body area network applications," *Wiley Microwave and Optical Technology Letters (MOTL)*, 2019, vol. 64, issue 4. pp. 912-919, doi: <https://doi.org/10.1002/mop.31695>, I.F.:0.948.
- 

- 
60. M. A. Maktoomi, M. S. Hashmi, F. M. Ghannouchi, "On the Dual-Frequency Impedance and Admittance Characteristic of Multi-Section Commensurate Transmission-Line," *IEEE Transactions on Circuits and Systems (TCAS - II)*, 2017, vol. 64, issue.6, pp. 665 - 669, doi: 10.1109/TCSII.2016.2604425, I.F.: 3.25.
 61. M. A. Maktoomi, M. S. Hashmi, F. M. Ghannouchi, "A Dual-Band Port Extended Branch-Line Coupler and Mitigation of the Band-Ratio and Power Division Limitations," *IEEE Transactions on Components, Packaging and Manufacturing Technology (TCPMT)*, 2017, vol. 7, issue 8, pp. 1313 - 1323, doi: 10.1109/TCPMT.2017.2661864, I.F.: 1.29.
 62. M. A. Maktoomi, A. P. Yadav, M. S. Hashmi, F. M. Ghannouchi, "Performance Enhancement of Dual-Frequency Impedance Matching Networks Using Dual-Frequency Property of Two-Section Transmission-Line Terminated into a Real Impedance," *IET Journal Microwaves, Antennas & Propagation*, 2017, vol. 11, issue. 10 pp. 1415 - 1423, DOI: 10.1049/iet-map.2016.0941, I.F.: 2.03.
 63. S. M. M. Moghaddam, K. R. Rao, G. Tiwari, P. Biyani, "Simultaneous bus transit route network and frequency setting search algorithm", *Journal of Transportation Engineering*, 2019, vol. 145, issue. 4, doi: 10.1061/JTEPBS.0000229, I.F.:2.2.
 64. S. K. Biswas, A. G. Dempster, "Approximating Sample State Vectors Using the ESPT for Computationally Efficient Particle Filtering," *IEEE Transactions on Signal Processing*, 2019, vol. 67, no. 7, pp. 1918 - 1928, doi: 10.1109/TSP.2019.2897955, I.F.: 5.23.
 65. R. D. Yates, S. K. Kaul, "The Age of Information: Real-Time Status Updating by Multiple Sources," in *IEEE Transactions on Information Theory*, 2018, vol. 65, issue 3, pp.1807-1827, doi: 10.1109/TIT.2018.2871079, I.F.: 3.125.
 66. S. Gopal, S. K. Kaul, S. Roy, "Optimizing City-Wide White-Fi Networks in TV White Spaces," in *IEEE Transactions on Cognitive Communications and Networking*, 2018, vol. 4, issue 4, pp. 749 - 763, doi: 10.1109/TCCN.2018.2872052.
 67. M Gulati, FS Parizi, E. Whitmire, S Gupta, S. S Ram, A Singh, SN Patel, "CapHarvester: A stick-on capacitive energy harvester using stray electric field from AC power lines," *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 2018, vol. 2, issue 3, doi: <https://doi.org/10.1145/3264920>.
 68. S. Vishwakarma, S. S. Ram, "Dictionary learning with low computational complexity for classification of human micro-Dopplers across multiple carrier frequencies," *IEEE Access*, 2018, vol. 6, pp. 29793 - 29805, doi: 10.1109/ACCESS.2018.2843391, IF: 4.098.
 69. S.Garg, S. Saurabh, "Improving the scalability of SOI-based Tunnel FETs using Ground Plane in Buried Oxide", in *IEEE Journal of the Electron Devices Society*, 2019, vol. 7, pp. 435 - 443, doi: 10.1109/JEDS.2019.2907314, I. F.: 2.000.
 70. S. Saurabh, H. Shah, S. Singh, "Timing Closure Problem: Review of Challenges at Advanced Process Nodes and Solutions" *IETE Technical Review*, 2018, pp.1-14, doi: 10.1080/02564602.2018.1531733, I. F.: 1.618.
 71. S. Banerjee, S. Garg, S. Saurabh, "Realizing logic functions using single Double-Gate Tunnel FETs: A simulation study", *IEEE Electron Device Letters*, 2018, vol. 39, issue 5, pp. 773-776 2018, doi: 10.1109/LED.2018.2819205, I. F.: 3.753.
 72. S. H. Gade, S. S. Ram, S. Deb, "Millimeter wave wireless interconnects in deep submicron chips: Challenges and opportunities", *Integration, the VLSI Journal*, 2019, vol. 64, pp.127-136, doi: <https://doi.org/10.1016/j.vlsi.2018.09.004>, I.F.: 1.15.
- 

- 
73. N. Wadhwa, P. G. Bahubalindrani, K. Chapagai, J. Goes, S. Deb, P. Barquinha, “6th Order Differential Sallen-and-Key Switched Capacitor LPF using a-IGZO TFTs”, *International Journal of Circuit Theory and Applications (IJCTA)*, 2019, vol. 47, issue 5, pp.32-42, doi:10.1002/cta.2576, I.F.:2.0.
 74. W. Singh, S. Deb, “Biopotential Acquisition Unit For Energy Efficient Wearable Health Monitoring“, *IET Cyber-Physical Systems: Theory & Applications*, 2018, vol. 3, issue 2, pp. 73 – 80, doi: 10.1049/iet-cps.2017.0071.
 75. S. H. Gade, S. Deb, “HyWin: Hybrid Wireless NoC with Sandboxed Sub-networks for CPU/GPU Architectures”, *IEEE Transactions on Computers (TC)*, 2017, vol. 66, issue: 7, pp. 1145 – 1158, doi: 10.1109/TC.2016.2643668, I.F.: 3.13.
 76. W. Singh, A. Shukla, S. Deb, A. Majumdar, “Energy Efficient EEG Acquisition and Reconstruction for a Wireless Body Area Network,” *Integration, the VLSI Journal*, 2017, vol. 58, pp. 295-302, doi: <https://doi.org/10.1016/j.vlsi.2016.08.006>, I.F.: 1.15.
 77. H. K. Mondal, S. H. Gade, M. S. Shamim, S. Deb, A. Ganguly, “Interference-Aware Wireless Network-on-Chip Architecture using Directional Antennas”, *IEEE Transactions on Multi-Scale Computing Systems (TMSCS)*, 2017, vol. 3, issue: 3, pp. 193-205, doi: 10.1109/TMSCS.2016.2595527, I.F.: 0.65.
 78. S. J. Darak, C. Moy, J. Palicot, “Distributed Decision Making Policy for Frequency Band Selection Boosting RF Energy Harvesting Rate in Wireless Sensor Nodes,” in *Wireless Networks (Springer)*, 2018, vol. 24, issue. 8, pp. 3189-3203, DOI: <https://doi.org/10.1007/s11276-017-1529-7>, I.F.: 2.4.
 79. H. Joshi, S. J. Darak, Y. LOUET, “Spectrum Blind Recovery and Application in Non-Uniform Sampling Based Automatic Modulation Classifier,” in *Circuits, Systems, and Signal Processing*, 2018, vol. 37, issue 8, pp. 3457-3486, doi:10.1007/s00034-017-0715-2, I.F.: 1.922.
 80. R. Kumar, S. J. Darak, A. Sharma R. Tripathi, “Two-Stage Decision Making Policy for Opportunistic Spectrum Access and Validation on USRP Testbed,” in *Wireless Networks (Springer)*, 2018, vol. 24, issue 5, pp. 1509–1523, doi: <https://doi.org/10.1007/s11276-016-1420-y>, I.F.: 2.4.
 81. N. Jain, A. Gupta, V. A. Bohara “PCI-MDR: Missing Data Recovery in Wireless Sensor Networks using Partial Canonical Identity Matrix,” in *IEEE Wireless Communications Letters*, 2019, vol. 8, issue 3, pp. 673 – 676, doi: 10.1109/LWC.2018.2882403, I.F.: 2.449.
 82. N. Jain, V. A. Bohara, A. Gupta “iDEG: Integrated Data and Energy Gathering Framework for Practical Wireless Sensor Networks using Compressive Sensing,” in *IEEE Sensors Journal*, 2019, vol. 19, issue 3, pp. 1040 – 1051, doi: 10.1109/JSEN.2018.2878788, I.F.: 2.617.
 83. P. Aggarwal, V. A. Bohara, "End-to-End Theoretical Evaluation of a Nonlinear MIMO-OFDM System in the Presence of Digital Predistorter" in *IEEE Systems Journal*, 2018. vol. 13, issue 3 pp. 2309 – 2319, doi: 10.1109/JSYST.2018.2872609, I.F.: 4.463.
 84. P. Aggarwal, V. A. Bohara, "Analytical Characterization of Dual-Band Multi-User MIMO-OFDM System with Nonlinear Transmitter Constraints" in *IEEE Transactions on Communications*, vol. 66, issue 10, pp. 4536 – 4549, doi: 10.1109/TCOMM.2018.2840697, I.F.: 5.69.
 85. T. Kalluri, M. Peer, V. A. Bohara, D. B. da Costa, U. S. Dias, “Cooperative Spectrum Sharing Based Relaying Protocols With Wireless Energy Harvesting Cognitive User,” *IET Communications*, 2018, vol. 12, issue 7, pp. 838 – 847, doi: 10.1049/iet-com.2017.0218, I.F.: 1.443.
 86. V Ravindran, J Nacher, T Akutsu, M Ishitsuka, A Osadcenco, V Sunitha, G. Bagler, J-M Schwartz, D Robertson, “Network controllability analysis of intracellular signalling reveals viruses are actively controlling molecular systems”, *Scientific Reports*, 2019, vol.9, issue 2066, pp. 1-11, doi: 10.1038/s41598-018-38224-9, I.F.: 4.122.


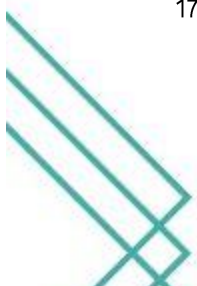
- 
87. Rakhi NK, R Tuwani, J Mukherjee, G. Bagler, “Data-driven analysis of biomedical literature suggests broad-spectrum benevolence of culinary herbs and spices”, PLoS ONE, 2018, vol. 13, issue 5 , pp. 1-20, doi: <https://doi.org/10.1371/journal.pone.0198030> , I.F.: 2.766.
 88. R. Kumar, G. Nagpal, V. Kumar, SS Usmani, P. Agrawal, GPS Raghava, “HumCFS: a database of fragile sites in human chromosomes”, BMC Genomics, 2019, vol. 19, issue 9, doi: 10.1186/s12864-018-5330-5, I.F.: 3.5.
 89. S. Ahmad, M.M. Gromiha, G.P.S. Raghava, C. Schönbach, S. Ranganathan, “APBioNet's annual International Conference on Bioinformatics (InCoB) returns to India in 2018”. BMC Genomics, 2019, vol. 19 , issue 9, pp., doi: 10.1186/s12864-019-5582-8. I.F.: 3.5.
 90. P. Agrawal, S. Kumar, A. Singh, G.P.S. Raghava, I.K .Singh, “NeuroPIpred: a tool to predict, design and scan insect neuropeptides”, Scientific Report, 2019, vol. 9 , issue 1 , pp., doi:10.1038/s41598-019-41538-x, I.F.: 4.10.
 91. S.S. Usmani, P. Agrawal, M. Sehgal, P.K. Patel, G.P.S. Raghava, “ImmunoSPdb: an archive of immunosuppressive peptides”, Database (Oxford), 2019, vol. 2019, doi: 10.1093/database/baz012, I.F.: 3.68.
 92. P. Agrawal, H. Singh, H.K. Srivastava, S. Singh, G. Kishore, G.P.S Raghava, “Benchmarking of different molecular docking methods for protein-peptide docking”, BMC Bioinformatics, 2019, vol. 2019, issue 13, doi: 10.1186/s12859-018-2449-y, I.F.: 2.51.
 93. P. Agrawal, S. Patiyal, R. Kumar, V. Kumar, H. Singh, P.K. Raghav, G.P.S Raghava, “ccPDB 2.0: an updated version of datasets created and compiled from Protein Data Bank”, Database (Oxford), 2019, vol. 2019, doi: 10.1093/database/bay142, I.F.: 3.68.
 94. P. Agrawal, G.P.S. Raghava, “Prediction of Antimicrobial Potential of a Chemically Modified Peptide From Its Tertiary Structure”, Frontiers in Microbiology, 2018, issue 9, doi: 10.3389/fmicb.2018.02551, I.F.: 4.25.
 95. G. Nagpal, S.S. Usmani, G.P.S. Raghava, “A Web Resource for Designing Subunit Vaccine Against Major Pathogenic Species of Bacteria”, Frontiers in Immunology, 2018, issue. 9, doi: 10.3389/fimmu.2018.02280., I.F.:4.71.
 96. S.S. Usmani, S. Bhalla, G.P.S Raghava, “Prediction of Antitubercular Peptides from Sequence Information Using Ensemble Classifier and Hybrid Features”, Frontiers in Pharmacology, 2018, issue. 9, doi:10.3389/fphar.2018.00954m, I.F.:3.84.
 97. P. Agrawal, P.K. Raghav, S. Bhalla, N. Sharma, G.P.S Raghava, “Overview of Free Software Developed for Designing Drugs Based on Protein-Small Molecules Interaction”, Current Topics in Medicinal Chemistry, 2018, vol. 18, issue 13, pp. 1146-1167, doi : 10.2174/1568026618666180816155131, I.F.: 3.4.
 98. G. Nagpal, K. Chaudhary, P. Agrawal, G.P.S. Raghava, “Computer-aided prediction of antigen presenting cell modulators for designing peptide-based vaccine adjuvants”, Journal of Translational Medicine, 2018, vol. 16, issue. 1, doi:10.1186/s12967-018-1560-1, I.F.: 3.24.
 99. D. Mathur, S. Singh, A. Mehta, P. Agrawal, G.P.S. Raghava, “In silico approaches for predicting the half-life of natural and modified peptides in blood”, PLoS One, 2018, vol. 13 , issue 6, doi: 10.1371/journal.pone.0196829, I.F.: 2.8.
 100. S. Pahil, N. Taneja, HR Ansari, G.P.S. Raghava, “In silico analysis to identify vaccine candidates common to multiple serotypes of Shigella and evaluation of their immunogenicity”, PLoS One, 2017, vol. 12, issue 8, doi: 10.1371/journal.pone.0180505, I.F. 2.8 .
- 

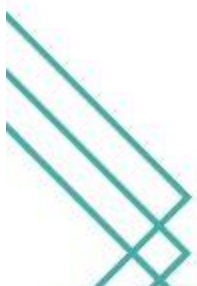
- 
101. A. Nagori, L.S. Dhingra, A. Bhatnagar, R. Lodha, T. Sethi, “Predicting Hemodynamic Shock from Thermal Images using Machine Learning,” *Scientific Reports*, 2019, vol. 9, no. 1, doi: 10.1038/s41598-018-36586-8, I.F.: 4.122.
102. K. Sikri, P. Duggal, C. Kumar, S. D. Batra, A. Vashist, A. Bhaskar, K. Tripathi, T. Sethi, A. Singh, J. S. Tyagi, “Multifaceted remodeling by vitamin C boosts sensitivity of Mycobacterium tuberculosis subpopulations to combination treatment by anti-tubercular drugs,” *Redox Biology*, 2018, vol.15, doi: 10.1016/j.redox.2017.12.020, I.F.: 7.793.
103. A. Sharma, E. Y. Cao, V. Kumar, X. Zhang, H. S. Leong, A. M. L. Wong, N. Ramakrishnan, M. Hakimullah, H. M. V. Teo, F. T. Chong, S. Chia, M. T. Thangavelu, X. L. Kwang, R. Gupta, J. R. Clark, G. Periyasamy, N. G. Iyer, R. DasGupta, “Longitudinal single-cell RNA sequencing of patient-derived primary cells reveals drug-induced infidelity in stem cell hierarchy”, *Nature Communications*, 2018, vol. 9, issue 1 , pp. 4931, doi: 10.1038/s41467-018-07261-3, I.F.: 11.88.
104. A. Sharma, T. Sidana, “On the structure and distances of repeated root constacyclic codes of prime power lengths over finite commutative chain rings”, *IEEE Transactions on Information Theory* , 2019, vol. 65 , issue: 2 , pp. 1072 – 1084, doi: 10.1109/TIT.2018.2864293, I.F: 3.2.
105. A. Sharma, V. Chauhan, H. Singh, “Multi-twisted codes over finite fields and their dual codes”, *Finite Fields and their Applications*, 2018, vol. 51, pp. 270-297, doi: https://doi.org/10.1016/j.ffa.2018.01.012, I.F.:1.254.
106. A. Sharma, T. Kaur, “Enumeration formulae for self-dual, self-orthogonal and complementary-dual quasi-cyclic codes over finite fields”, *Cryptography and Communications* , 2018, vol. 10, issue 3, pp. 401-435, doi: https://doi.org/10.1007/s12095-017-0228-7, I.F.:1.099.
107. H. Singh, R. Kaur, A. Gangadharan, A. K. Pandey and six others, “Neo-Bedside Monitoring Device for Integrated Neonatal Intensive Care Unit (iNICU)”, *IEEE Access*, 2018, vol. 7, pp. 7803-7813 , doi: 10.1109/ACCESS.2018.2886879, I.F.: 4.09.
108. B. Roy, S. Govindarajan, R. Raman, S. Ray, “Packing and Covering with Non-Piercing Regions”, *Discrete & Computational Geometry* , 2018, vol. 60, issue 2, pp. 471-492, doi: https://doi.org/10.1007/s00454-018-9983-2, I.F.: 0.741.
109. P. Aurora, M. Jena, R. Raman, “Constant factor approximation for the weighted partial degree bounded edge packing problem”, *Journal of Combinatorial Optimization*, 2018, vol. 36, issue 4, pp. 1243-1261, doi: https://doi.org/10.1007/s10878-017-0206-1, I.F.: 0.816.
110. S. Chaubey, K. P. Koutsaki, A. Zaharescu, “Monotonicity Properties of L-functions”, *Mathematische Nachrichten*, 2019, vol. 292, issue 6, pp. 1238-1245, doi: https://doi.org/10.1002/mana.201700485, I.F.:0.85.
111. S. Chaubey, A. Tamazyian, A. Zaharescu, “Lattice point problems involving index and joint visibility”, *Proceedings of the American Mathematical Society*, 2019, vol. 147, issue 8, pp.3273-3288 , doi: https://doi.org/10.1090/proc/14462, I.F.: 0.89.
112. A. Khan, “From Autonomy to Anonymity: Information Technology Policy and Changing Politics of the Media System in Indian Democracy”, in Ohm, B (et al. eds). *Critical Explorations of Media Modernity in India. In the Culture Unbound: Journal of Current Cultural Research*, 2018, vol. 10, issue 3, pp. 405-425, doi: 10.3384/cu.2000.1525.2018103405.
- 


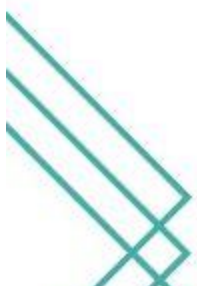
- 
113. H. Rashid, P. Singh, A. Singh, “I-BLEND: A Campus Scale Commercial and Residential Buildings Electrical Energy Dataset” , Scientific Data. 6:190015, Nature Scientific Data, 2019, doi: <https://www.nature.com/articles/sdata201915>, I. F.: 5.862.
 114. S. Grover, L. Jamir, M. Duggal, P. Singh, R. Nehra, “Epidemiology of behavioral (mobile) addiction among school students in rural India”, Asian Journal of Psychiatry, 2019, vol. 40, pp.30-38, doi: <https://doi.org/10.1016/j.ajp.2019.01.009> , I. F. : 1.06.
 115. H. Rashid, P. Singh, V. Stankovic, L. Stankovic, “ Can Non-intrusive Load Monitoring be used for Identifying Appliance’s Anomalous Behavior?”, Applied Energy, 2019, vol. 238, pp. 796-805, doi: <https://doi.org/10.1016/j.apenergy.2019.01.061> , I. F. : 7.90.
 116. G. Bajaj, R. Agarwal, P. Singh, N.S Georgantas, V. Issarny, “ W1H for IoT Semantics” , IEEE Access, 2018, vol. 6, pp. 65488 – 65506, doi: <https://doi.org/10.1109/ACCESS.2018.2878100>, I. F.: 4.09.
 117. K. S. Deb, A. Tuli, M. Sood, R. Chadda, R. Verma, S. Kumar, R. Ganesh, P. Singh, “Is India ready for mental health apps (MHapps)? A quantitative-qualitative exploration of stakeholder perspective of Smartphone based solutions for managing severe mental illnesses in low resource settings”, PLOS ONE, 2018, vol. 13, issue 9, doi :<https://doi.org/10.1371/journal.pone.0203353>, I. F. : 2.806.
 118. B. Duggal, J. Subramanyam, M. Duggal, P. Singh, M. R. Lochan, A. Avhad, U. Ram, S. Sen, A. Agrawal, S. Saunik, K. Desiraju. “Survival outcomes post percutaneous coronary intervention: Why the hype about stent type? Lessons from a healthcare system in India”, PLOS ONE, 2018, vol. 13, issue. 5, doi: <https://doi.org/10.1371/journal.pone.0196830> ,I. F : 2.806.
 119. M. Duggal, V. Chakrapani, L. Liberti, V. Satyanarayana, M. Verghese, M. Ranganathan, Mohini, P. Singh, P. Chandra, N. Reynolds, “Acceptability of mobile phone-based nurse-delivered counseling intervention to improve HIV treatment adherence and self-care behaviors among HIV-positive women in India”,2018, AIDS Patient Care and STDs., 2018, vol. 32, issue 9, doi: <https://doi.org/10.1089/apc.2017.0315> ,I. F.: 3.742.
 120. Y. Yin, R. R. Shah, G. Wang, R. Zimmermann, “Feature-based Map Matching for Low-Sampling-Rate GPS Trajectories.” In ACM Transactions on Spatial Algorithms and Systems, 2018, vol. 4, issue 2, pp. 4:1 – 4:24, doi:10.1145/3223049.
 121. D. Mahata, J. Friedrichs, R. R. Shah, J. Jiang, “Detecting Personal Intake of Medicine from Twitter.” In IEEE Intelligent Systems on Affective Computing and Sentiment Analysis, 2018, vol. 33, issue 4 , pp. 87 – 95, doi: 10.1109/MIS.2018.043741326, I.F.: 4.46.
 122. R.R. Shah, et al., “Geometry-based Localization for GPS Outage in Vehicular Cyber Physical Systems.” In IEEE Transactions on Vehicular Technology, 2018, vol. 67, issue. 5, pp.3800-3812, doi: 10.1109/TVT.2018.2796242, I.F: 5.339.
 123. D. Mahata, J. Friedrichs, R. R. Shah, J. Jiang, “Detecting Personal Intake of Medicine from Twitter”, In IEEE Intelligent Systems on Affective Computing and Sentiment Analysis, 2018, vol. 33 , issue: 4, pp.87 – 95, doi: 10.1109/MIS.2018.043741326, I.F.:4.46.
 124. R. Kumar, S. J. Darak, M. Hanawal, A. Sharma, R. Tripathi, “Distributed Algorithm for Learning to Coordinate in Infrastructure-less Network,” in IEEE Communications Letters, 2019, vol. 23, issue. 2, pp. 362-365, doi: 10.1109/LCOMM.2018.2890226, I F: 3.45.


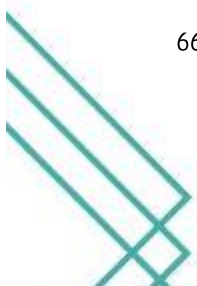
Conference Papers


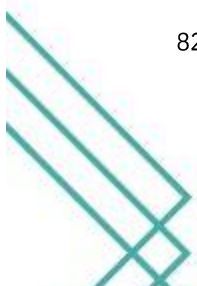
1. S. Singh, R. Kaushal, A. B. Buduru, P. Kumaraguru, “KidsGUARD: fine grained approach for child unsafe video representation and detection”, Proceedings of the 34th ACM/SIGAPP Symposium on Applied Computing, 2019.


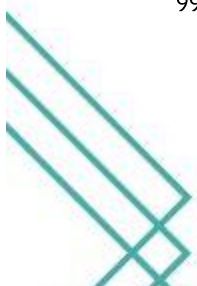
- 
2. D. Gupta, I. Sen, N. Sachdeva, P. Kumaraguru A. B. Buduru, “Empowering First Responders through Automated Multimodal Content Moderation”, IEEE International Conference on Cognitive Computing (ICCC), 2018.
 3. D. Bera, “Amplitude amplification for operator identification and randomized classes,” in Computing and Combinatorics - 24th International Computing and Combinatorics Conference (COCOON), 2018.
 4. D. Bera, F. Esposito, M. Pendyala, “Maximal labelled-clique and click-biclique problems for networked community detection,” in IEEE Global Communications Conference (GLOBECOM), 2018.
 5. K. Gupta, T. Jain, D. Sengupta, “Texture Classification Using Deep Convolutional Neural Network with Ensemble Learning” , In International Conference on Mining Intelligence and Knowledge Exploration 2018 .
 6. M. Mukherjee, S.A.Naqvi, A. Verma, D. Sengupta, A. Parnami, “MenstruLoss: Sensor For Menstrual Blood Loss Monitoring”, Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, 2019.
 7. P. Drozdowski, S. Garg, C. Rathgeb, M. G. Barrero, D. Chang, C. Busch, “Privacy-Preserving Indexing of Iris-Codes with Cancelable Bloom Filter-based Search Structures,” 26th European Signal Processing Conference (EUSIPCO), 2018.
 8. S. Chhabra, P. Majumdar, R. Singh, M. Vatsa, “Data Fine-tuning”, In Proceedings of AAAI Conference on Artificial Intelligence, 2019.
 9. S. Chhabra, R. Singh, M. Vatsa, G. Gupta, “Anonymizing k Facial Attributes via Adversarial Perturbations”, International Joint Conference on Artificial Intelligence, 2018.
 10. R. Keshari, M. Vatsa, R. Singh, A. Noore, “Learning Structure and Strength of CNN Filters for Small Sample Size Training”, International Conference on Computer Vision and Pattern Recognition, 2018.
 11. I. Joshi, A. Anand, M. Vatsa, R. Singh, S. D. Roy, P. Kalra, “Latent Fingerprints Enhancement using Generative Adversarial Networks”, In Proceedings of IEEE Winter Conference on Applications of Computer Vision, 2019.
 12. R. Garg, Y. Baweja, S. Ghosh, R. Singh, M. Vatsa, N. Ratha, “Heterogeneity Aware Deep Embedding for Mobile Periocular Recognition”, In Proceedings of IEEE International Conference on Biometrics: Theory, Applications and Systems, 2018.
 13. M. Singh, S. Nagpal, M. Vatsa, R. Singh, “Learning A Shared Transform Model for Skull to Digital Face Image Matching”, In Proceedings of IEEE International Conference on Biometrics: Theory, Applications and Systems (IEEE BTAS), 2018.
 14. S. Suri, A. Sankaran, M. Vatsa, R. Singh, “On Matching Faces with Alterations due to Plastic Surgery and Disguise”, In Proceedings of IEEE International Conference on Biometrics: Theory, Applications and Systems, 2018.
 15. I. Agarwal, A. Goel, A. Singh, M. Vatsa, R. Singh, “SmartBox: Benchmarking Adversarial Detection and Mitigation Algorithms with Application to Face Recognition”, In Proceedings of IEEE International Conference on Biometrics: Theory, Applications and Systems, 2018.
 16. A. Jain, M. Vatsa, R. Singh, “On Detecting Synthetic Alterations using GANs and Retouching”, In Proceedings of IEEE International Conference on Biometrics: Theory, Applications and Systems, 2018.
 17. A. Agarwal, M. Vatsa, R. Singh, N. Ratha, “Are Image Agnostic Universal Adversarial Perturbation Difficult to Detect?”, In Proceedings of IEEE International Conference on Biometrics: Theory, Applications and Systems, 2018.
- 


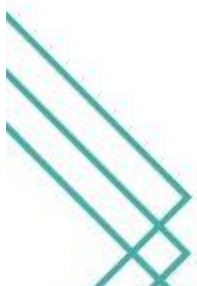
- 
18. I. Gupta, I. Bhalla, R. Singh, M. Vatsa, “Scattering Transform for Matching Surgically Altered Face Images”, In Proceedings of International Conference on Pattern Recognition, 2018.
 19. A. Lakra, P. Tripathi, R. Keshari, M. Vatsa, R. Singh, “SegDenseNet: Iris Segmentation for Pre and Post Cataract Surgery”, In Proceedings of International Conference on Pattern Recognition, 2018.
 20. S. Siddiqui, M. Vatsa, R. Singh, “Face Recognition for Newborns, Toddlers and Pre-School Children: A Deep Learning Approach”, In Proceedings of International Conference on Pattern Recognition, 2018.
 21. A. Malhotra, R. Singh, M. Vatsa, V. M. Patel, Person Authentication using Head Images, In Proceedings of IEEE Winter Conference on Applications of Computer Vision, 2018.
 22. D. Yadav, N. Kohli, S. Yadav, M. Vatsa, R. Singh, A. Noore, Iris Presentation Attack via Textured Contact Lens In Unconstrained Environment, In Proceedings of IEEE Winter Conference on Applications of Computer Vision, 2018.
 23. O. Sharma, T. Arora, A. Khattar, “Robust material graphs for automated transfer function Design in volume rendering,” In Proceedings Pacific Graphics, 2018.
 24. S. Gupta, D. Srivatsav, A.V. Subramanyam, P. Kumaraguru, “Attentional Road Safety Networks”, 26th IEEE International Conference on Image Processing (ICIP), 2019.
 25. S. Gupta, P. Kumaraguru, T. Chakraborty, “ MalReG: Detecting and Analyzing Malicious Retweeter Groups”, ACM India Joint International Conference on Data Science and Management of Data (CoDS-COMAD), 2019.
 26. R. Kapoor, Y. Kumar, K. Rajput, R. Shah, P. Kumaraguru, R. Zimmermann, “Mind Your Language: Abuse and Offense Detection for Code-Switched Languages”, 32nd AAAI Conference on Artificial Intelligence, 2019.
 27. A. Verma, A. Wadhwa, N. Singh, S. Beniwal, R. Kaushal, P. Kumaraguru, “Followee Management: Helping users follow the right users on Online Social Media”, International Workshop on Social Human Behavior Analysis through Online Social Media (co-located with ASONAM), 2018.
 28. H. Choudhary, A. Pathak, R. Shah, P. Kumaraguru, “Neural Machine Translation for English-Tamil”, Empirical Methods in Natural Language Processing, 2018.
 29. K. Singh, I. Sen, P. Kumaraguru, “A Twitter Corpus for Hindi English Code Mixed Dataset for POS Tagging”, Sixth International Workshop on Natural Language Processing for Social Media (SocialNLP), 2018.
 30. I. Sen, A. Aggarwal, S. Mian, S. Singh, P. Kumaraguru, A. Datta, “Worth its Weight in Likes: Towards Detecting Fake Likes on Instagram”, short paper in the 10th ACM Conference on Web Science, 2018.
 31. S. Gupta, D. Kuchhal, P. Gupta, M. Ahamad, M. Gupta, P. Kumaraguru, “Under the Shadow of Sunshine: Characterizing Spam Campaigns Abusing Phone Numbers Across Online Social Networks”, 10th ACM Conference on Web Science, 2018.
 32. A. Aggarwal, B. Viswanath, L. Zhang, S. Kumar, A. Shah, P. Kumaraguru, “I Spy with My Little Eye: Analysis and Detection of Spying Browser Extensions”, At IEEE European Symposium on Security and Privacy, 2018.
 33. I. Sen, A. Aggarwal, S. Mian, S. Singh, P. Kumaraguru, A. Datta, “Worth its Weight in Likes: Towards Detecting Fake Likes on Instagram”, At 10th ACM Conference on Web Science, 2018.
 34. S. Gupta, D. Kuchhal, P. Gupta, M. Ahamad, M. Gupta, P. Kumaraguru, “Under the Shadow of Sunshine: Characterizing Spam Campaigns Abusing Phone Numbers Across Online Social Networks”, At 10th ACM Conference on Web Science, 2018.
- 


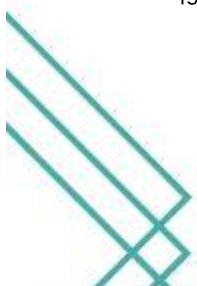
- 
35. A. Becker, F. Fagerholm, R. Mohanani, A. Chatzigeorgiou, “Temporal Discounting in Technical Debt: How do Software Practitioners Discount the Future?” In Proceedings of the International Conference on Technical Debt. IEEE/ACM, 2019.
 36. G. Allabadi, A. Dhar, A. Bashir, R. Purandare, “METIS: Resource and Context-Aware Monitoring of Finite State Properties.” In Proceedings of the 18th International Conference on Runtime Verification, 2018.
 37. D. Khanna, S. Sharma, C. Rodríguez, R. Purandare. “Dynamic Symbolic Verification of MPI Programs.” In Proceedings of the 22nd International Symposium on Formal Methods , 2018.
 38. R. Jain, S. Prathik, V. Vinayakara, R. Purandare. “A search system for mathematical expressions on software binaries.” In Proceedings of the IEEE/ACM 15th International Conference on Mining Software Repositories, 2018.
 39. H. Jha, S. Anand, M. Singh, V. S. R. Veeravasaru, “Disentangling Factors of Variation with Cycle-Consistent Variational Auto-encoders”, European Conference on Computer Vision (ECCV), 2018.
 40. I. Shukla, S. Uppal, S. Bhagat, S. Anand, P. Turaga, "Geometry of Deep Generative Models for Disentangled Representations", Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP), 2018.
 41. L. Tiwari, S. Anand, "DGSAC: Density Guided Sampling and Consensus," 2018 IEEE Winter Conference on Applications of Computer Vision (WACV), 2018.
 42. L. Tripathi, A. Mohan, S. Anand, M. Singh, "Adversarial Learning of Raw Speech Features for Domain Invariant Speech Recognition," 2018 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2018.
 43. T. Yadav, A. Sinha, D. Gosain, P. Sharma, S. Chakravarty, “Where The Light Gets In: Analyzing Web Censorship Mechanisms in India”, In Proceedings of ACM Internet Measurements Conference (IMC), 2018.
 44. P. Chalermsook, S. Das, G. Even, B. Laekhanukit, D. Vaz, “Survivable Network Design for Group Connectivity in Low-Treewidth Graphs”, Approximation Algorithms for Combinatorial Optimization (APPROX), 2018.
 45. I. Gupta, K. Singh, S. Chakrabarti, T. Chakraborty, “Multi-task Learning for Target-dependent Sentiment Classification”, Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2019.
 47. I. Gupta, T. Chakraborty, S. Chakrabarti, “GIRNet: Interleaved Multi-Task Recurrent State Sequence Models”, 33rd AAAI Conference on Artificial Intelligence (AAAI), 2019
 48. A. Chetan, B. Joshi, H. Dutta, T. Chakraborty, “CoReRank: Ranking to Detect Users Involved in Blackmarket-based Collusive Retweeting Activities”, 12th ACM International Conference on Web Search and Data Mining (WSDM), 2019.
 49. T. Chowdhury, T. Chakraborty, “CQASUMM: Building References for Community Question Answering Summarization Corpora”, ACM India Joint International Conference on Data Sciences and Management of Data (CoDS-COMAD), 2019.
 50. P. Agarwal, R. Verma, A. Agarwal, T. Chakraborty, “DyPerm: Maximizing Permanence for Dynamic Community Detection”, Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2018.
 51. S. Sikdar, T. Chakraborty, S. Sarkar, N. Ganguly, A. Mukherjee, “ComPAS: Community Preserving Sampling for Streaming Graphs”, International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2018.
- 

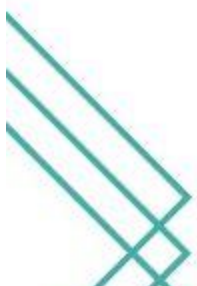
- 
52. I. Anand, K. Gorde, J. Moniz, N. Park, T. Chakraborty, B. Chu, “Phishing URL Detection with Oversampling based on Text Generative Adversarial Networks”, IEEE Big Data, 2018.
 53. H. S. Dutta, A. Chetan, B. Joshi, T. Chakraborty, “Retweet Us, We Will Retweet You: Spotting Collusive Retweeters Involved in Blackmarket Services”, IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2018.
 54. S. Hong, N. Park, T. Chakraborty, H. Kang, S. Kwon, “PAGE: Answering Graph Pattern Queries via Knowledge Graph Embedding”, International Conference on Big Data, 2018.
 55. R. Kaur , V. Goyal, V. M. V. Gunturi, “Finding the Most Navigable Path in Road Networks: A Summary of Results”, 29th International Conference on Database and Expert Systems Applications, DEXA (1) 2018.
 56. Max Grossman, Vivek Kumar, Nick Vrvilo, Zoran Budimlic, Vivek Sarkar, “A Pluggable Framework for Composable HPC Scheduling Libraries”, in Proceedings of IEEE, International Parallel and Distributed Processing Symposium Workshops (IPDPSW), 2017.
 57. D. Singh, S. Vishwakarma, S. S. Ram, “Simulation of the radar cross-section of dynamic human motions using virtual reality data and ray tracing,” 2018 IEEE Radar Conference, 2018.
 58. S. Vishwakarma, S. S. Ram, "Mitigation of through-wall interference in radar images using denoising autoencoders," 2018 IEEE Radar Conference (RadarConf), 2018.
 59. A. Singh , A. Srivastava, V. A. Bohara "On Feasibility of VLC Based Car-to- Car Communication Under Solar Irradiance and Fog Conditions", Communication and Computing in Connected Vehicles and Platooning (C3VP) ACM MobiCom, 2018.
 60. S. K. Biswas, A. Mitra, A. Srivastava, "Challenges in designing satellite constellation for providing uninterrupted network security through Quantum Key Distribution at a larger geographic region", in 69th International Astronautical Congress, 2018.
 61. M. S. Sayed, H. M. H. Shalaby, R. K. Pokharel, Basma E. Abu-elmaaty, A. Srivastava, “Silicon-on-Insulator Fundamental to First-Order Dual Polarization Mode Converter based on Si-Si₃N₄ Phase Plate Waveguide”, IEEE International Conference on Transport Optical Networks (ICTON) 2018.
 62. M. E. Shawky, M. A. El-Shimy, H. M. H. Shalaby, A. Mokhtar, El-S. A. El- Badawy, A. Srivastava, “Optical Channel Estimation Based on Kalman Filtering for VLC Systems Adopting DCO-OFDM”, IEEE International Conference on Transport Optical Networks (ICTON) 2018.
 63. M. A. Hasabelnaby, H. A. I. Selmy, M. Dessoky, A. Srivastava “Performance enhancement of relayed hybrid FSO/mmW fronthaul network in C-RAN architecture”, IEEE International Conference on Transport Optical Networks (ICTON), 2018.
 64. R. Ahmad, A. Srivastava, “Throughput improvement in CAP-based indoor VLC system using GMSK filters” Photonics West 2019.
 65. D. N. Anwar, A. Srivastava, V. A. Bohara, G. Subrahmanya, V. R. Rao, “Power and SER analysis of VLC- and RF-based links in indoor environment” Photonics West 2019.
 65. C. Chatterjee, N. Sarma, A. Mitra, A. Srivastava, N. Stol, E. Oki, “Performance of dispersion-reduced wavelength assignment in wavelength-routed optical networks” IEEE International Conference on Transport Optical Networks (ICTON), 2018.
 66. R. Ahmad, A. Srivastava, H. A. I. Selmy, “Advanced modulation techniques for low PAPR in VLC system” IEEE International Conference on Transport Optical Networks (ICTON), 2018.
- 


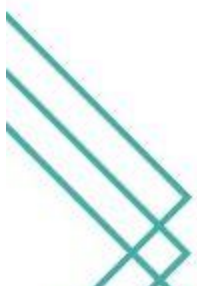
- 
67. I. Singh, A. Srivastava, V. A. Bohara, G. S. V.RK Rao, “Outage and power saving analysis for hybrid cellular-visible light communication and direct cellular downlink” IEEE International Conference on Transport Optical Networks (ICTON), 2018.
 68. R. Kaur, A. Srivastava, B. C. Chatterjee, A. Mitra, B. Ramamurthy “Performance analysis of fairness oriented dynamic bandwidth algorithm in integrated fibre-wireless architecture based on XG-PON and Wi-Fi” IEEE International Conference on Transport Optical Networks (ICTON), 2018.
 69. D. N. Anwar, A. Srivastava, ‘VLC based safe, low-cost and accurate healthcare system for Video EEG using colour constellation scheme’ SPIE Photonics, 2018.
 70. P. Aggarwal, R. Ahmad, V. A Bohara, A. Srivastava, “Adaptive Predistortion Technique for nonlinear LED with Dimming Control in VLC” IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), 2017.
 71. A. Majumdar, “Deeply Coupled Graph Structured Autoencoder for Domain Adaptation”, Proceedings of the ACM India Joint International Conference on Data Science and Management of Data, 2019.
 72. J. Maggu, E. Chouzenoux, G. Chierchia, A. Majumdar, “Convolutional Transform Learning”, in Proceedings of International Conference on Neural Information Processing of the Asia-Pacific Neural Network Society (ICONIP), 2018.
 73. J. Maggu, A. Majumdar, “Semi-Coupled Transform Learning”, in Proceedings of International Conference on Neural Information Processing of the Asia-Pacific Neural Network Society (ICONIP), 2018.
 74. J. Lewis, V. Singhal, A. Majumdar, “Adaptive Deep Dictionary Learning for MRI Reconstruction”, in Proceedings of International Conference on Neural Information Processing of the Asia-Pacific Neural Network Society (ICONIP), 2018.
 75. J. Maggu, A. Majumdar, E. Chouzenoux, “Transformed Locally Linear Manifold Clustering”, in Proceedings of 26th European Signal Processing Conference (EUSIPCO), 2018.
 76. I. Paul, A. Majumdar, D. Mukherjee, “Discriminative Autoencoder”, in Proceedings of 25th IEEE International Conference on Image Processing (ICIP), 2018.
 77. K. Seemakurthy, J. Gubbi, S. Deshpande, B. Purushothaman, A. Majumdar, “Multi-spectral missing label prediction via restoration using deep residual dictionary learning,” in Proceedings of 2018 International Joint Conference on Neural Networks (IJCNN), 2018.
 78. K. Gupta, B. Bhowmick, A. Majumdar, “Coupled Analysis Dictionary Learning to inductively learn inversion: Application to real-time reconstruction of Biomedical signals”, in Proceedings of 2018 International Joint Conference on Neural Networks (IJCNN), 2018.
 79. S. Jain, A. Majumdar, “Doubly Label Consistent Autoencoder: Accounting User and Item Metadata in Recommender Systems”, in Proceedings of 2018 International Joint Conference on Neural Networks (IJCNN), 2018.
 80. M. Gupta, A. Majumdar, “Robust Supervised Sparse Coding for Non-Intrusive Load Monitoring”, in Proceedings of 2018 International Joint Conference on Neural Networks (IJCNN), 2018.
 81. S. Maheshwari, A. Majumdar, “Hierarchical Autoencoder for Collaborative Filtering”, in Proceedings of 2018 International Joint Conference on Neural Networks (IJCNN), 2018.
 82. V. Singhal, A. Majumdar, “Supervised Deep Dictionary Learning for Single Label and Multi-Label Classification”, in Proceedings of 2018 International Joint Conference on Neural Networks (IJCNN), 2018.
- 


- 
83. S. Viswakarma, S. S. Ram, A. Majumdar, "Mitigation of Through-Wall Interference in Radar Images Using Denoising Autoencoders", in Proceedings of 2018 IEEE Radar Conference (RadarConf.), 2018.
 84. S. Sharma, K. Deka, V. Bhatia, A. Gupta, "SCMA Codebook Based on Optimization of Mutual Information and Shaping Gain", IEEE Global Communications Conference (IEEE GLOBECOM), 2018.
 85. P. Kumar, P. Nagar, C. Arora, A. Gupta, "U-SEGNET: Fully Convolutional Neural Network Based Automated Brain Tissue Segmentation Tool", IEEE International Conference on Image Processing (ICIP), 2018.
 86. S. Sharma, A. Bishnu, A. Gupta, V. Bhatia, "Improved Noncoherent Receiver for Joint Range and Symbol Estimation," International Conference on Signal Processing & Communication (SPCOM), 2018.
 87. S. Sharma, V. Bhatia A. Gupta, "An Iterative Transmitted Reference UWB Receiver for Joint ToA and Data Symbols Estimation," IEEE International Conference on Communications (ICC), 2018.
 88. I. Mamgain, A. Grover, "A 81nW Error Amplifier Design for Ultra Low Leakage Retention Mode Operation of 4Mb SRAM Array in 40nm LSTP Technology," 2018 31st IEEE International System-on-Chip Conference (SOCC), 2018.
 89. S. Chandok, H. Joshi, S. Darak, A V Subramanyam," LSTM Guided Modulation Classification and Experimental Validation for Sub-Nyquist Rate Wideband Spectrum Sensing," In Proceeding of International Conference on Communication Systems & Networks (COMSNETS), 2019.
 90. Dhruv Mullick, A V Subramanyam, Sabu Emmanuel, "Online SVM and backward model validation based visual tracking," In Proceedings of IEEE International Conference on Image Processing (ICIP), 2017.
 91. A. Mehrish, A V Subramanyam, M. Kankanhalli, "Multimedia signatures for vehicle forensics," In Proceedings of IEEE International Conference on Multimedia and Expo (ICME), 2017.
 92. K. Kansal, A V Subramanyam, "Transfer Learning of Spatio-Temporal Information Using 3D-CNN for Person Re-identification," In Proceedings of IEEE International Conference on Systems, Man, and Cybernetics (SMC), 2018.
 93. A. Khusro, M. S. Hashmi, A. Q. Ansari, "Exploring Support Vector Regression for Modeling of GaN HEMT," IEEE MTT-S International Microwave and RF Conference (IMaRC), 2018.
 94. A. Saxena, M. S. Hashmi, "Design of pi-Structure Dual-Band Matching Network With Unequal Susceptance Cancellation Stubs," IEEE MTT-S International Microwave and RF Conference (IMaRC), 2018.
 95. R. Gupta, V. V. Singh, M. S. Hashmi, "High Impedance Transforming Dual-Band Wilkinson Power Divider," IEEE MTT-S International Microwave and RF Conference (IMaRC), 2018.
 96. R. Gupta, M. A. Maktoomi, M. S. Hashmi, "Dual-Band Wilkinson Power Divider with Port Extensions," IEEE MTT-S International Microwave and RF Conference (IMaRC), 2018.
 97. A. Kumar, M. S. Hashmi, A. Q. Ansari, "Investigation of Appropriate Wavelets for Computational Electromagnetics Problems," IEEE 5th International Workshop on Computing, Electromagnetics, and Machine Intelligence (CEMi), 2018.
 98. A. Saxena, D. Banerjee, M. S. Hashmi, F. M. Ghannouchi, "Design of Compact Dual-Band Matching Network with Single Unequal Susceptance Cancellation Stub," IEEE Asia Pacific Microwave Conference (APMC), 2018.
 99. D. Banerjee, M. S. Hashmi, F. M. Ghannouchi, "A Novel Design of a Tri-Band Impedance Matching Network Based on the Concept of an Impedance Bridge," IEEE Asia Pacific Microwave Conference (APMC), 2018.
- 

- 
100. S. Verma, D. Rano, M. S. Hashmi, V. Bohara, "A High Q Dual E-Shaped Defected Ground Structure for Wireless Power Transfer Applications," IEEE Asia Pacific Microwave Conference (APMC), 2018.
 101. V. Sharma, S. Malhotra, M. S. Hashmi, "An Emerging Application Centric RFID Framework Based on New Web Technology," IEEE 13th RFID-Technology and Applications Conference (RFID-TA), 2018.
 102. V. Sharma, M. S. Hashmi, "Orientation Independent Printable Backscattering Chipless RFID Tags Based on L-Resonator," IEEE 48th European Microwave Conference (EuMC), 2018.
 103. D. Banerjee, A. Saxena, M. S. Hashmi, F. M. Ghannouchi, "A Compact Dual-band Impedance Matching Network Based on All-Pass Coupled Lines," IEEE 61st Midwest Symposium on Circuits and System (MWSCAS), 2018.
 104. V. Sharma, M. S. Hashmi, "Simple Chipless RFID Tag Configurations," IEEE 7th Asia Pacific Conference on Antenna and Propagation (APCAP), 2018.
 105. D. Rano, M. S. Hashmi, "A New Miniaturized Slot-loaded EBG Cell for Cancelling Surface Waves in PCBs," IEEE 7th Asia Pacific Conference on Antenna and Propagation (APCAP), 2018.
 106. D. Rano, M. S. Hashmi, "A New Lumped Circuit Modelling Technique for EBG Based on Surface Current Flow," IEEE 7th Asia Pacific Conference on Antenna and Propagation (APCAP), 2018.
 107. V. Sharma, A. Vithalkar, M. S. Hashmi, "Power Saving Method in Chipless RFID Reader for IoT Applications," IEEE 7th Asia Pacific Conference on Antenna and Propagation (APCAP), 2018.
 108. A. Khusro, M. S. Hashmi, A. Q. Ansari, "Empirical Device Scaling and RF Performance Perspective: A Small Signal Model for GaN High Electron Mobility Transistor," IEEE 2nd International Conference on Computing and Network Communications (CoCoNet), 2018.
 109. D. Kupirev, K. Dautov, M. S. Hashmi, "Programmable Gain, Temperature Compensated Logarithmic Amplifier based on Current Conveyor and OTA," IEEE 2nd International Conference on Computing and Network Communications (CoCoNet), 2018.
 110. Banerjee, A. Saxena, M. S. Hashmi, "A Novel Compact Tri-band Matching Network With Enhanced Frequency Ratios," IEEE MTT-S International Microwave and RF Conference (IMaRC), 2017.
 111. D. Rano, D. Banerjee, M. S. Hashmi, "A Miniaturized Three-Stage Dual-Frequency Matching Network," IEEE MTT-S International Microwave and RF Conference (IMaRC), 2017.
 112. S. Verma, D. Rano, M. S. Hashmi, "A Novel Miniaturized Band Stop Filter Using Fractal Type Defected Ground Structure (DGS)," IEEE 29th Asia Pacific Microwave Conference (APMC), 2017.
 113. A. Mishra, A. Khusro, M. S. Hashmi, A. Q. Ansari, "Modeling and Parameter Extraction method for AlGaIn/GaN HEMT," IEEE International Conference on Multimedia and Communication Technologies (IMPACT), 2017.
 114. V. Sharma, M. S. Hashmi, "Design of LNA using On-Chip Inductors for Ku-Band Applications," IEEE International Conference on Multimedia and Communication Technologies (IMPACT), 2017.
 115. D. Rano, M. S. Hashmi, "Interdigital Based EBG: Compact and Polarization Stable for MBAN and Wi-Fi," IEEE 12th European Conference on Antenna and Propagation (EuCAP) 2018.
 116. D. Banerjee, A. Saxena, M. S. Hashmi, "A Simple Robust Equal-Split T-Junction Power Divider at Three Frequencies," IEEE 24th National Conference on Communications (NCC), 2018.
- 

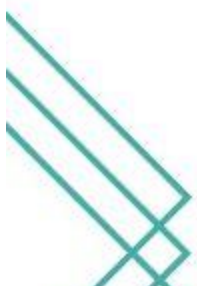
- 
117. A. Saxena, D. Banerjee, M. S. Hashmi, "A Novel Meandered Coupled-Line Tri-Band Impedance Matching Network," IEEE 24th National Conference on Communications (NCC), 2018.
 118. M.K. Pal, R. Bhati, A. Sharma, S.K. Kaul, S. Anand, P.B. Sujit "A reinforcement learning approach to jointly adapt vehicular communications and planning for optimized driving", IEEE International Conference on Intelligent Transportation Systems, 2018.
 119. P. Maini, K. Yu, P. Totekar, P.B. Sujit, "Persistent monitoring with refueling on a terrain using a team of aerial and ground robots", IEEE/RAS International Conference on Intelligent Robots and Systems, 2018.
 120. P. Maini, G. Gupta, P. Totekar, P.B. Sujit, "Visibility-based monitoring of a path using a heterogeneous robot team", IEEE/RAS International Conference on Intelligent Robots and Systems, 2018
 121. N. Sharma, S. Thukral, S. Aine, P.B. Sujit, "A virtual bug planning technique for 2D robot path planning", Proceedings of the American Control Conference, 2018.
 122. R. Jain, R. Tiwari, P. Jain, P.B. Sujit, "Distributed fault tolerant and balanced multirobot area partitioning for coverage applications", International Conference on Unmanned Aircraft Systems, 2018.
 123. P. B. Sujit, "UAV coalition formation with increased decision-making autonomy", AIAA Infotech@Aerospace, AIAA Science and Technology Forum and Exposition, 2018.
 124. A. Gautam, P.B. Sujit, S. Saripalli, "Autonomous quadrotor landing using vision and pursuit guidance", IFAC World Congress, 2017.
 125. P. Jain, R. Tiwari, S. Butail, P.B. Sujit, M.A. Goodrich, "Effect of leader placement on swarms", International Conference on Autonomous Agents and Multiagent Systems, 2017.
 126. A. Gautam, P.B. Sujit, S. Saripalli, "Adaptive pure pursuit based autonomous landing of quadrotors", 7th AHS Technical Meeting on VTOL Unmanned Aircraft Systems and Autonomy, 2017.
 127. Charul, U. Bhatt, P. Biyani, K. Rajawat, "Online variational Bayesian subspace filtering", IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2019.
 128. A. Gang, P. Biyani, A. Soni, "Towards automated single channel source separation using neural networks", In Proceeding of Interspeech, 2018.
 129. T. Shreedhar, N. Mohan, S. K. Kaul, J. Kangasharju, "QAware: A Cross-Layer Approach to MPTCP Scheduling," 2018 IFIP Networking Conference (IFIP Networking) and Workshops, 2018.
 130. S. K. Kaul, R. D. Yates, "Age of Information: Updates with Priority," 2018 IEEE International Symposium on Information Theory (ISIT), 2018.
 131. S. K. Kaul and R. D. Yates, "Status updates over unreliable multiaccess channels," IEEE International Symposium on Information Theory (ISIT), 2017.
 132. D. Jaisinghani, V. Naiak, S. Kaul, S. Roy, "Sniffer-based Inference of the Causes of Active Scanning in WiFi Networks" in National Conference on Communications (NCC), 2017.
 133. V. Agarwal, S. Saurabh, "Application of Probabilistic Spin Logic (PSL) in detecting satisfiability of a Boolean function", 20th International Symposium on Quality Electronic Design (ISQED 2019), 2019.
 134. S. Saurabh V. Vikash, "Assessing the impact of temperature and supply voltage variations in near-threshold circuits using an analytical model", ACM Great Lakes Symposium on VLSI (GLSVLSI) 2018.
- 

- 
135. S. H. Gade, S. S. Rout, R. Kashyap, S. Deb, "Reliability Analysis of On-Chip Wireless Links for Many Core WNoCs", Conference on Design of Circuits and Integrated Systems (DCIS), 2018.
 136. A. K. Mondal, R. C. Cataldo, C. Marcon, K. Martin, S. Deb, J-Ph. Diquet, "Broadcast- And Power-aware Wireless NoC for Barrier Synchronization in Parallel Computing", 31st IEEE International System-on-Chip Conference (SOCC), 2018.
 137. S. H. Gade, S. S. Rout, S. Deb, "On-Chip Wireless Channel Propagation: Impact of Antenna Directionality and Placement on Channel Performance", 12th IEEE/ACM International Symposium on Networks-on-Chip (NOCS), 2018.
 138. M. Sinha, H. Gns, W.Singh, S. Deb, "Data-flow Aware CNN Accelerator with Hybrid Wireless Interconnection", 29th Annual IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP), 2018.
 139. N. Wadhwa, P. B. Sujit, S. Deb, "A PVT Insensitive Low-power Differential Ring Oscillator", 22nd International Symposium on VLSI Design and Test (VDATE), 2018.
 140. N. Wadhwa, P. Bahubalindrani, S. Deb, P. Barquinha, "A Comparative Study of On-Chip Clock Generators Using a-IGZO TFTs for Flexible Electronic Systems", IEEE International Flexible Electronics Technology Conference (IFETC), 2018.
 141. A. Rehani, S. Deb, P. G. Bahubalindrani, B. Odedara, S. Bojja, "A High-Efficient Current-Mode PWM DC-DC Buck Converter Using Dynamic Frequency Scaling", IEEE International Symposium on VLSI (ISVLSI), 2018.
 142. S. H. Gade, M. Sinha, S. S. Rout, S. Deb, "Enabling Reliable High Throughput On-Chip Wireless Communication for Many Core Architectures", IEEE International Symposium on VLSI (ISVLSI), 2018.
 143. S. H. Gade, H. K. Mondal, S. Deb, "High Bandwidth Off-Chip Memory Access Through Hybrid Switching and Inter-Chip Wireless Links", IEEE International Symposium on VLSI (ISVLSI), 2018.
 144. S. H. Gade, S. S. Rout, M. Sinha, H. K. Mondal, W. Singh, S. Deb, "A Utilization Aware Robust Channel Access Mechanism for Wireless NoCs", IEEE International Symposium on Circuits and Systems (ISCAS), 2018.
 145. S. S. Rout, H. K. Mondal, R. Juneja, S. H. Gade S. Deb, "Dynamic NoC Platform for Varied Application Needs", accepted at The 19th International Symposium on Quality Electronic Design (ISQED), 2018.
 146. W. Singh, Y. Gupta, P. Jivani, S. Deb, "Energy Efficient Biopotential Acquisition Unit for Wearable Health Monitoring Applications", International Symposium on Quality Electronic Design (ISQED), 2017.
 147. A. K. Mondal, S. Kaushik, S. H. Gade, S. Deb, "Energy-efficient Transceiver for Wireless NoC," 30th International Conference on VLSI Design (VLSID), 2017.
 148. R. Kumar, A. Yadav, S. J. Darak, M. Hanawal, "Trekking Based Distributed Algorithm for Opportunistic Spectrum Access in Infrastructure-less Network," 16th International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt 2018), 2018.
 149. S. Sawant, M. Hanawal, S. J. Darak, R. Kumar, "Distributed Learning Algorithms for Coordination in a Cognitive Network in Presence of Jammers," 16th International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt), 2018.
 150. Gyan Deep, S. J. Darak, P. Garg, "Spectral Parameter Approximation Based Tunable Digital Filters on Zynq SoC," IEEE International Symposium on Circuits and Systems (ISCAS), 2018.
- 

- 
151. A. Joshi, R. Kumar, A. Yadav, S. J. Darak, "Distributed Algorithm for Dynamic Spectrum Access in Infrastructure-less Cognitive Radio Network," IEEE Wireless Communications and Networking Conference (WCNC), 2018.
 152. N. Agrawal, S. J. Darak, F. Bader, "Reconfigurable Filtered OFDM Waveform for Next Generation Air-to-Ground Communications," IEEE/AIAA 36th Digital Avionics Systems Conference (DASC), 2017.
 153. N. Modi, C. Moy, P. Mary, S. J. Darak, "Proof-Of-Concept: Spectrum And Energy Efficient Multi-User CR Network Via Vacancy And Quality Based Channel Selection," 32nd General Assembly and Scientific Symposium of the URSI (URSI-GASS), 2017.
 154. S. K. Biswas, B. Southwell, A. G. Dempster, "Performance analysis of Fast Unscented Kalman Filters for Attitude Determination," in Advances in Control and Optimization of Dynamic Systems, 2018.
 155. N. Jain, A. Gupta, V. A. Bohara, "TS-MC: Two Stage Matrix Completion Algorithm for Wireless Sensor Networks," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2019
 156. N. Gupta, D. Kumar, V. A. Bohara, "A Novel User Selection and Resource Allocation Framework for Cooperative D2D Communication," IEEE Global Communications Conference (GLOBECOM), 2018.
 157. P. Aggarwal, F. Jabin, V. A. Bohara, "Nonlinear Amplification Effects on Dual Band Multi-User MIMO-OFDM Systems," 2018 IEEE International Conference on Communications (ICC), 2018.
 158. R. Tuwani, N. Sahoo, G. Bagler, "Computational models for the evolution of world cuisines", DECOR workshop at the International Conference on Data Engineering (ICDE), 2018.
 159. N. Singh, G. Bagler, "Data-driven investigations of culinary patterns in traditional recipes across the world", DECOR workshop at the International Conference on Data Engineering (ICDE), 2018.
 160. T. Sethi, A. Mittal, S. Maheshwari, S. Chugh, "Learning to Address Health Inequality in the United States with a Bayesian Decision Network," Association for the Advancement of Artificial Intelligence (AAAI), 2019.
 161. R. Raman, S. Ray, "Planar Support for Non-piercing Regions and Applications", European Symposium on Algorithm, 2018.
 162. S. S. Basu, "A paraconsistent sub-logic of intuitionistic propositional logic", presented at the 8th Indian Conference on Logic and its Applications (ICLA), 2019.
 163. V. R. Suri, S. Majid, S. Foo, H.T. Dumauual-Sibal, Y.K. Chang, "Understanding health literacy through the lens of phronesis: The case of coronary artery disease patients," In Information Literacy in Everyday Life. In: Kurbanoğlu S. et al. (eds) Information Literacy in Everyday Life. ECIL, 2018.
 164. V.R. Suri, N. Rangaswamy, T. Joshi, M. Joshi, S. Nanavati, "Tool smiths in off-shored work: socio-technical system of quality testing in India," In Proceedings of the Tenth International Conference on Information and Communication Technologies and Development, 2019.
 165. A. Arora, K. Mathur, A. Saini, A. Parnami, "Gehna: Exploring the Design Space of Jewellery as an Input Modality", In Proceedings of the Conference on Human Factors in Computing Systems (CHI) 2019.
 166. A. Arora, A. Saini, N. Mehra, V. Jain, S. Shrey, Aman Parnami, "VirtualBricks: Exploring a Scalable, Modular Toolkit for Enabling Physical Manipulation in VR" , In Proceedings of the Conference on Human Factors in Computing (CHI), 2019.
- 

- 
167. H. Rashid, N. Batra, P. Singh, “Rimor: Towards Identifying Anomalous Appliances in Buildings”, In Proceedings of the 5th ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys), 2018.
 168. I. Tuli, S. Chopra, N. Kumar, P. Singh, “Learning from and with Menstrupedia: Towards Menstrual Health Education in India”, In Proceedings of the 21st 11 ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW), 2018.
 169. D. Yadav, M. Gupta, M. Chetlur, P. Singh, “ Automatic Annotation of Voice Forum Content for Rural Users and Evaluation of Relevance”, In Proceedings of the 1st ACM SIGCAS Conference on Computing and Sustainable Societies, 2018.
 170. H. Rashid, P. Singh, “Monitor: An Abnormality Detection Approach in Buildings Energy Consumption”, IEEE 4th International Conference on Collaboration and Internet Computing, 2018.
 171. A. Bajaj, P. Singh, “Load-Balanced Task Allocation for Improved System Lifetime in Mobile Crowdsensing”, In Proceedings of the 19th IEEE international conference on Mobile data management (MDM), 2018.
 172. D. Yadav, P. Singh, K. Montague, V. Kumar, D. Sood, M. Balaam, D. Sharma, M. Duggal, T. Bartindale, D. Varghese, P. Olivier, “Sangoshthi: Empowering Community Health Workers through Peer Learning in Rural India” , Proceedings of the 26th International Conference on World Wide Web (WWW), 2017.
 173. D. Mahata, J. Kuriakose, R. R. Shah, R. Zimmermann, “Key2Vec: Automatic Ranked Keyphrase Extraction from Scientific Articles using Phrase Embeddings.” In North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT), 2018.


Workshop Papers

1. V. Kushwaha, M. Singh, R. Singh, M. Vatsa, N. Ratha, R. Chellappa, “Disguised Faces in the Wild”, In Proceedings of International Conference on Computer Vision and Pattern Recognition First International Workshop on Disguised Faces in the Wild, 2018.
 2. M. Singh, S. Nagpal, M. Vatsa, R. Singh, “Identity Aware Synthesis for Cross Resolution Face Recognition”, In Proceedings of International Conference on Computer Vision and Pattern Recognition - Workshop on Biometrics, 2018.
 3. P. Majumdar, S. Chhabra, R. Singh, and M. Vatsa, “On Detecting Domestic Abuse via Faces”, IEEE Conference on Computer Vision and Pattern Recognition Workshop on Analysis and Modeling of Faces and Gestures, 2018.
 4. D. Yambay, A Czajka, K Bowyer, M Vatsa, R Singh, A Noore, N Kohli, D. Yadav, S. Schuckers, “Review of iris presentation attack detection competitions”, Handbook of Biometric Anti- Spoofing, 2019.
 5. S. Chopra, A. Malhotra, M. Vatsa, R. Singh, “Unconstrained Fingerphoto Database”, In Proceedings of International Conference on Computer Vision and Pattern Recognition - Workshop on Biometrics, 2018.
 6. D. Yadav, N. Kohli, A. Agarwal, M. Vatsa, R. Singh, A. Noore, “Fusion of Handcrafted and Deep Learning Features for Large-scale Multiple Iris Presentation Attack Detection” In Proceedings of International Conference on Computer Vision and Pattern Recognition - Workshop on Biometrics, 2018.
 7. D. Jaisinghani, G. Singh, H. Fulara, M. Maity, V. Naik, “Elixir: Efficient Data Transfer in WiFi-based IoT Nodes.” In Proceedings of the 24th Annual International Conference on Mobile Computing and Networking (MobiCom) , ACM, 2018.
- 

8. K. Singh, I. Sen, P. Kumaraguru, "Language Identification and Named Entity Recognition in Hinglish Code Mixed Tweets", ACL Student Research Workshop 2018.
9. S. Sinha, M. Agarwal, M. Vatsa, R. Singh, Anand, "Exploring Bias in Primate Face Detection and Recognition", In: Leal-Taixé L., Roth S. (eds) Computer Vision – ECCV 2018 Workshops. European Conference on Computer Vision (ECCV), 2018
10. M. Hanawal, S. J. Darak, "Distributed Learning in Ad-Hoc Networks with Unknown Number of Players ," in ACM SIGMETRICS Performance Evaluation Review, 2018.
11. K. Joshi, V. A. Bohara and P. Aggarwal "Design and Implementation of LTE Advanced Underlay Device to Device Communication Framework" Demo, Annual International Conference on Mobile Computing and Networking, (ACM MobiCom), 2018.
12. S. Poonia, S. Chawla, S. Kaushik, D. Sengupta, "Pathway Informatics.", Encyclopedia of Bioinformatics and Computational Biology, 2018.
13. R. Kapoor, K. Rajput, Y. Kumar, R. R. Shah, P. Kumaraguru, R. Zimmermann, "Mind Your Language: Abuse and Offence Detection for Code-Switched Languages", Association for the Advancement of Artificial Intelligence (AAAI), 2019.
14. Y. Kumar, M. Aggarwal, P. Nawal, Sh. Satoh, R. R. Shah, R. Zimmerman, "Harnessing AI for Speech Reconstruction using Multi-view Silent Video Feed", In ACM Multimedia, 2018.
15. Y. Kumar, A. Sharma, A. Khaund, A. Kumar, P. Kumaraguru, R. R. Shah, R. Zimmermann, "IceBreaker: Solving Cold Start Problem for Video Recommendation Engines." In Multimodal Representation, Retrieval, and Analysis of Multimedia Content (MR2AMC), 2018.
16. P. Mathur, R. Sawhney, R. R. Shah, D. Mahata, "Did you offend me? Classification of Offensive Tweets in Hinglish Language." In 2nd Workshop on Abusive Language Online (ALW2), 2018.
17. R. Sawhney, P. Manchanda, P. Mathur, R. R. Shah, R. Singh, R. Sawhney, "Exploring and Learning Suicidal Ideation Connotations on Social Media with Deep Learning." In 9th Workshop on Computational Approaches to Subjectivity, Sentiment & Social Media Analysis (WASSA), 2018.
18. P. Mathur, M. Ayyar, S. Chopra, S. Shahid, L. Mehnaz, R. R. Shah, "Identification of Emergency Blood Donation Request on Twitter." In Social Media Mining for Health Applications (SMM4H), 2018.
19. P. Mathur, R. R. Shah, R. Sawhney, D Mahata, "Detecting Offensive Tweets in Hindi-English Code-Switched Language." In Annual Meeting of the Association for Computational Linguistics (ACL), 2018.
20. S. Anand, R. Gupta, R. R. Shah, P. Kumaraguru, "Fully Automatic Approach to Identify Factual or Fact-checkable Tweets." In FIRE working notes, 2018.
21. D. Gaur, M. Ayyar, A. K. Singh, R. Ratn Shah, "Multilingual Author Profiling from SMS." In FIRE working notes, 2018.
22. A. K. Pathak, H. Choudhary, R. R. Shah, "NMT based Tamil Translation." In FIRE working notes, 2018.

Books and Book Chapters

1. A. Majumdar, Compressed Sensing for Engineers. CRC Press, 2018.
2. M. Vatsa, R. Singh, A. Majumdar, Deep Learning in Biometrics, CRC Press/Taylor and Francis, ISBN 9781138578234, 2018.

- 
3. S. Gupta, S. Sachdeva, P. Dewan, P. Kumaraguru, “Cbl: Improving Credibility of User-Generated Content on Facebook”, Sixth International Conference on Big Data Analytics 2018 (BDA), 2018.
 4. S. Dutta, T. Chakraborty, D. Das, “How did the discussion go: Discourse act classification in social media conversations”, Linking and Mining Heterogeneous and Multi-view Data, Springer, 2019.
 5. R. R. Shah, D. Mahata, V. Choudhary, R. Bajpai, “Multimodal Semantics and Affective Computing from Multimedia Content” In IGI Global, 2017.

Appendix B: Tools & Technology Developed

Ganesh Bagler

1. WEB-BASED DATABASE: FlavorDB: A database of flavor molecules.
2. ANDROID APP: FlavorDB Food Pairing App
3. SpiceRx DietRx
4. BitterSweet

Dhonghoon Chang

1. U2F/UAF

Mayank Vatsa


1. Gesture Recognition for Autonomous Driving
2. Face Recognition for Vehicles
3. DMIPA - Multiple Iris Presentation Attack Detector
4. Multimodal Face, Iris and Periocular Recognition System at a Distance
5. Face Recognition System with Resolution Variations

Ponnuram Kumaraguru

1. PhishGuru
2. Phil
3. AASMA: Advanced Application for Social Media Analytics
4. Saftie / KillFie
5. Analytics platform for National Bomb Data Centre / National Security Guard (NSG)
6. Developed a solution that will help DRDO to understand How, What, When, and Where of the DRDO employees are talking about and what is being talked about DRDO. This has been installed at the CAIR DRDO Bengaluru lab this year. Last year it was installed at the DRDO HQ. In both the installations, scientists have used it and given good feedback. This system will have only these. 2 installations.
7. Keeping the theme of Saving Lives, we have been working on Blue Whale issue also. We have built a browser plugin that deducts if users are trying to request for playing the game or playing the role of curator. This project had multiple media attention, including <http://indianexpress.com/article/india/bengaluru-project-aims-at-flagging-potential-curators-victims-of-blue-whale-challenge-5051066/>
8. WhatsFarzi
9. Bugle News
10. Awaaz
11. Facebook Profile Analyzer.

Tanmoy Chakraborty

1. Multigraph2Vec
- 

- 
2. The solution to knowledge graph for business data was given to Egregore Lab.
 3. DeFrauder

Shobha Sunder Ram

Micro-Doppler simulator of pedestrians at automotive frequencies (Matlab based simulator)

Pravesh Biyani

1. License to use the software platform for Routing algorithm for ride sharing

Pushpendra Singh

1. I-BLEND

Rajiv Ratn Shah

1. Build a deep learning model for automating car insurance claim for Humonics Global, Delhi. This model is being used by an insurance company which is the client of Humonics Global (cannot reveal the client name due to company policy) in production. Company wants to apply this technology to many other domains. We have delivered this technology to Humonics Global.
2. Build a deep learning model for automatic speech recognition for Humonics Global, Delhi. This model is being used in production of the company which has conversational agent for different applications. Company has a client which uses this technology for music on demand in Africa. Company wants to apply this technology to many other domains. We have delivered this technology to Humonics Global.
3. Build a deep learning model for automatically tagging (e.g., if the frame is part of surgery or determining which tools are used in the surgery) and subsequently reduce the size of surgery videos by automatically removing the non-relevant parts and keeping only useful parts of the videos for Humonics Global, Delhi. This is very important problem since the client of the company is a very big hospital which performs more than 10000 cataract surgeries across India. Company wants to apply this technology to many other domains. We have delivered this technology to Humonics Global.
4. Build a deep learning model for automating the early detection of Chronic Kidney Disease at the early stage using the biopsy image of kidney. We have delivered this technology to Arkana Laboratories, USA.



Appendix C : Patents

1. Application No: 201911006527
Date of filling: 19/02//2019
Title: Method and System for Post Silicon Validation
Inventors: Dr. Sujay Deb, Sidhartha Sankar Rout (Student)
Status: Filed
 2. Application No: 201911002013
Date of filling: 17/01/2019
Title: Eyewear, system and method to facilitate reading for the visually impaired
Inventors: Dr. Aman Parnami, Raunak Srikant Mokhasi, Shahid Nawaz Khan, Anjanay Kirti Gour, Bharath Kumar Thulasidoss
Status: Filed
 3. Application No: 201811042117
Date of filling: 08/11/2018
Title: Finding Rare Samples in a Given Dataset
Inventors: Dr. Debarka Sengupta, Aashi Jindal (IIT-Student), Prashant Gupta (IIT-Student), Prof. Jayadeva (Faculty, IIT-Delhi)
Status: Filed
 4. Application No: 201811033277
Date of filling: 05/09/2018
Title: Capacitive energy harvester from ac power lines
Inventors: Manoj Gulati (Student), Prof. Shwetak N. Patel (Paul G. Allen School for CSE, UW [Seattle, USA])
Status: Filed
 5. Application No: 201811025231
Date of filling: 04/07/2018
Title: Wearable device and method of operating the same to perform multiple functions seamlessly
Inventors: Dr. Aman Parnami, Sagar Khurana (Student), Paras Jain (Student), Harshit Verma (Student)
Status: Application awaiting Examination (Was filed in 2018 and published on 19/10/2018)
 6. Application No: 201811025230
Date of filling: 04/07/2018
Title: Wearable device and method of slaying insects
Inventors: Dr. Aman Parnami, Himanshu Chandana (Student)
- 

Status: Application awaiting Examination (Was filed in 2018 and published on 19/10/2018)

7. Application No: 201811008597

Date of filling: 08/05/2018

Title: A system and method for energy harvesting during analog signal sampling

Inventors: Dr. Vivek Bohara, Dr. Anubha Gupta & Neha Jain (Student)

Status: Filed

8. Application No: 201811043770

Date of filling: 21/11/2018

Title: "Kidney biopsy assessment system and method"

Inventors: Dr. Rajiv Ratn Shah, Dr. Shree Gopal Sharma (Physician, Arkana Laboratories, USA), Meghna P Ayyar (Student), Puneet Mathur (Student)

Status: Filed

Appendix D : Research Projects

New Sponsored Research Projects

| S. No | Title of the Project | Name of the PI | Funding Agencies | Total Sanction Amount Rs. (in Lakh) |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------|-------------------------------------|
| 1 | Ramanujan Fellowship | Dr. Swapna Purandre | DST-SERB | 81.00 |
| 2 | A Mobile based training platform for Aasha Workers | Prof. Pushpendra Singh | Melinda Gates Foundation | 65.00 |
| 3 | Commuter Vision: Cooperative employee transportation and scheduling | Dr. Pravesh Biyani | IT Knowledge Park; GC Karnataka | 10.00 |
| 4 | Multi-twisted codes over various finite commutative rings and their generalizations | Dr. Anuradha Sharma | SERB | 6.60 |
| 5 | Enumeration of splitting subspaces of linear transformations over finite fields | Dr. Samrith Ram | SERB | 6.60 |
| 6 | Kinetics of gastric gels: protection and transport | Dr. Sarthok Sircar | SERB | 6.60 |
| 7 | Repeated-root constacyclic codes over finite commutative chain rings and over non-principal ideal rings $\mathbb{Z}_{ps}[u]/\langle u^e - \alpha \rangle$ | Dr. Anuradha Sharma | SERB | 20.00 |
| 8 | The Sustainable Lifestyles Accelerator Catalysing Change (ACCELERATOR). | Dr. Amrit Srinivasan | Wuppertal University | 5.85 |

| | | | | |
|----|----------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------|-------|
| 9 | An In-depth Analysis of Abuses in social Media - Integrating cues from language behaviour & networks | Dr. Tanmoy Chakraborty | DST | 25.04 |
| 10 | Royal Society Commonwealth Science Conference Travel Grant | Dr. Tavpritesh Sethi | The Royal Society | 5.10 |
| 11 | Automated Deepening of Financial Asset Relationships through Online Data Sources | Dr. Tanmoy Chakraborty | Egregore Information Services Private Limited | 3.43 |
| 12 | Applying Deep Learning Techniques in Information Networks | Dr. Tanmoy Chakraborty | Hike Pvt Ltd | 3.25 |
| 13 | Understanding Collective Behaviour in Online Social Networks | Dr. Tammmoy Chakraborty | SERB | 22.57 |
| 14 | International Development & Collaboration with Jini Info Co. Ltd. for Marketing Research | Dr. Donghoon Chang | Jini Info Co. Ltd. | 1.59 |
| 15 | International Collaboration with Norma Inc. for Marketing Research | Dr. Donghoon Chang | Norma Inc. | 0.96 |
| 16 | Multi-purpose VTOL-UAV for Smart Cities desiccant systems | Dr. P. B. Sujit | Indo-US | 10.00 |
| 17 | International Development of India-Korea ICT SME's Assignment | Dr. Donghoon Chang | Nexustech Technologies | 1.58 |
| 18 | Face & Gesture Recognition for Golf-Carts | Prof. Mayank Vatsa | Yamaha Motors | 3.84 |
| 19 | Development and Implementation of an open Data Initiative for Public Transport in Delhi | Dr. Pravesh Biyani | Delhi Govt. of NCT | 5.40 |
| 20 | NIF Inspire | Incubation | National Innovation Foundation | 0.60 |
| 21 | Ramanujan Fellowship | Dr. Sneha Chaubey | SERB | 38.00 |
| 22 | Collusion Dynamics in Online Groups – Integrating Cues from Language, Behaviour and Networks (Google AI/ML Research Award) | Dr. Tanmoy Chakraborty | Google | 14.10 |
| 23 | Improving detectability of disorders using cell free DNA in plasma with Genome wide signal processing | Dr. Vibhor Kumar | DBT | 30.60 |
| 24 | FPGA based Accelerator for Digital Signal Processing | Dr. Sumit Darak | Indian Army | 5.00 |

| | | | | |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------|---------------|
| 25 | Micro-services and container approach in Control Systems: Challenges In Security | Dr. Arun Balaji Buduru | ABB Global Industries and Services Pvt Ltd. | 14.92 |
| 26 | A framework to study competing agriculture risk management policies in India | Dr. Gaurav Arora | ICMOID & SANDEE | 7.70 |
| 27 | Examination Record Management System | Incubation | Delhi Govt. | 1.00 |
| 28 | Detection and Recommendation of Events based on Analysis of Cataract Surgery Videos | Dr. Rajiv Ratn Shah | Humonics Global | 8.64 |
| 29 | Identification of network pathways for drug targeting in Multiple Myeloma from NSG data using Deep Learning | Prof. Anubha Gupta | DST | 20.10 |
| 30 | Designing a cost efficient and optimised Green Broadband Access Network for Rural India Using Fibre Wireless (FiWi) Access Network Architecture appropriate for NoFN | Prof. Anand Srivastava | Meity | 35.88 |
| 31 | Jankar- Leveraging Innovations in Governance and Accountability | Dr. Venkata Ratnadeep Suri | Goldsmith University of London | 8.15 |
| 32 | Machine Learning for Efficient Millimetre-Wave Communication | Dr. Vivek Ashok Bohara | SERB | 18.30 |
| 33 | Cooperation for innovation and exchange of good practices Capacity building in the field of Higher Education | Prof. Pushpendra Singh | European Commission /ERASMUS | 120.00 |
| 34 | Smart Visual Surveillance | Dr. A. V. Subramanyam | SERB | 24.80 |
| 35 | Harnessing Artificial Intelligence and Multimodal Information for Health & Social Virtue | Dr. Rajiv Ratn Shah | SERB | 25.55 |
| 36 | GNSS and NavIC reflectrometry for soil moisture monitoring | Dr. Sanat K. Biswas | SERB | 41.14 |
| Total | | | | 699.00 |

New Consultancy Projects

| S.No | Title of the Project | Name of the PI | Funding Agencies | Total Sanction Amount Rs. (in Lakh) |
|--------------|-------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------|-------------------------------------|
| 1 | Understanding Collusion Dynamics in online Review Forums | Dr. Tanmoy Chakraborty | Flipkart | 3.20 |
| 2 | IEEE Biometric Council - Website and Newsletter | Prof. Richa Singh | IEEE | 2.24 |
| 3 | Micro Doppler modelling and simulation for pedestrian and animal motions at 77 GHz for automotive radar applications | Dr. Shobha Sundar Ram | Continental | 9.26 |
| 4 | Identify Me: Matching Skull Images with Faces | Prof. Richa Singh | CAI Budget | 3.00 |
| 5 | AI Education | Prof. Mayank Vatsa | GAIL India | 0.10 |
| 6 | IEEE TBIOM Staff | Prof. Richa Singh | IEEE Biometric Council | 4.04 |
| 7 | Carrying out impact assessment due to breakdown of Public transport buses on traffic and wastage fuel due to congestion | Dr. Pravesh Biyani | PCRA | 5.28 |
| 8 | Harnessing Artificial Intelligence for Social Good | Dr. Rajiv Ratn Shah | Humonics Global | 8.00 |
| 9 | Transport Planning | Dr. Pravesh Biyani | DIMTS | 1.50 |
| 10 | Design Advisor to Circle of Life | Dr. Aman Parnami | My col | 1.77 |
| 11 | Database Design and Algorithm for Online store Software | Dr. Vikram Goyal | Deep Insight Blue | 5.00 |
| Total | | | | 43.39 |

Total Running Sponsored Research Projects

| S.No | Title of the Project | Name of the PI | Funding Agencies | Total Sanction Amount Rs. (Lakh) |
|------|--------------------------------------------------------------------------------------------------|----------------------------|-----------------------|----------------------------------|
| 1 | International Development Research Centre, Canada and Privacy International, UK Privacy In India | Dr. Ponnurangam Kumaraguru | Privacy International | 20.55 |

| | | | | |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------|--------|
| 2 | An Inter-Disciplinary Approach Toward building Ontology for Online Extremism | Dr. Ponnurangam Kumaraguru | DST-Indo-Ireland | 6.84 |
| 3 | Research and Exploration in Support of the proposed Project Title Use of cell phone for detecting and Controlling Infectious Diseases from National Geographic Society | Dr. Vinayak Naik | National Geographic Society | 9.86 |
| 4 | EMC: Development of distributed algorithms for incremental Sensing Communication | Dr. Amarjeet Singh | EMC Data Storage System India Pvt. Ltd | 9.60 |
| 5 | Human Sense: Towards contex aware sensing, inference and actuation for applications in Energy and Healthcare | Prof. Pushpendra Singh | Media Lab Asia | 184.41 |
| 6 | Small Cell Wi-Fi Networks For The Enterprise | Dr. Sanjit Kaul | DeitY | 88.34 |
| 7 | Creating Course Content for Privacy and Security in Online Social Media | Dr. Ponnurangam Kumaraguru | Intel Corporation | 12.19 |
| 8 | Mobile-based Diagnosis of Sleep Apnea | Dr. Vinayak Naik | DST-SERB | 51.01 |
| 9 | Google Award for School | Prof. Pankaj Jalote | Google | 9.50 |
| 10 | Mechanism, Impact and Scenario Analysis | Dr. Ponnurangam Kumaraguru | CARS: DRDO | 0.90 |
| 11 | Joint Research between EMC & IIITD | Dr. Ponnurangam Kumaraguru | EMC Data Storage System India Pvt. Ltd | 9.60 |
| 12 | ISEA Project Phase-II | Dr. Ponnurangam Kumaraguru | CDAC | 36.06 |
| 13 | Nokia Lokalization | Dr. Vinayak Naik | NOKIA | 11.52 |
| 14 | Nokia Health | Dr. Vinayak Naik | NOKIA | 6.31 |
| 15 | Integrating open sources intelligence from traditional sources and online social networks for Intelligence gathering | Dr. Ponnurangam Kumaraguru | DeitY | 168.7 |
| 16 | SRP-Irisys Company Ltd | Dr. Donghoon Chang | Irisys Company Ltd | 5.74 |
| 17 | IBM India | Prof. Mayank Vatsa | IBM | 0.90 |

| | | | | |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------|
| 18 | Algorithmic 3D Modelling and Virtual Spatial interaction | Dr. Ojaswa Sharma | DST-SERB | 27.22 |
| 19 | Efficient Algorithms for Inference in Higher Order MRF-MAP Problems | Dr. Chetan Arora | DST-SERB | 23.28 |
| 20 | Frontal Radar Imaging of Humans Behind Walls | Dr. Shobha Sundaram | AFRL | 39.48 |
| 21 | J.C. Bose Fellowship Award | Prof. G.P.S. Raghava | SERB | 136.00 |
| 22 | ExRe: Examining and Enabling Resilience for Internet Vulnerabilities of Large Organisations using Network Cartography | Dr. Sambuddho Chakravarty | Persistent Systems Pvt Ltd | 44.00 |
| 23 | Investigation of Tunnel Field-Effect Transistors for Energy Efficient Circuits | Dr. Sneha Saurabh | DST-SERB | 41.74 |
| 24 | Performance Improvement in Indoor Visible Light Communication (VLC) system using MIMO-OFDM Based Techniques | Prof. Anand Srivastava | DST | 6.30 |
| 25 | Anyang Korean Project - 2 | Dr. Donghoon Chang | Anyang | 3.99 |
| 26 | Energy and water disaggregation for Non-Intrusive load monitoring in buildings | Dr. Angshul Majumdar | DST | 24.09 |
| 27 | Self-Contained Flexible Oxide Electronics for Smart Packaging | Dr. Pydi Ganga Bahubalindrani | DST-SERB | 33.76 |
| 28 | Analysing and Measuring the Collateral Damage of an Entity of the Internet | Dr. Ponnurangam Kumaraguru | DRDO | 34.01 |
| 29 | Minimal Residual Disease Estimation in Multiple Myeloma using Image Processing: design and Development of Myelomaimager - an Automated Computer | Prof. Anubha Gupta | DST-SERB | 43.12 |
| 30 | Looking Beyond Back Propagation in Deep Learning | Dr. Angshul Majumdar | DST-CEFIPRA/CAI | 35.48 |
| 31 | An effective Multi-Task Learning Approach for context - Sensitive Speech Analysis | Dr. Arun Balaji Buduru | DRDO-CARS | 9.78 |
| 32 | Development of USB Protocol, UAF Protocol, Fingerprint & Secure USB | Dr. Donghoon Chang | Irisys Co. Ltd. | 15.61 |
| 33 | Emergency flood planning and management using unmanned aerial system | Dr. P. B. Sujit | Exter University | 149.9 |
| 34 | Ramanujan Fellowship | Dr. Tanmoy Chakraborty | SERB | 38.00 |

| | | | | |
|----|---------------------------------------------------------------------------------------------------|------------------------|---------------------------------|-------|
| 35 | NIHR Global Health Research Group on Psychosis Outcomes: The Warwick - India-Canada (WIC) Network | Prof. Pushpendra Singh | NIHR | 43.20 |
| 36 | Cartilage mechanics: multiscale modelling, analysis and scientific computing | Dr. Sarthok Sircar | SERB | 21.91 |
| 37 | MSR- Unrestricted Research Grant Air Pollution | Dr. Vinayak Naik | Microsoft | 1.56 |
| 38 | Inspire Faculty Award | Dr. Pravesh Biyani | DST | 35.00 |
| 39 | Inspire Faculty Award | Dr. Agshul Majumdar | DST | 35.00 |
| 40 | Inspire Faculty Award | Dr. Sumit Darak | DST | 35.00 |
| 41 | Inspire Faculty Award | Dr. Debarka Sengupta | DST | 13.32 |
| 42 | Inspire Faculty Award | Dr. Sujay Deb | DST | 35.00 |
| 43 | Inspire Faculty Award | Dr. Shobha Sundar Ram | DST | 35.00 |
| 44 | SSB-Honorarium | Prof. G.P.S Raghava | CSIR | 0.30 |
| 45 | Inspire Faculty Award | Dr. Abhijit Mitra | DST | 35.00 |
| 46 | Ramanujan Fellowship | Dr. Swapna Purandre | DST-SERB | 81.00 |
| 47 | A Mobile based training platform for Aasha Workers | Prof. Pushpendra Singh | Milinda Gates Foundation | 65.00 |
| 48 | Commuter Vision: Cooperative employee transportation and scheduling | Dr. Pravesh Biyani | IT Knowledge Park; GC Karnataka | 10.00 |
| 49 | Multi-twisted codes over various finite commutative rings and their generalizations | Dr. Anuradha Sharma | SERB | 6.60 |
| 50 | Enumeration of splitting subspaces of linear transformations over finite fields | Dr. Samrith Ram | SERB | 6.60 |
| 51 | Kinetics of gastric gels: protection and transport | Dr. Sarthok Sircar | SERB | 6.60 |

| | | | | |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------|-------|
| 52 | Repeated-root constacyclic codes over finite commutative chain rings and over non-principal ideal rings $\mathbb{Z}_{ps}[u]/\langle e \rangle$ | Dr. Anuradha Sharma | SERB | 20.00 |
| 53 | The Sustainable Lifestyles Accelerator Catalysing Change (ACCELERATOR). | Dr. Amrit Srinivasan | Wuppertal University | 5.85 |
| 54 | An In-depth Analysis of Abuses in social Media - Integrating cues from language behaviour & networks | Dr. Tanmoy Chakraborty | DST | 25.04 |
| 55 | Royal Society Commonwealth Science Conference Travel Grant | Dr. Tavpritesh Sethi | The Royal Society | 5.10 |
| 56 | Automated Deepening of Financial Asset Relationships through Online Data Sources | Dr. Tanmoy Chakraborty | Egrogore Information Services Private Limited | 3.43 |
| 57 | Applying Deep Learning Techniques in Information Networks | Dr. Tanmoy Chakraborty | Hike Pvt Ltd | 3.25 |
| 58 | Understanding Collective Behaviour in Online Social Networks | Dr. Tamnmoy Chakraborty | SERB | 22.57 |
| 59 | International Development & Collaboration with Jini Info Co. Ltd. for Marketing Research | Dr. Donghoon Chang | Jini Info Co. Ltd. | 1.59 |
| 60 | International Collaboration with Norma Inc. for Marketing Research | Dr. Donghoon Chang | Norma Inc. | 0.96 |
| 61 | Multi-purpose VTOL-UAV for Smart Cities desiccant systems | Dr. P. B. Sujit | Indo-US | 10.00 |
| 62 | International Development of India-Korea ICT SME's Assignment | Dr. Donghoon Chang | Nexustech | 1.58 |
| 63 | Development and Implementation of an open Data Initiative for Public Transport in Delhi | Dr. Pravesh Biyani | Delhi Govt. of NCT | 5.40 |
| 64 | NIF Inspire | Incubation | National Innovation Foundation | 0.60 |
| 65 | Ramanujan Fellowship | Dr. Sneha Chaubey | SERB | 38.00 |
| 66 | Collusion Dynamics in Online Groups – Integrating Cues from Language, Behaviour and Networks (Google AI/ML Research Award) | Dr. Tanmoy Chakraborty | Google | 14.10 |

| | | | | |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------|----------------|
| 67 | Improving detectability of disorders using cell free DNA in plasma with Genome wide signal processing | Dr. Vibhor Kumar | DBT | 30.60 |
| 68 | FPGA based Accelerator for Digital Signal Processing | Dr. Sumit Darak | Indian Army | 5.00 |
| 69 | Micro-services and container approach in Control Systems: Challenges In Security | Dr. Arun Balaji Buduru | ABB Global Industries and Services Pvt Ltd. | 14.92 |
| 70 | A framework to study competing agriculture risk management policies in India | Dr. Gaurav Arora | ICMOID & SANDEE | 7.70 |
| 71 | Examination Record Management System | Incubation | Delhi Govt. of NCT | 1.00 |
| 72 | Detection and Recommendation of Events based on Analysis of Cataract Surgery Videos | Dr. Rajiv Ratn Shah | Humonics Global | 8.64 |
| 73 | Identification of network pathways for drug targeting in Multiple Myeloma from NSG data using Deep Learning | Prof. Anubha Gupta | DST | 20.10 |
| 74 | Designing a cost efficient and optimised Green Broadband Access Network for Rural India Using Fibre Wireless (Fi-Wi) Access Network Architecture appropriate for NoFN | Prof. Anand Srivastava | Meity | 35.88 |
| 75 | Jankar- Leveraging Innovations in Governance and Accountability | Dr. Ratnadeep Suri | Goldsmith University of London | 8.15 |
| 76 | Machine Learning for Efficient Millimetre-Wave Communication | Dr. Vivek Ashok Bohara | SERB | 18.30 |
| 77 | Cooperation for innovation and exchange of good practices Capacity building in the field of Higher Education | Prof. Pushpendra Singh | European Commission /ERASMUS | 120.00 |
| 78 | Smart Visual Surveillance | Dr. A. V. Subramanyam | SERB | 24.80 |
| 79 | Harnessing Artificial Intelligence and Multimodal Information for Health & Social Virtue | Dr. Rajiv Ratn Shah | SERB | 25.56 |
| 80 | GNSS and NavIC reflectrometry for soil moisture monitoring | Dr. Sanat K. Biswas | SERB | 41.14 |
| Total | | | | 2323.14 |

Total Running Consultancy Project

| S. No. | Project Title | PI | Funding Agency | Sanction Amount |
|--------|----------------------------------------------------------|----------------------------|------------------------------------|-----------------|
| 1 | CRM-DMS for Indian Oil Corporation | Prof. Pankaj Jalote | Indian Oil Corporation | 2.50 |
| 2 | IEEE -Website Consultancy | Prof. Richa Singh | IEEE | 3.92 |
| 3 | USB-Korea Consulatancy | Dr. Donghoon Chang | Irisys Company Ltd | 4.43 |
| 4 | IEEE Consultancy | Prof. Mayank Vatsa | IEEE | 4.00 |
| 5 | IEEE Biometrics Council - Website and Social Media Pages | Prof. Richa Singh | IEEE | 0.99 |
| 6 | IEEE Biometrics Council - Newsletter Design | Prof. Mayank Vatsa | IEEE | 5.31 |
| 7 | Identify food pairing opportunities for tea | Dr. Ganesh Bagler | Unilever Pvt. Ltd | 4.27 |
| 8 | TCS Research Advisory Engagement | Dr. Angshul Majumdar | TCS | 7.00 |
| 9 | Online Routing Portal for Employee Transportation | Dr. Pravesh Biyani | Yatra | 4.40 |
| 10 | Consultancy for DOA | Dr. Shobha Sundar Ram | BEL | 8.65 |
| 11 | DSP training | Dr. Shobha Sundar Ram | Tata Advance System | 1.00 |
| 12 | Anyang Korean Project | Dr. Donghoon Chang | Anyang Creative Industry | 4.81 |
| 13 | Robert Bosch Engineering and business Solutions Limited | Dr. Ponnurangam Kumaraguru | Robert Bosch | 7.75 |
| 14 | Mycol life | Dr. Debarka Sengupta | Circle of life healthcare pvt. ltd | 10.2 |
| 15 | Anyang Korean Project -2 | Dr. Donghoon Chang | Anyang Creative Industry | 5.96 |
| 16 | Design Consultancy | Dr. Aman Parnami | Elucidata Consulting Pvt Ltd | 12.96 |
| 17 | Understanding Collusion Dynamics in online Review Forums | Dr. Tanmoy Chakraborty | Flipkart | 3.20 |

| | | | | |
|--------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|----------------------------------------|
| 18 | IEEE Biometric Council - Website and Newsletter | Prof. Richa Singh | IEEE | 2.25 |
| 19 | Micro Doppler modelling and simulation for pedestrian and animal motions at 77 GHz for automotive radar applications | Dr. Shobha Sundar Ram | Continental | 9.26 |
| 20 | Identify Me: Matching Skull Images with Faces | Prof. Richa Singh | CAI Budget | 3.00 |
| 21 | Marketing Research for IT SME Companies in Anyang City | Dr. Donghoon Chang | Plato | 1.50 |
| 22 | AI Education | Prof. Mayank Vatsa | GAIL India | 0.10 |
| 23 | IEEE TBIOM Staff | Prof. Richa Singh | IEEE Biometric Council | 4.04 |
| 24 | Carrying out impact assessment due to breakdown of Public transport buses on traffic and wastage fuel due to congestion | Dr. Pravesh Biyani | PCRA | 5.28 |
| 25 | Harnessing Artificial Intelligence for Social Good | Dr. Rajiv Ratn Shah | Humonics Global | 8.00 |
| 26 | Transport Planning | Dr. Pravesh Biyani | DIMTS | 1.50 |
| 27 | Design Advisor to Circle of Life | Dr. Aman Parnami | My col | 1.77 |
| 28 | Database Design and Algorithm for Online store Software | Dr. Vikram Goyal | Deep Blue Insight | 5.00 |
| Total | | | | 1 3 3 . 0 5 |

Appendix E : Faculty Collaborations

Academic Collaborations

A V Subramanyam

- Prof. Mohan Kankanhalli, School of Computing, National University of Singapore
- Prof. Shin'ichi Satoh, National Institute of Informatics, Japan
- Prof. Clinton Fookes and Prof. Sridha Sridharan, Queensland University of Technology

Aasim Khan

- Research partnership with Center for Sciences de Humaines (CSH, French Social Science Center in Delhi).
 - Organised and co-hosted, with CSH staff and faculty (Dr John Thomas Martelli), an academic workshop on the theme of Mediated Campaigns and Unmediated Politics in Millennial India.
 - The faculty involved from CSH was from Science Po, Paris, and they covered and funded the entire workshop with expenses in the range of 100,000 INR. The funding was handled entirely by the collaborators at the CSH.
 - Leading academics in the field of digital politics participated in the event, including Prof Christophe Jaffrelot (Sciences Po, Paris) and Prof Sahana Udupa (LMU, Germany).

Anand Srivastava

- Prof. Byrav Rammoorthy of UNL
- Research Collaboration with NILES, Cairo University Giza, Egypt (2017-2019)

Angshul Majumdar

- Emilie Chouzenoux and Jean-Christophe Pesquet (Centrale-Supelec)
- Ivan Bajic (Simon Fraser University)
- Rabab Ward (University of British Columbia)

Anubha Gupta

- Prof. Ritu Gupta (AIIMS, Delhi)-
- Dr. Ananya Sen Gupta (University of Iowa) - Signal Processing for
- Prof. S.D. Joshi (IIT Delhi)
- Dr. Vimal Bhatia (IIT Indore)
- Dr. Krishnaveni Achary and Blessin Varkey: Tamana NGO

Anuradha Sharma

- Prof. Patrick Solé, Directeur de Recherche, Dept Comelec, Telecom Paristech, Paris, France
- Prof. Vaneet Aggarwal, Associate Professor, School of Electrical and Computer Engineering and School of Industrial Engineering, Purdue University
- Prof. Hai Q. Dinh, Dept. of Applied Mathematics, Kent State University

Arun Balaji Buduru

- Prof. Kamakoti Veezhinathan, IIT-Madras
- Prof. Chester Rebeiro
- Prof. Stephen Yau, Arizona State University
- Prof. Vijay Varadharajan, The University of Newcastle-Australia

Ashish Kumar Pandey

- Vera Mikyoung Hur (University of Illinois at Urbana Champaign)
- Mathew A Johnson (University of Kansas)

Debajyoti Bera

- Prof. Subhamoy Maitra, ISI Kolkata
- Kishore Kothapalli, IIIT-Hyderabad

Debarka Sengupta

- Dr. Shyam Prabhakar, Assoc. Director, Genome Institute of Singapore
- Dr. Jeremie Poschmann, Group Leader, University of Nantes
- Prof. Dr. Lalit Kumar, HOD, Dept. of Medical Oncology
- Prof. Dr. Ritu Gupta, HOD, Laboratory Oncology Unit, AIIMS
- Prof. Stefanie Jefry, Stanford University
- Prof. Dr. Ramesh Agarwal, AIIMS-D
- Prof. Colleen Nelson, Faculty of Health, School - Biomedical Sciences, QUT, Australia

Donghoon Chang

- Graduate school of cyber security (GSCS) of Korea University
- NIST (National Institute of Standards and Technology), USA
- Sangmyung University
- College of Convergence Engineering

Ganesh Bagler

- Prof. V Sunitha, DA-IICT. Visited in April 2017
- Prof. David R Robertson, MRC-University of Glasgow.

Gaurav Arora

- David A. Hennessy (Michigan State University, U.S.A.)
- Hongli Feng (Michigan State University)
- Ruiqing Miao (Auburn University)
- Tong Wang (South Dakota State University)
- Larry Janssen (South Dakota State University)
- 2. Sambarta Dasgupta (Intuit, U.S.A)
- Peter T. Wolter (Iowa State University, U.S.A.)
- Sandip Agarwal (IISER Bhopal)

Gourab Ghatak

- Prof. David Gesbert, Professor, Eurecom Sophia-Antipolis, France
- Dr. Abhishek Gupta, Assistant Professor, IIT Kanpur
- Prof. Christophe Moy, Professor, Université de Rennes 1, IETR - CNRS UMR 6164, France

Jainendra Shukla

- Prof. G. C. Nandi, IIT Allahabad
- Dr. Arindam Dey and Dr. Chelsea Dobbins, UQ
- Dr. Jessica Korte, UQ
- Dr. Kshitij Srivastava, Assoc. Prof., MLNMC Allahabad
- Dr. Nidhi Singhal

Kiriti Kanjilal

- Dr. Felix Munoz Garcia, Associate Professor, Washington State University. (Co-author)
- Dr. Robert Rosenman, Professor, Washington State University. (Co-author)

Kaushik Kalyanaraman

- Andrea Dziubek and Edmond Rusjan at SUNY Poly, New York, United States of America
- Pankaj Jagad, Mamdouh Mohamed, and Ravi Samtaney of King Abdullah University of Science and Technology, Saudi Arabia

M S Hashmi

- Prof. Atif Shamim from KAUST
- Prof. Prof. F. M. Ghannouchi from University of Calgary, Canada
- Prof. Ramesh Pokharel of Kyushu University, Japan
- Collaborations with Dr. M. Nasimuddin from I2R Singapore
- Dr. Akmal Chaudhary from Ajman University of Science and Technology
- Collaborations with Dr. Karun Rawat of IIT Roorkee

Manohar Kumar

- Collaborated with Dr. Daniele Santoro, CEPS, University of Minho
- Collaborating with Dr. Anthony Miligan, Kings College, London
- Collaborating with Prof. Arundhati Virmani, EHES, Marseille

Mayank Vatsa

- Dr. Mona Duggal, PGI Chandigarh
- Prof. Kevin Bowyer, University of Notre Dame
- Prof. Rama Chellappa, University of Maryland, College Park
- Dr. Nalini Ratha, IBM TJ Watson
- Dr. Anush Sankaran, IBM IRL
- Prof. Afzel Noore, West Virginia University (now at TAMU-Kingsville)
- Dr. Vishal Patel, Johns Hopkins University

Mukulika Maity

- Prof. Joy Kuri, IISC Bangalore
- Prof. Venkatesh Ramaiyan, IIT Madras
- Prof. Samar Agnihotri, IIT Mandi
- Prof. Vinayak Naik, BITS Goa

Monika Arora

- Dr. N. Rao Chaganty, Old Dominion University, Virginia, USA
- Dr. Kimberly F. Sellers, Georgetown University, Washington DC, USA
- Dr. N. Rao Chaganty, Old Dominion University, Virginia, USA
- Dr. Abdel Lisser, University of Paris Sud, Paris, France
- Dr. Vikas Vikram Singh, IIT Delhi, Delhi, India

Ojaswa Sharma

- Dr. Arindam Dey, Queensland University

P B Sujit

- Srikanth Saripalli, Texas A&M
- Sivakumar Rathinam, Texas A&M
- Pratap Tokekar, Virginia Tech
- Joel George, IIT Madras
- Ashwini Ratnoo, IISc

Paro Mishra

- Manju Singh, Head, Department of Sociology, Banasthali Vidyapith, Rajasthan

Ponnurangam K.

- Dr. Kiran Garimella, MIT, USA.
- Dr. Krishna Gummadi, Max Planck Institute for Software Systems, Saarbrucken, Germany
- Dr. David Garcia, ETH Zurich

- Prof. Mustaque Ahamad, Prof. Munmun De Choudhury, GaTech, Atlanta / USA
- Prof. Anupam Joshi, Ebiquty research group at University of Maryland Baltimore County (UMBC), USA.

Pushpendra Singh

- Dr. Neha Kumar, Georgia Institute of Technology, USA
- Prof. Nancy Reynolds, John Hopkins University, USA
- Prof. Valérie Issarny, Inria-Paris, France
- Dr. Mona Duggal, PGIMER-Chandigarh, India
- Dr. Bhanu Duggal, AIIMS-Rishikesh, India
- Prof. Rakesh Chadda, AIIMS-New Delhi, India
- Prof. Mamta Sood, AIIMS-New Delhi, India

Rahul Mohanani

- Dr. Paul Ralph, Dalhousie University, Canada
- Prof. Burak Turhan, Monash University, Australia
- Prof. Christoph Becker and Dr. Fabian Fagerholm, University of Toronto, Canada

Rahul Purandare

- Prof. Subodh Sharma (IIT-Delhi)
- Prof. Anita Sarma (Oregon State University)
- Prof. Hiroshi Unno and Prof. Deepak D'Souza (IISc)

Ratn Deep Suri

- Faculty from Wee Kim Wee School of Communication and Information (WKWSCI), Nanyang Technological University (NTU), Singapore

Rajiv Raman

- Saurabh Ray, NYU Abu Dhabi

Rajiv Ratn Shah

- Prof. Roger Zimmermann, National University of Singapore, Singapore
- Dr. Yifang Yin, National University of Singapore, Singapore
- Prof. Yi Yu, National Institute of Informatics, Japan
- Prof. Shin'ichi Satoh, National Institute of Informatics, Japan
- Prof. Mukesh Prasad, University of Technology Sydney, Australia
- Prof. Omprakash Kaiwartya, Nottingham Trent University, U.K.
- Prof. Jing Jiang, Singapore Management University, Singapore
- Dr. Soujanya Poria, Nanyang Technological University, Singapore
- Prof. Junyi Jessy Li, The University of Texas at Austin, USA
- Prof. Huan Liu, The University of Texas at Austin, USA

Richa Singh

- Prof. Kevin Bowyer, University of Notre Dame
- Prof. Rama Chellappa, University of Maryland, College Park
- Dr. Nalini Ratha, IBM TJ Watson
- Dr. Anush Sankaran, IBM IRL
- Prof. Afzel Noore, West Virginia University (now at TAMU-Kingsville, USA)
- Prof. Arun Ross, Michigan State University
- Dr. Vishal Patel, Johns Hopkins University
- Dr. Mona Duggal, PGI Chandigarh

Saket Anand

- Prof. Milind Tambe, Harvard University, MA, USA
- Dr. Ryan Farrell, BYU, Utah, USA
- Prof. Y. V. Jhala and Prof. Q. N. Qureshi, Wildlife Institute of India (WII), Dehradun
- Dr. Maneesh Singh, Verisk Analytics, USA

Samrith Ram

- Y. Aubry (Institut de Mathématiques de Toulon (IMATH))
- W. Castryck (Laboratoire Painlevé, Université de Lille-1)
- S.R. Ghorpade (IIT Bombay)
- G. Lachaud (Aix Marseille University, CNRS)
- M.E. O'Sullivan (Department of Mathematics and Statistics, San Diego State University)
- Ayineedi Venkateswarlu (ISI Chennai)

Sanat K Biswas

- Professor Andrew Dempster, UNSW Sydney
- Dr. Ediz Cetin, Macquarie University, Sydney

Sanjit Kaul

- Prof. Roy Yates of Rutgers University
- Prof. Sumit Roy of University Washington
- Prof. Jussi Kangasharju of University of Helsinki

Sankha S Basu

- Associate, Theoretical Computer Science Unit, IMSc, Chennai

Sarthok Sircar

- Dr. Andrei Kotousov (Mechanical Engineering@Adelaide University)
- Dr. Giang Nyugen (Civil Engineering@Adelaide University)

Sayan Basu Roy

- Prof. Shubhendu Bhasin, IIT
- Prof. Indra Narayan Kar, IIT Delhi
- Prof. Rushikesh Kamalapurkar, Oklahoma State University, USA
- Prof. Aswin Dani, University of Connecticut, USA
- Dr. Spandan Roy, Delft University of Technology, Netherlands
- Prof. Simone Baldi, Delft University of Technology, Netherlands
- Dr. Jino Lee, IIT, Italy
- Dr. Sumit Kumar Jha, MNIT Allahabad

Shilpak Banerjee

- Philipp Kunde, Indiana University (Visiting Assistant Professor)
- Darren Wei, Penn State University (Ph.D. Student)
- Shibendu Mahata, NIT Durgapur (Ph.D. Student)

Shobha Sundar Ram

- Dr. Anshu Gupta, Continental Inc. Bangalore, India
- Dr. Kumar Vijay Mishra, Army Research Lab, University of Iowa, USA

Sneha Chaubey

- Alexandru Zaharescu (Professor, Dept. of Mathematics, University of Illinois at Urbana-Champaign, USA)
- Elena Fuchs (Associate Professor, Department of Mathematics, University of California, Davis, USA)
- Amita Malik (Postdoc, Department of Mathematics, Rutgers University)

Sriram K.

- **Dr. Ritu Gupta**, AIIMS to understand different Leukemia

Sujay Deb

- Prof. Prabhat Mishra, University of Florida
- Prof. Sudeep Pasricha, Colorado State University
- Prof. Jean-Philippe Diguët, CNRS senior researcher
- Dr. Amlan Ganguly, Rochester Institute of Technology
- Collaborator: Dr. Kanad Basu, NYU, Project
- Collaborator: Prof. Preeti Ranjan Panda, IIT Delhi

Sumit J Darak

- Dr. Bhavani Shankar, Univ. of Luxembourg
- Prof. Yves LOUET, CentraleSupélec, France
- Manjesh Kumar Hanawal, IIT Bombay
- Carlos Bader, CentraleSupélec, France
- Christophe Moy and Jacques Palicot, CentraleSupélec, France
- Manjesh Kumar Hanawal, IIT Bombay
- Yves LOUET, CentraleSupélec, France and Anil Kumar, TCS Innovation Labs, Bangalore

Syamantak Das

- Dr. Parinya Chalermsook, Aalto University Finland
- Dr. Bundit Laekhanukit, ITCS, Shanghai

Tanmoy Chakraborty

- Prof. Soumen Chakraborti, IIT Bombay, India
- Prof. Amitava Das, Wipro Research
- Prof. Subrata Nandi, NIT, Durgapur, India
- Dr. Sumit Bhatia, IBM Research, India
- Dr. Senthil k Mani and his team, IBM Research, India
- Prof. Srikanta Bedathur & Prof. Maya Ramanath, IIT Delhi, India
- Prof. Sushmita Ruj, ISI, Kolkata
- Samik Datta, Flipkart, India
- Dr. Sameep Mehta, IBM Research, India
- Dr. Arindam Pal, TCS Research, India
- Mr. Debdoot Mukhrjee, Hike Messenger, India
- Mr. Hari Balagi, Egrogore Lab, India
- Dr. Siddharth Pal, Scientist, Raytheon BBN Technologies, USA
- Dr. Alex Beutel, Google Research, New York City
- Prof. Deepak Padmanavan (Queen's University, Belfast) & Prof. Cheng Long (NTU, Singapore)
- Prof. Bjorn Gambäck (NTNU Norway + RISE SICS Sweden)
- Prof. V.S. Subrahmanian, Dartmouth College, USA
- Prof. Jaegul Chao, Korea University, Korea
- Prof. Noseong Park, University of North Carolina, Charlotte, USA
- Prof. Sushil Jajodia, George Mason University, USA

Vikram Goyal

- Prof. Vishwanath Gunturi, IIT Ropar

Vivek Ashok Bohara

- Prof. Pie Xiao and Dr. Liu Zilong from University of Surrey
- Prof. Daniel Benevides da Costa of Federal University of Ceará (UFC)
- Prof. Ugo Silva Dias from University of Brasília
- Prof. Guan Yong Liang of Nanyang Technological University, Singapore on the
- Dr. Prabhat Sharma of VNIT, Nagpur
- Dr. Anand Srivastava of IIIT-Delhi
- Dr. Anubha Gupta of IIIT-Delhi
- Dr. Mohammad Hashmi of IIIT-Delhi

Vivek Kumar

- Dr. Gaurav Mitra, Texas Instruments, USA
- Dr. Sridutt Bhalachandra, Argonne National Laboratory, USA

Industry Collaboration

Aasim Khan

- WZB Berlin
- Co-media lab

Anand Srivastava

- MoU with Velmanni LiFi Start Up (2019- present)

Anubha Gupta

- Dr. Krishnaveni Achary and Blessin Varkey: Tamana NGO

Anuradha Sharma

- Prof. Patrick Solé, Dept Comelec, Telecom Paristech, Paris, France

Arun Balaji Buduru

- Dr. Srin Ramaswamy, ABB

Debarka Sengupta

- Dr. Naveen Ramalingam, Fluidigm Corporation, USA

Gourab Ghatak

- Dr. Antonio De Domenico, CEA LETI, Grenoble, France
- Nicolas Cassiau, CEA-LETI, Grenoble, France

Jainendra Shukla

- Dr. Miguel Barreda, EURECAT, Spain
- Dr. Nidhi Singhal, Action for Autism
- Mr. Joan Oliver and Ms. Rebeca Oliván, IRD, Spain

M S Hashmi

- Dr. M. Nasimuddin from I2R Singapore
- Mr. M. Suhaib from SiWays Microelectronics

Mayank Vatsa

- Dr. Nalini Ratha, IBM TJ Watson
- Dr. Anush Sankaran, IBM IRL

Ponnurangam K.

1. IBM Research Labs, Delhi, India. Collaborator: Dr. Sameep Mehta
2. Info Edge Limited, Delhi, India. Collaborator: Nitendra Rajput
3. Adobe Research Labs, Bengaluru, India. Collaborator: Dr. Niyati Chhaya

Rahul Purandare

- Mr. R. D. Naik and Mr. R. Venkatesh, TRDDC
- Dr. Aditya Nori and Dr. Kapil Vaswani, Microsoft Research
- Mr. Praveen Jain, Nucleus Software

Ratn Deep Suri

- Tamanna (NGO) and Action for Autism (NGO)

Rajiv Ratn Shah

- Dr. Shree Gopal Sharma, Arkana Laboratories, USA

Richa Singh

- Dr. Nalini Ratha, IBM TJ Watson
- Dr. Anush Sankaran, IBM IRL

Saket Anand

- Prof. Y. V. Jhala and Prof. Q. N. Qureshi, Wildlife Institute of India (WII), Dehradun

Sayan Basu Roy

- Ranjan Dasgupta, TCS Innovations Lab, Kolkata

Shobha Sundar Ram

- Dr. Anshu Gupta, Continental Inc. Bangalore, India

Sneh Saurabh

- Dr. R. S. Saxena: Solid State Physics Lab (SSPL) DRDO, Delhi

Sriram K.

- **Dr. Ritu Gupta**, AIIMS

Sujay Deb

- Prof. Jean-Philippe Diguët, CNRS senior researcher, Lab-STICC

Sumit J Darak

- Anil Kumar, TCS Innovation Labs, Bangalore
- Pratik Sikka, NXP Semiconductors, Delhi

Tanmoy Chakraborty

- Wipro Research
- Dr. Sumit Bhatia, IBM Research, India
- Dr. Senthil k Mani, IBM Research, India
- Samik Datta, Flipkart, India

- 
- Dr. Sameep Mehta, IBM Research, India
 - Dr. Arindam Pal, TCS Research, India
 - Mr. Debdoot Mukhrjee, Hike Messenger, India
 - Mr. Hari Balagi, Egregore Lab, India
 - Dr. Siddharth Pal, Raytheon BBN Technologies, USA
 - Dr. Alex Beutel, Google Research, New York City

Vijaya Raghava

- Dr. Sumit Bhatia, IBM Research, Delhi.
- Dr. Harpreet Singh, Child Health Imprints Pvt. Ltd., Delhi.

Vikram Goyal

- Dr. Sameep Mehta, IBM IRL Bangalore
- Sumit Bhatia, IBM IRL Delhi

Vivek Kumar

- Dr. Gaurav Mitra, Texas Instruments, USA
- Dr. Sridutt Bhalachandra, Argonne National Laboratory, USA

Appendix F : Awards and Recognitions

A V Subramanyam

- SST Early Career Research Award
Title: Smart Visual Surveillance
Duration: 3 years (2019 – 2022)
Budget: INR 24.79 lacs
- Second best poster award for COMSNETS 2019 paper titled “LSTM Guided Modulation Classification and Experimental Validation for Sub-Nyquist Rate Wideband Spectrum Sensing”

Aman Parnami

- Outstanding Educator Award, April 2019

- Teaching Excellence Award, Monsoon 2018, Winter 2019

Anubha Gupta

- 2019 **Education Innovation Award** in IEEE ICASSP 2019, Brighton, UK for the paper titled “Rethinking Teaching Practices for Signal Processing Education”
- Received “Outstanding Educator Award” by the graduating UG and PG batch of 2019 at IIIT-Delhi.
- Poster with PhD student Neha received second position in ACM Student Research Competition (SRC) in Mobicom 2018 (Core A* conference)
- Received best paper runner-up award in NETHealth, COMSNET Conference, 2018.

Anuj Grover

- Teaching Excellence Award, IIIT Delhi, Winter 2018
- Teaching Excellence Award, IIIT Delhi, Monsoon 2018
- Outstanding Educator Award, IIIT Delhi, 2018-19

Arun Balaji Buduru

- Best paper award [IEEE ICC 2018]

Debarka Sengupta

- Faculty Award, for project titled ”Price optimization, demand planning and out of stock prediction using deep learning”
Project value - INR 1 million (approximately)
Granting agency - NextOrbit Platforms and Solutions Private Limited
Start - April, 2019
- INSPIRE Faculty Award
Grant value - INR 3.5 million
Granting agency - DST
Start - July, 2016
- Member, Editorial board, Scientific Reports (Nature Publishing Group)
Start - 2019
- Member, Editorial board, PLOS one
Start - 2019

Ganesh Bagler

- Outstanding Educator Award 2018, IIIT-Delhi.
- Grant Evaluator for Science and Engineering Research Board (SERB).

Gaurav Arora

- **Honorary Life Membership from Indian Society of Ecological Economics (INSEE), granted in 2019,** in lieu of conducting the pioneering workshop on Remote Sensing/GIS and Machine Learning for Environment, Natural Resources and Agriculture during January 4-5, 2019.
- **James R. Prescott Scholarship 2017** awarded for **outstanding creativity in research** at Iowa State University.

G.P.S. Raghava

- Sun Pharma Research Award for the year 2018 in the field of “Pharmaceutical Sciences” by Sun Pharma Science Foundation. This award Carry a Trophy, Citation and a Cash Prize of Rs.250000/- (Rupees two lakh fifty thousand).

- Outstanding Educator Award for academic year 2018-19 by IIIT Delhi. The award recognizes brilliance in teaching and creating a positive impact on students through your interaction with them in IIIT Delhi. This award Carry a Citation and a Cash Prize of Rs.50000/- (Fifty thousand).

Jainendra Shukla

- Ph.D. Award (2018): Awarded Industrial and International Doctorate Distinction by URV, Spain

M S Hashmi

- DeiTy Young Faculty Research Fellow (2016-2021)

Mayank Vatsa

Swarnajayanti Fellowship by Government of India, 2017 – 2018

Mukulika Maity

- Awarded with Early Career Research Award, 2019
- Awarded with Best Paper Award at NetHealth workshop, 2019
- Awarded with WACI Master Award at WACI workshop, 2018

Ojaswa Sharma

- **GPU Grant** on *Freehand shape modelling in VR* (Dec 2018), NVIDIA Inc.
- *RealVol* (led by the student Palash R. Bansal) wins **Microsoft Imagine Cup, India finals** (Apr 2018) Microsoft Inc.
- Invited as a **panelist** on *AR/VR: Applications, scope in Automotive Biz* (Mar 2018) World Auto Forum on Information Technology, India.

Ponnurangam K.

- Received Outstanding Educator Award from Classof2018.
- Best paper award. Gupta, D., Sen, I., Sachdeva, N., Kumaraguru, P. and Buduru, A. Empowering First Responders through Automated Multimodal Content Moderation. Accepted at The Second IEEE International Congress on Cognitive Computing, San Francisco, 2-7 July, 2018.

Pushpendra Singh

- Visvesvaraya Young Faculty Fellow, 2018 - 2021. He was among the few faculty across India which got the fellowship for full three year period after evaluation of performance.
- Institute-wide Outstanding Educator Award by the graduating batch of 2019 (UG+PG). The educator award is given by the Graduating Batch by voting. Only top 10% faculty of the institute is selected.
- Institute-wide Outstanding Educator Award by the graduating batch of 2018 (UG+PG). The educator award is given by the Graduating Batch by voting. Only top 10% faculty of the institute is selected.

Rahul Purandare

- Received the best paper award along with 1000 Euro for the work published in RV 2018.
- Received Teaching Recognition awards 2018 for the data structures and algorithms course.

Rajiv Ratn Shah

- **20th IEEE International Symposium on Multimedia (ISM) 2018:** Won the best poster runner-up award at ISM 2018 conference in Taichung, Taiwan.
- **33rd AAAI Conference on Artificial Intelligence 2019:** Won the best student poster award at AAAI conference 2019 in Honolulu, Hawaii, USA.

- **5th Heidelberg Laureate Forum 2018:** Selected among 200 most qualified young researchers across the world those are provided an opportunity to meet Laureates in CS and Maths for a week at Heidelberg, Germany.
- **10th Forum for Information Retrieval and Evaluation (FIRE) 2018:** Won the Information Retrieval from Microblogs during Disasters (IRMiDis) challenge at FIRE conference 2018 in India.

Richa Singh

- Outstanding Educator Award, (given by the graduating batch) 2019
- Fellow, International Association of Pattern Recognition, 2018
- Teaching Excellence Award, IIIT Delhi, 2018
- Finalist for National Academy of Science SCOPUS
- Young Scientist Award - Women's (among top 3 in 250 applicants), 2018

Sambuddho Chakravarty

Received best student paper award

Samrith Ram

Awarded MATRICS grant by SERB in 2017 for a period of 3 years.

Sneh Saurabh

- Web Chair, 32nd International Conference on VLSI Design (VLSID) 2019, Delhi
- Teaching Excellence Award: Winter 2018 for *Introduction to Nanoelectronics*

Sneha Chaubey


- Ramanujan Fellowship, SERB, DST, Govt. of India for a period of 5 years – 2018-2022 (7 lakhs p.a. research grant).
- University Fellowship for 1 semester, \$10,750 (Fellowship offered by the Department of Mathematics, UIUC based on academic excellence).

Sumit J Darak

- Second best poster award at IEEE COMSNETS 2019 held at Bangalore, India.
- students have received three awards at graduate forum events in COMSNETS and ICDCN 2019.
- Academic research grant (\$2000) from National Instruments (NI) to attend IEEE ISWCS 2019.
- 2018 IIIT-Delhi Teaching Excellence Award
- Second best paper award at IEEE DASC 2017 held at Florida, USA. The first author of the paper is PhD student, Niharika Agrawal and this work was done in collaboration with Prof. Carlos Bader, CentraleSupélec, France.
- Young scientist award and conference travel grant for GASS-URSI conference held at Montreal, Canada. This first author of the paper is UG intern, Abhishek Unnam from NSIT, Delhi.
- Academic research grant (\$2000) from National Instruments (NI) to attend IEEE WCNC 2018.
- Ettus Travel grant (Rs. 30K) to attend WiOpt 2018.
- Best Demo Award at CROWNCOM 2016.

Tanmoy Chakraborty

- Best Student Paper Award in JCDL (a Core A* conference)
- Google India Faculty Award (Domain: Data Mining and Modeling)
- Teaching Excellence Award for both Monsoon'17 and Winter'18
- Faculty Award from Hike Messenger, India
- Faculty Award from Egregore Lab, India

- 
- Early Career Research Award from SERB, DST
 - Best Reviewer Award (out of 1232 reviewers) in WWW'18 (a Core A* conference)
 - DAAD Faculty Fellowship
 - Ramanujan Faculty Fellowship (for five years)

Tavpritesh Sethi

- • Royal Society's Commonwealth Science Conference Follow-on Grant (PI). Year awarded: 2018
- • AI in Medicine: Inclusion and Equity Seed Grant (Stanford Presence). Year awarded: 2018

Vivek Ashok Bohara

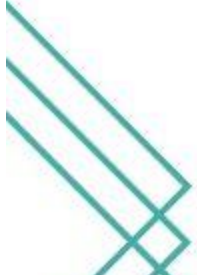
- Teaching Excellence award for the course Basic Electronics (Winter Semester, 2018) course.

Vivek Kumar

Excellence in teaching award

Appendix G: Invited Speaker

Aasim Khan

- Participated and chaired session at a national conference on Media, culture and caste organized at the Center for Media, Law and Governance, Jamia Millia Islamia.
 - Invited to deliver a public lecture at the Center for Study of Law and Governance, Jawaharlal Nehru University (JNU).
 - Invited to participate in the public conference on Elections and Social Media, by the Institute of South Asia Studies (ISAS), National University of Singapore. Delivered a presentation on the 'Digitalization of Public Sphere and Journalism in India'.
- 

Anand Srivastava

- Lecture on VLC in Photonics India at IIT Delhi and Tutorial in ANTS2018
- Lectures in Various Delhi Govt Colleges

Anubha Gupta

- Delivered 12 invited talks including 4 talks at US campuses (University of Calgary, Canada; ISU, Uol, and MSU, USA)

Arun Balaji Buduru

- Invited talk on “Data Analytics” at National Academy for Customs, Indirect taxes and Narcotics on Feb. 08, 2019
- Invited talk on “Data Analytics” at National Academy for Customs, Indirect taxes and Narcotics on Oct. 05, 2018
- Invited talk on “Adaptive security and Data Analytics” at National Academy for Customs, Indirect taxes and Narcotics on Sept. 05, 2018
- Invited talk on “User Centric Approaches to Securing Devices” at ABB-Bangalore on March 23, 2018
- Invited talk on “Adaptive Approaches to Protecting Cyber Infrastructures with User-Centric Techniques” at IIT-Madras on June 6, 2017
- Invited Lecture on “Information Assurance for Smart World Environments -- Challenges and Future Research” at IIIT-Noida on June 9, 2017
- Invited Lecture on “Adaptive Protection of Cyber Infrastructures with Reinforcement Learning Techniques” at IGDTUW-Delhi
- Invited Talk on “User-Centric Approaches for Protecting Cyber Infrastructures with Self-Learning Capabilities”, at Fifth Security & Privacy Symposium, Feb. 2017, New Delhi

Debajyoti Bera

- Invited speaker at IETE MTS at NSUT, Delhi (2019)
- Invited speaker at Indoquant 2018 at IIT Hyderabad
- Invited speaker at Ashoka University in 2017
- Lecturer at Summer School on Cryptology at ISI Kolkata (2017)

Debarka Sengupta

- Invited to develop MOOC on Computational Genomics by Experfy
- Invited seminar at Banarsidas Chandiwala Institute of Information technology (BCIIT) on “Introduction to Machine Learning”
- Invited lecture at Indian Statistical Institute, Delhi on “Foundation of Applied Machine Learning”
- Invited lecture at Indian Statistical Institute, Kolkata on “Single Cell Genomics”
- Invited talk at Sysmics conference organised by the University of Nantes, France
- Invited talk at AIIMS Rishikesh on use of AI to combat antimicrobial resistance
- Invited lecture at Elucidata on Single Cell Genomics
- Invited lecture ISI Kolkata on Single Cell Genomics
- Invited talk at “National Workshop on Computation for Biomedicine and Healthcare” organized by IIIT-D. Talk title “Hashing a cell”

Donghoon Chang

- Invited Lecture, “Fingerprint-based Authentication”, ETRI (Electronics and Telecommunications Research Institute), Korea, June, 2017.
- Invited Lecture, “Authentication Mechanism”, Shaheed Bhagat Singh College (Delhi University), September 2017.
- Invited Lecture, “Impossible results of Reusable Garble-based Approach”, Seoul National University of Science and Technology, April, 2018.

- Invited Lecture, “Impossible results of Reusable Garble-based Approach”, Korea University, April, 2018.
- Invited Lecture, “Spoofing Detection Techniques using AI”, ETRI (Electronics and Telecommunications Research Institute), Korea, April, 2019.
- Invited Lecture, “Side-channel Attack-resistant Authenticated Encryption Schemes”, Seoul National University of Science and Technology, Dec, 2018.
- Invited Lecture, “Biometric Security”, Korea University, July, 2018.
- Invited Lecture, “Authenticated Encryption”, Kookmin University, Dec, 2018.
- Seminar, “Lightweight Cryptography”, NIST, USA, May 2019.
- Invited Lecture, “Lightweight Cryptography”, Indian Statistical Institute Kolkata, India, June 2019.

Ganesh Bagler

- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, National Conference on Complex Systems in Interdisciplinary Sciences”, Jamia Millia Islamia, New Delhi, 11 March 2019.
- Science Day Talk: Department of Physics, Malaviya National Institute of Technology (MNIT), Jaipur, 28 February 2019.
- Science Cafe: ‘Of Truths and Taste: The Science of Computational Gastronomy’, The emerging data science of food, flavors, and health’, Organized by Bangalore Life Science Cluster, 24 February 2019.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, National Centre for Biological Sciences (NCBS), Bangalore, 22 February 2019.
- ‘The Science of Computational Gastronomy: A journey from astronomy to gastronomy’, Raman Research Institute (RRI), Bangalore, 21 February 2019.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, Centre for BioSystems Science and Engineering, Indian Institute of Science (IISc), Bangalore, 20 February 2019.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, Jawaharlal Nehru Centre for Science Education and Research (JNCASR), Bangalore, 20 February 2019.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, IBAB, Institute of Bioinformatics and Applied Biotechnology, Bangalore, 19 February 2019.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, CSIR-Central Food Technological Research Institute, Mysore, 18 February 2019.
- ‘Digital Gastronomy: An App A Day For Eating The Right Way’, A Public Talk at the FSSAI’s (Food Safety and Standards Authority of India) ‘Eat Right Mela’, at Jan Path, Near India Gate, New Delhi, 16 December 2018
- Moderated a session (Evolving skills framework for evolving F&B businesses) in the FICCI’s (Federation for Indian Chamber of Commerce and Industries) ‘Foodzania 2018’ Conference, 12 December 2018.
- ‘Network Biology: An integrative paradigm for modeling biological complex systems’, National Workshop on Computation for Biomedicine and Healthcare, IIIT-Delhi, 10 December 2018.
- ‘Network Biology: An integrative paradigm for modeling biological complex systems’, Faculty Development program on Network Science at Delhi University, 4 December 2018.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, 2nd International Meeting on Systems Medicine (Big Data – Transition to Practice), Utrecht, Netherlands, European Association of Systems Medicine, 7-9 November 2018.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, International Conference on Bioinformatics and Systems Biology, IIIT Allahabad, 26-18 October 2018.
- ‘Computational Sciences: A perspective on interdisciplinary applications of computation’, Faculty Development Program, JNU, New Delhi, 16 October 2018.
- Moderated a session and presented the Computational Gastronomy research at the World Heritage Cuisine Festival, Amritsar, in the presence of around 200 chefs from around 40 nations, FlavorDB Android App was officially launched. 12-14 October 2018.

- Lead Talk: ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, Knowledge Summit on Gastrophysics—The New Science of Eating, Bandra-Kurla Complex, Mumbai, 3 Oct 2018. Also moderated a panel discussion session with eminent chefs, nutritionist and food technology experts.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, Indian Institute of Science Education and Research Berhampur (IISER-BPR), Berhampur, 11 Sept 2018.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, Indian Institute of Technology (IIT-BBSR), Bhubaneswar, 10 Sept 2018.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, National Institute of Science Education and Research (NISER), Bhubaneswar, 10 Sept 2018.
- ‘Modeling brain as networks’, Institute of Nuclear Medicine & Allied Sciences (INMAS), DRDO, Delhi, 6 September 2018
- ‘Computational Sciences: A perspective on interdisciplinary applications of computation’, Faculty Development Program, JNU, New Delhi, 24 July 2018.
- Plenary Talk: ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, Gastrophysics Knowledge Summit, Indian Culinary Forum & TagTaste, Pullman Aerocity, New Delhi, 25 June 2018. Also moderated a panel discussion session with eminent chefs, Entrepreneurs and food technology experts.
- ‘Computational Gastronomy: The emerging data science of food, flavors, and health’, International Workshop on Computational Social Sciences, Centre for IT and Society, IIIT-Delhi, New Delhi, 20 June 2018.
- ‘Theoretical Physics Seminar Circuit’ (TPSC) Talks, Jan 2018.
- Keynote Talks & equivalent:
 - TEDxDAlICT Speaker
 - Guest of Honor at the 7th International Chef’s Conference
 - Keynote @ IIT Guwahati Research Conclave
 - Keynote Speaker at iHOST
 - HasGeek’s KilterCon, Bangalore
 - Cadence Advanced Technology Talk.
 - 2nd International Meeting on Systems Medicine (Utrecht, Netherlands).
 - Public Talk at FSSAI’s EatRight Mela/Initiative by the Govt. of India

Gourab Ghatak

- **National Conference on Communications (NCC)**, 20-23 February 2019 at IISc Bangalore, “Millimeter wave selection optimization for sustaining the 5G use cases.”
- International workshop on Next Generation Wireless Networks (NGWiN), 8-9 March 2019 at IIIT-D, Stochastic geometry and its application in modeling mm-wave communications.
- IEEE Seminar on "Slice-Aware Millimeter-wave Selection for Sustaining the 5G Use-Cases" in IIT Kanpur 5th February 2019

Jainendra Shukla

- Invited Lecture on Artificial Intelligence at The Indian School, New Delhi

Kiriti Kanjilal

- Talk titled “Common Pool Resources with Endogenous Equity Shares” at IIM Ahmedabad (Job Talk) on 15th January 2018.
- Talk titled “Endogenous equity shares in Cournot competition: Welfare analysis and Policy” at IISER, Bhopal on 15th October, 2018.
- Talk titled “Endogenous equity shares in Cournot competition: Welfare analysis and Policy” at Beihang University, Beijing on 17th May, 2019.

Mayank Vatsa

Tutorials:

- Conducted Tutorial: Adversarial Learning in Face Recognition - Two Sides of the Security Coin, IEEE International Conference on Automatic Face and Gesture Recognition, 2019
- Conducted Tutorial: M. Vatsa and R. Singh, Adversarial Perturbations in Deep Learning, IEEE International Conference on Security, Behavior and Analysis (ISBA), India 2019
- Conducted Tutorial: M. Vatsa and R. Singh, Role of Adversaries in Deep Learning, IEEE International Workshop on Information Forensics and Security (WIFS), Hong Kong 2018
- Conducted Tutorial: R. Singh, M. Vatsa and N. Ratha, Adversarial Perturbations in Biometrics: Detection and Mitigation, IEEE International Conference on Biometrics: Theory, Applications and Systems, Los Angeles, USA 2018
- Conducted Tutorial: R. Singh and M. Vatsa, Domain Adaptation in Biometrics, International Conference on Computer Vision, Venice, France 2017
- Conducted Tutorial: R. Singh and M. Vatsa, From Deep Unsupervised to Supervised Models for Face Analysis, IEEE Conference on Automatic Face and Gesture Recognition, Washington DC, USA, 2017
- Conducted Tutorial: M. Vatsa and R. Singh, Deep Learning for Face Recognition, International Joint Conference on Neural Networks, Alaska, USA, 2017

Invited Presentations:

- Deep Learning for Small Sample Size Problems, IIT Ropar, April 2019
- Role of Strength and Data Fine-Tuning in Deep Learning (jointly with Richa Singh), IIIT Hyderabad, Hyderabad, March 2019
- Role of Strength and Adversarial Perturbations in Deep Learning (jointly with Richa Singh), Ai Enterprise, Bangalore, February 2019
- Role of Strength and Adversarial Perturbations in Deep Learning (jointly with Richa Singh), IBM India Research Labs, Bangalore, February 2019
- Adversarial Perturbations in Deep Learning (jointly with Richa Singh), Indian Institute of Sciences, Bangalore, February 2019
- Multimodal Deep Learning for Biometrics, NVIDIA, Bangalore, February 2019
- Artificial Intelligence: What, Why, and How?, National Defense College, Delhi July 2018
- Role of Adversaries in Face Recognition (jointly with Richa Singh), Visa Research, San Francisco, June 2018
- Role of Adversaries in Face Recognition (jointly with Richa Singh), Facebook, Menlo Park, June 2018
- Unraveling IoT for Armed Forces, Directorate General of Information Systems, Army HQ, September 2018
- Artificial Vision at Directorate General of Information Systems, Army HQ, May 2018
- Biometrics and Forensics, IFIP International Conference on Digital Forensics, New Delhi, November 2018
- Deep Learning for Face Recognition: Looking Beyond CNNs, University of Notre Dame, South Bend, April 2017
- Deep Learning and Fingerprint Recognition, IEEE Winter School on Machine Learning in Biometrics, New Delhi, February 2017
- CNN and RBM, IEEE Winter School on Machine Learning in Biometrics, New Delhi, February 2017
- Introduction to Deep Learning, IEEE Winter School on Machine Learning in Biometrics, New Delhi, February 2017
- Deep Learning for Biometrics, GIAN Course on International Course on Multimodal and Advanced Biometrics Authentication, MNIT Jaipur, January 2017
- Deep Learning for Biometrics, GIAN Course on Biometric-based Authentication and Deidentification for Privacy Protection, MNIT Jaipur, December 2016
- Introduction to Biometrics, GIAN Course on Biometric-based Authentication and Deidentification for Privacy Protection, MNIT Jaipur, December 2016

- Face Recognition and Deep Learning: Progress and Challenges, Rutgers University, New Jersey, November 2016
- Face Recognition and Deep Learning: Progress and Challenges, IBM T. J. Watson Research Center, New York, November 2016
- Deep Learning, Delhi Technological University, New Delhi, July 2016

Ojaswa Sharma

- Panel discussion on *AR/VR: Applications and scope in automotive biz* (Mar 2018)
- World Auto Forum on Information Technology, New Delhi
- Talk and tutorial session on *Virtual Reality - fundamentals and research challenges* (Dec 2017)
- NCVPRIPG conference, IIT Mandi, Himachal Pradesh
- Keynote talk on *Computing in Graphics and Beyond* (Apr 2017)
- National Symposium on Computing, Analytics and Networks (NCAN), Chitkara University, Punjab
- Invited talk on *Graphics research at IIIT Delhi* (Aug 2016)
- TCS Research, Gurgaon

Pravesh Biyani

- Ola, Bangalore, World Sustainable Development Summit, Delhi, On the open transit data, algorithms and learnings.
- IIT Delhi, ETA estimation algorithms for public transit.
- World Resources Institute, New Delhi, Reforming the bus system at the State level, a data driven perspective.

Richa Singh

- Invited Presentation on Adversarial Perturbations in Deep Learning, IIT Ropar, April 2019
- Invited Presentation on Role of Strength and Data Fine-Tuning in Deep Learning (jointly with Mayank Vatsa), IIIT Hyderabad, March 2019
- Invited Presentation on Role of Strength and Adversarial Perturbations in Deep Learning (jointly with Mayank Vatsa), Ai Enterprise, Bangalore, February 2019
- Invited Presentation on Role of Strength and Adversarial Perturbations in Deep Learning (jointly with Mayank Vatsa), IBM India Research Labs, Bangalore, February 2019
- Invited Presentation on Adversarial Perturbations in Deep Learning (jointly with Mayank Vatsa), Indian Institute of Sciences, Bangalore, February 2019
- Invited Presentation on Role of Adversarial Perturbations in Privacy Preservation and Data Fine-Tuning, NVIDIA, Bangalore, February 2019
- Invited Presentation on Role of Adversaries in Face Recognition (jointly with Mayank Vatsa), Facebook, Menlo Park, June 2018
- Invited Presentation on Role of Adversaries in Face Recognition (jointly with Mayank Vatsa), Visa Research, San Francisco, June 2018
- Invited Presentation on Feature Engineering in Biometrics, Faculty Development Workshop at Delhi Technological University, May 2018
- Perils and Patches of AI, Women in Machine Learning and Data Science, IIIT Delhi, March 2018
- Adversarial Attacks on Deep Learning Algorithms, India-EMBO Symposium on Big Data in Biomedicine, New Delhi, February 2018
- Machine Learning in Forensics Winter school Workshop cum Faculty Development Programme on THz Communication and Image Processing, Ambedkar Institute of Technology, New Delhi, February 2018
- Machine Learning in Forensics, Annual IFIP WG 11.9 International Conference on Digital Forensics, New Delhi February 2018
- Domain Adaptation in Biometrics, UGC supported National Workshop on A Trend towards Machine Learning: Techniques and Applications, New Delhi, January 2018
- Introduction to Biometrics and Performance Evaluation, UGC supported National Workshop

- on A Trend towards Machine Learning: Techniques and Applications, New Delhi, January 2018
- Introduction to Machine Learning, IEEE Winter School on Machine Learning in Biometrics, New Delhi, February 2017
- Introduction to Biometrics and Performance Evaluation, IEEE Winter School on Machine Learning in Biometrics, New Delhi, February 2017
- Transfer Learning, IEEE Winter School on Machine Learning in Biometrics, New Delhi, February 2017
- Face Recognition and Deep Learning: Progress and Challenges, Rutgers University, November 2016
- Face Recognition and Deep Learning: Progress and Challenges, IBM T. J. Watson Research Center, New York, November 2016
- Machine Learning in Face Recognition, Delhi Technological University, New Delhi, July 2016
- Domain Specific Learning for Newborn Recognition, Infant Biometric Workshop, UIDAI, Bangalore, June 2016
- Domain Specific Learning for Newborn Recognition, Samsung, Advanced Technology Labs, Bangalore, June 2016

Samrith Ram

- Invited to 16th International Conference on Arithmetic, Geometry, Cryptography and Coding Theory, Centre International de Rencontres Mathématiques, Marseille, France, June 2017.
- Invited speaker at National Conference on Advances in Applied Mathematics and Statistics (NCAAMS 2017, Delhi), Mata Sundri College (University of Delhi), Sep 2017.
- “Polynomial Matrices over Finite Fields with given Smith Form”, seminar at University of Neuchâtel, Switzerland, Dec 2017.
- Gave lectures at Teachers Enrichment Workshop (TEW Nagpur) on Linear Algebra, Group Theory and Enumerative Combinatorics organized by the NCM (joint centre of TIFR and IIT Bombay), Dec 2018.
- Invited speaker at the Workshop on Polynomials and Curves over Finite Fields, Boğaziçi University, Istanbul, May 2019.

Sneh Saurabh

- Gave talk on "Nanoscale Devices for the New Era of Computation", Advanced Technical Talks, 24th January 2019 at Cadence Design Systems NOIDA
- Gave talk on "An overview of Nanoelectronics", Workshop on Emerging Technologies in ECE, 22nd May 2017, IIIT Delhi
- Organized “Workshop on Emerging Technologies in ECE”, 22nd May 2017 at IIIT Delhi
- "Green Transistors: Futuristic Energy-Efficient Devices", Institute Seminar IIIT Delhi, 4th August 2016
- Interacted with different companies for possible collaboration. For example with Intel, Qualcomm, Cadence, Synopsys and Global Foundries.
- Created connections between faculty members and some companies.
- Organized talks by IIITD faculty in industry
- Organized talks by industry experts in IIITD

Sujay Deb

- Invited talk at Tripura University on 9th November 2018. In this event Dr. Deb also highlighted about IIITD and all the opportunities available for students.
- Invited talk at NIT Agartala on 8th November 2018.
- Guest lecture on IoT Standardization at World Telecommunications and Information Society Day 2019 on 17 May 19, IETE.

Sumit J Darak

- Invited expert lecture on “Green Data Centers” at IIIT Noida on Nov. 25, 2018.
- Invited speaker for short term course "Towards 5G: The Key Enabling Technologies" at NIT Patna.

- Research talk on “Decision Making Policies for Green Radio” at IIT Delhi
- Invited speaker for short term faculty development programme on "Emerging Trends in Computer and Electronics Communications" at IAICTR Delhi.
- Invited expert lecture on “Decision Making Policies for Smart Grids” at IIIT Noida
- Poster presentation at DST INSPIRE Meet, SSN College of Engineering, Chennai.

Tanmoy Chakraborty

- Invited talk at the meetup at Hike on Mining Networks, Mar 30, 2019
- Invited talk at BITS Pilani, Goa Campus, Mar 18, 2019
- Invited talk at IBM IRL Delhi, Feb 4, 2019
- Attended (upon invitation) PanIIT, IIT Delhi, Jan 19, 2019
- Tutorial at Sixth International Conference on Big Data Analytics (BDA), Dec 19, 2018
- Invited talk at Workshop on Big Data (JIIT), Dec 17, 2018
- Invited talk at Delhi University, Delhi, Dec 7, 2018
- Invited at Amazon Research Days, Bangalore, Sep 28 2018
- Invited talk at Microsoft Research, Bangalore, Sep 27 2018
- Invited talk at Dept of CSE, IIT Kanpur, India, Sep 19 2018
- Invited panelist in the workshop of Trusted AI, IIIT Delhi, Sep 8 2018
- Invited to Amazon Research Days, Sep 28 2018

Tavpritesh Sethi

- Invited Speaker at Conference on Artificial Intelligence in Healthcare at IIT-Delhi, July 6, 2019
- Invited speaker at Stanford Presence Initiative’s on AI in Medicine: Inclusion and Equity Summit at Stanford University, June 20-22, 2019.
- Invited Speaker at Symposium on Computational Integration of Multi-omic data at Institute of Clinical Molecular Biology Christian-Albrechts-University Kiel, Germany.
- Invited speaker at American Medical Informatics Association (AMIA) Clinical Informatics Conference, April 30 – May 2, Atlanta, Georgia, USA
- Invited Speaker at the 2nd Conference of European Association of Systems Medicine, Utrecht Netherlands (Nov 7-9, 2018)

Vijaya Raghava

- Gave a talk at IBM Research, Delhi. October 2018
- Gave a talk at TCS Research Labs, Gurgaon. November 2018
- Gave a talk at the RinAI 2019 summer school, IIT Mandi. June 2019
- Gave a talk at Jaypee Institute of Information Technology, Noida. July 2019
- Gave a talk at AIDA 2019 summer school, IIIT-D. July 2019

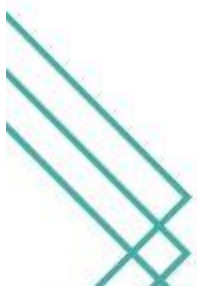
Vikram Goyal

- Expert talk at NATIONAL PROGRAM FOR TRAINING OF SCIENTISTS & TECHNOLOGISTS WORKING IN GOVERNMENT SECTOR” at its **Mohali campus** from **11-15 February 2019** on "**Big Data Management & Comprehensive Analysis**".
- Member Board of Studies, Chandigarh University, Chandigarh
- Invited talk at IIIT Noida, Sector 62
- Invited talk at JSSATE, Noida



Appendix H: Professional Services by faculty

A V Subramanyam

- Co-organizer of 2nd IEEE International Workshop on Fake Multimedia, Mar 28-30, San Jose, CA, USA
 - Co-located with 2nd IEEE International Conference on Multimedia Information Processing and Retrieval (IEEE MIPR 2019)
Webpage: <http://www.cs.albany.edu/~patrey/fakemm19/>
 - Organizer of 1st International Workshop on Cross-Modal Person Reidentification, Sept 9-11, Singapore
 - Co-located with 5th IEEE International Conference on Multimedia Big Data
Webpage: <http://bigmm2019.org/index.php/calls-for-submission/workshops>
 - Reviewer of IEEE Transaction in Circuits and Systems for Video Technology, Transactions on
 - Image Processing,
 - Transactions on Multimedia,
 - Access,
- 

- Elsevier Pattern Recognition Letters,
- Pattern Recognition,
- Information Fusion,
- Signal Processing: Image Communication,
- Journal of Visual Communication and Image Representation,
- ACM Multimedia,
- ACM Transactions on Multimedia Computing,
- Communications, and Applications,
- PLOS ONE

Aasim Khan

- Book review:
 - Ghazala Jamil, Accumulation by Segregation, in *Social Change*, Volume: 48 issue: 4, page(s): 680-683, Sage Publications.
 - India Connected: how the smartphone in transforming world's largest democracy. *The Book Review*. March 2019.

Aman Parnami

- Founding Program Committee Member for Empower 2018
- Reviewer ACM IUI 2019

Anand Srivastava

- Reviewer of various journals (Optics Communication, PNET, IEEE Access etc)
- IIT Delhi MTech thesis examiner
- MTech examiner for Delhi Govt colleges
- Examiner of 2 PhD Thesis at IIT Delhi

Anubha Gupta

- Elected as Chair, IEEE SPS Delhi Chapter for 2019-20
- Member, IEEE Women in Signal Processing Committee, 2019-21
- Associate Editor, IEEE Access
- Senior Member, IEEE SP Society
- Reviewer for leading conferences ICASSP 2017, 2018, 2019; ICIP 2017; NCC 2017, 2018; MICCAI 2017; IEEE GlobalSIP 2016; ICVGIP 2016, 2018; MedImage 2016, 2018; and many more in past years
- Reviewed research papers of various prestigious journals in the past
- Member, advisory board, Million Sparks Foundation, a Google-funded technology-led educational initiative
- Expert Member, Electronics and Communication Engineering, National Board of Accreditation, India
- Expert committee member, SERB-DST, Govt. of India, November 2018
- MTech External Examiner, IIT Delhi; 2016-2019

Anuj Grover

- Reviewer of papers in IEEE TCAS-1, IEEE TCAS-2, IEEE TVLSI
- Working with ESSCI on MoU to bring up quality of VLSI education in Teir-3 and Tier-4 colleges

Anuradha Sharma

- Reviewed two PhD Theses for the Department of Mathematics at IIT Roorkee
- Member of the Technical Program Committee for ADMA 2018

- Member of the Technical Program Committee for “National Conference on Algebra, Analysis, Coding and Cryptography” Organized by Department of Mathematics, Delhi University during October 14-16, 2016
- Invited as an external expert to conduct PhD (Maths) interviews at IIT Jammu on July 7, 2018
- A reviewer for Mathematical reviews of American Mathematical Society
- Reviewed research articles for publication at IEEE Transactions on Information Theory;
 - IEEE Access;
 - Designs, Codes and Cryptography;
 - Discrete Mathematics;
 - Discrete Applied Mathematics;
 - Journal of the Franklin Institute;
 - Finite Fields and their applications;
 - Turkish journal of Mathematics;
 - Journal of Applied Mathematics and computing;
 - Journal of Combinatorial Mathematics and combinatorial computing;
 - Journal of Algebra Combinatorics, Discrete Structures and Applications;
 - Journal of the Korean Mathematical Society;
 - International Journal of Computer Mathematics - Computer Systems Theory;
 - Cryptography and Communications;
 - Indian Journal of Pure and Applied Maths;
 - Journal of Ramanujan Math Society.

Arun Balaji Buduru

- Organizing a 2-week ACM summer School on Cybersecurity and Data Analytics at IIIT-Delhi to be held between July 8th and 19th 2019
- Organizing member for workshop on security protocols and network services held at IIIT-Delhi in May/June 2019
- PC Member IEEE Big Data Congress
- PC Member for International conference on security, privacy and applied cryptography engineering [SPACE]
- Reviewer for IEEE Transactions on Service Computing
- Reviewer for IEEE International Conference on Mobile Services
- Technical program chair for Security and Privacy Symposium
- Panel member for hiring IT personnel for Govt. of NCT

Ashish Kumar Pandey

Presented a talk in Faculty development program aimed for faculties of mathematics in DU colleges in Hansraj college

Debajyoti Bera

- Member of initial screening committee for Technology Development Board (2018)
- Co-Chair of Algorithms track, IC3 2018 conference
- TPC of Algorithms track, IC3 2017 conference
- Expert committee member for curriculum development at IGNOU, New Delhi (2017)
-

Debarka Sengupta

- Member, Editorial board, Scientific Reports (Nature Publishing Group)
Start - 2019
- Member, Editorial board, PLOS one

Start – 2019

Donghoon Chang

- Editor, Journal of Platform Technology (2016-2018)
- Program Committee Member
 - ICISC 2016-2019
 - Inscript 2016-2019
 - ProvSec 2016-2019
 - CICT-2018
 - ICMC-2018
- Editor, Journal of Platform Technology (2018)
- Program Committee Member:
 - Inscript2018
 - Inscript2019
 - ICISC2018
 - ICISC2019
 - ProvSec2018
 - CICT-2018
 - ICMC 2018

Ganesh Bagler

- Mentor for the DU-CIC Star Innovation Project at SVC: "Network analysis in the systems biology of neurological disorders". (Discussion meetings to advise a group of 8-10 students).
- Jury for selection of the 'Origin Best Researcher Award' for the National Science Day 2018 celebrations at the Central University of Kerala.
- committee member of the Doctoral Advisory Committee for progress evaluation of PhD thesis of two students at CSIR-IGIB: Debi Prasanna Dash and Rintu Kumar
- Served as the PhD Thesis Examiner of Akshara Pande at CSIR-IGIB, AcSIR.
- Served as the M.S. (Research) thesis examiner of Tarun Mahajan (2014EEY7542) for the thesis entitled 'Augmenting Gene Network Inference Using Meta-Analysis and Structural Priors' on 8th December 2017 at the Department of Electrical Engineering, IIT Delhi.
- Program Committee Member of COMPLEXIS from 2016 till date.
- Peer-Reviewer:
 - Bioinformatics
 - Molecular Biosystems
 - Physica A
 - Europhysical Journal
 - PLoS Journals
 - BMC Journals
 - Chaos, among others
- Member, BTIS-NET Question Paper Setting Committee
- Working Committee Member of Bioprocessing India

Gaurav Arora

- Journal Paper Reviewer (1 manuscript each for): Agricultural Economics, Journal of Agricultural and Applied Economics
- Grant proposal reviewer for South Asian Network for Development & Environmental Economics (SANDEE) and International Center for Integrated Mountain Development (ICIMOD)
- External reviewer of overseas scholarships for J.N. Tata Endowment Fund, Mumbai

Gourab Ghatak

- Session Chair: Workshop on Machine Learning for Communications WMLC 2019,
- Reviewer of Journals:
 - IEEE Transactions on Communication-2
 - IEEE Transactions on Wireless Communication-1
 - IEEE Journal on Selected Areas in Communications - Special issue on Machine Learning for Wireless Communication-1
 - EURASIP Journal on Wireless Communications and Networking-1
- Reviewer of Conferences:
 - IEEE Globecom 2019
 - IEEE WCNC 2019
 - IEEE ICC 2019

G.P.S. Raghava

- Editor in reputed journals like
 - Section Editor of Translational Medicine
 - Academic Editor of Plos One
 - Associate Editor of BMC Bioinformatics
- Role as Reviewer: Reviewed number of manuscript for reputed journals
- Number of Ph.D. thesis has been evaluated for reputed universities
- Number of invited lectures have been delivered in workshops/conferences
- Serving as a member of Task Force on “Theoretical and computational Biology” of DBT

Jainendra Shukla

- Reviewer: International Journal of Social Robotics, Springer
- TPC Member: 8th International Conference on Pattern Recognition and Machine Intelligence 2019 (PREMI 2019)
- TPC Member: First International Conference on Advanced Communication & Computational Technology - 2019
- Editorial Advisory Board Member: Machine Learning Techniques for Pattern Recognition and Information Security

Kiriti Kanjilal

- Book review of Advanced Microeconomic Theory: An Intuitive Approach with Examples, Felix Munoz-Garcia, The MIT Press, November 2017 during the editing process.
- Book review of Strategy and Game Theory: Practice Exercises with Answers, Felix Munoz-Garcia and Daniel Toro-Gonzalez, Springer, May 2019 during the editing process.

Kaushik Kalyanaraman

- Reviewer for CGI 2019
- Participated and gave a talk in Faculty Development Program for Delhi University
- MathemaKcs Teachers at Hansraj College in Summer 2019

M S Hashmi

- Senior Member, IEEE (Since April 2017)
- Associate Editor, IEEE Microwave Magazine, Since 2016
- Publication Chair, IEEE CoCoNet 2018
- Tutorial Organizer and Speaker, IEEE APMC 2018, Tokyo, Japan
- Committee member in many IEEE conferences such as
 - APMC, CoCoNet

- IMPACT etc
- Reviewer in several conferences such as
 - ISCAS
 - MWSCAS
 - APMC etc
- Reviewer in many leading journals and transactions

Manohar Kumar

- **Review**
 - Assistant Editor- Plurilogue
 - Reviewed papers for the Journal Ethical Theory and Moral Practice

Mayank Vatsa

- Vice-President, Publications – IEEE Biometrics Council (January 2015 – December 2018)
- Started IEEE Transactions on Biometrics, Behavior and Identity Science
- **Journals**
 - Area Editor, Information Fusion, 2014 - Present
 - Associate Editor, IEEE Access, 2014 - 2018
 - Editorial Board Member, Information Fusion, Elsevier, November 2011 - December 2018
 - Guest Editor, Special Issue on Domain Adaptation for Visual Understanding, Pattern Recognition, Elsevier, 2018-2019
 - Lead Guest Editor, Special Issue on Deep Learning for Information Fusion, Journal of Information Fusion, Elsevier, 2017-2019
- **Conferences**
 - General Co-Chair: IEEE International Joint Conference on Biometrics, Houston, USA, September 2020
 - Program Committee Co-Chair: IEEE International Conference on Advanced Video and Signal based Surveillance, 2020
 - Program Co-Chair, Disguised Faces in the Wild - Competition and Workshop at IEEE/CVF ICCV, Seoul, Korea, June 2019
 - Industry Liaison, IEEE International Conference on Identity, Security and Behavior Analysis, Hyderabad, India 2019
 - Publicity Chair, IEEE International Conference on Automatic Face and Gesture Recognition, France, USA, 2019
 - Panelist, Impact of Deep Learning on Biometrics and Trends, Workshop on Biometrics, CVPR, Salt Lake City, USA 2018
 - Doctoral Consortium Chair, IAPR International Conference on Biometrics, Greece, May 2019
 - Area Chair, IEEE Winter Conference on Computer Vision, Lake Tahoe, USA 2018
 - Session Chair, IEEE International Conference on Face and Gesture Recognition, France 2019
 - Session Chair, International Workshop on Information Forensics and Security, Hong Kong 2018
 - Session Chair: IEEE International Conference on CVPR, DFW Workshop, Salt Lake City, USA, June 2018
 - Session Chair, Workshop on Disguised Faces in Wild, CVPR, USA 2018
 - PC Member, International Joint Conference on Artificial Intelligence, Macau 2019
 - PC Member, IEEE International Conference on Biometrics: Theory, Applications and Systems, Tampa, October 2019
 - PC Member, 2nd International Workshop on Bias Estimation in Face Analytics, Long Beach, USA 2019
 - PC Member, International Conference on Computer Vision, Seoul, Korea 2019
 - PC Member, IEEE International Conference on Image Processing, Taipei, Taiwan 2019

- PC Member, Computer Vision and Pattern Recognition, Long Beach, June 2019
- PC Member, International Conference on Biometrics, Greece, 2019
- PC Member, IEEE International Conference on Face and Gesture Recognition, France, May 2019
- PC Member, AAI Conference on Artificial Intelligence, January 2019
- PC Member, Computer Vision and Pattern Recognition, Salt Lake City, Utah, June 2018
- PC Member, European Conference on Computer Vision, Munich, Germany, October 2018
- PC Member, International Joint Conference on Artificial Intelligence, Sweden 2018
- PC Member, IEEE International Conference on Biometrics: Theory, Applications and Systems, Los Angeles, October 2018
- PC Member, International Conference on Pattern Recognition, China, 2018
- PC Member, British Machine Vision Conference, NewCastle, UK, 2018
- **Government Consulting**
 - Expert Member, Committee on AI Advancements, DG-IS Army Headquarters,
 - Member, Confederation of Indian Industry, 2018 - Present
 - Science Engineering and Research Board - Project Evaluator, 2018
 - Working Group Member, Standards for Biometrics, National Center for eGovernance
 - Standards & Technology, Government of India, 2015 - Present
 - Member, Technical Advisory Committee for Testing and Certification of Point-of-Sale (POS)
 - Devises/Mobile Terminals for Automation of Fair Price Shops, Department of Electronics & Information Technology, Government of India, 2015 - Present
 - Member, Working Group on R&D in e-Governance, Department of Electronics & Information Technology, Government of India

Mukulika Maity

TPC member for Comsnets poster session, Percom demo session

Ojaswa Sharma

- Member of ACM SIGGRAPH, IEEE, and Asia Graphics
- Reviewer for articles submitted to various international conferences including ISMAR, EuroVis, IEEE VR, PacificVis, Graphics Interface, and ISVD
- Reviewer for articles submitted to various Indian conferences including NCAN, ICVGIP
- Member of Project Review & Steering Group (PRSG) on DigiBunai (Open Source CAD Tool for Weaving) project sponsored by Ministry of Electronics and IT (MeitY), India (Jan 2019)
- Program Committee member for International Conference on Contemporary Computing (IC3), India (2019)
- Member of Program Committee for Computer Graphics International (CGI) conference, Canada (2018-2019)

Paro Mishra

- Reviewer for proposals for Ethnographic Praxis in Industry Conference (EPIC), 2019
- As Member of the Preliminary Committee of Shastri Indo-Canadian Institute, he is also involved in their fellowship and grants application review process
- Field Supervisor for Mr. Rahul Bose, LSE student

Ponnurangam K.

- Member of Project Review and Steering Group (PRSG). Centre of Excellence on Internet of Things (IoT). NASSCOM. Funded by Ministry of Electronics and Information Technology (MeitY). 2018 -- 2020. Worth

- few crores of Rupees
- Member of committee on AI for CyberSecurity, Safety, Legal and Ethical issues. Ministry of Electronics and Information Technology (MeitY). Feb 2018 -- present
- Member of Project Review and Steering Group (PRSG). Design and Development of opinion mining and sentiment analysis of social media content to assess security threat. Indian Institute of Technology, Guwahati (IITG). Funded by Department of Electronics and Information Technology (DeitY). 2016 -- 2018
- Member of a Committee for implementing the Open Source Intelligence Solution at National Intelligence Grid (NATGRID), Ministry of Home Affairs (MHA), Government of India. March 2016 - Present. Worth few crores of Rupees
- Member of a Steering Committee for developing Early Warning System (EWS). Serious Fraud Investigation Office, Ministry of Corporate Affairs, Government of India. Jan 2016 - Present. Worth few crores of Rupees
- Member of Project Management Review Committee. Analysis of IP Traffic over Satellite (SAMVAAD). Defence Research & Development Organization. 2015 -- 2018. Worth few crores of Rupees
- Member of a Sub-Group, Micro Mission, National Police Mission setup by the Bureau of Police Research and Development (BPR&D), MHA, Government of India. Jan 2015 -- Present
- Member of Review Committee. Information Security and Data Protection Policy. Defence Research & Development Organization. 2016
- Member of a Prime Minister's Silver Cup Essay Competition – 2016, 2017, 2018. Committee comprises of 6 members, including nominee from Prime Minister's Office and Director of Sardar Vallabhbhai Patel National Academy, Hyderabad
- Member of Review Committee. Technology Foresight Study taken up in partnership with C-DAC, Pune & DSCI, New Delhi. Information & Communication Security & Financial Sector Security. Funded by Technology Information, Forecasting and Assessment Council (TIFAC). 2015 -- 2016
- Member of Project Review and Steering Group (PRSG), Global, Regional and Domestic Factors Impacting India's Cyber Security, by Institute for Defence Studies and Analysis (IDSA), Delhi. Funded by Department of Electronics and Information Technology (DeitY). 2015 -- 2017
- Board of Studies, B.Tech on Cybersecurity. Raksha Shakti University, Gujarat. Fall 2017 -- Present
- Board of Studies , Faculty of Engineering and Technology, Indira Gandhi Delhi Technical University For Women (IGDTUW). March 2018 -- Present
- External Program Curriculum Reviewer, Masters in Computer Applications (MCA) and M.Sc. Computer Science, Delhi University
- External Masters thesis examiner. Jaypee Institute of Information Technology, Delhi. May 2017
- External B.Tech. thesis examiner. IGDTUW. May 2017
- Program Committee Member WWW 2018
- Program Committee Member ICWSM 2018
- Program Committee Member CSCW 2018
- Program Committee Member Privacy Enhancing Technologies Symposium (PoETS) 2017, 2018
- Technical Program Co-Chair IEEE Intelligence and Security Informatics (ISI) 2018
- On Student Review Committee for a couple of Ph.D. students at IIT Delhi
- ACM Distinguished Speaker. April 2016 - Present
- Program Committee Member WWW 2017
- Program Committee Member ICWSM 2017
- M.Tech. Thesis examiner, JIIT, May 2017

Pravesh Biyani

- Reviewers of various IEEE Journals, conferences
- TPC of many conferences -- COMSNETS, ICASSP, SPIN

Pushpendra Singh

- Reviewer for CSCW 2019

- Reviewer for ACM ToCHI 2019
- Technical Program Committee Member, ACM IUI, 2019
- Reviewer for SERB, DBT, 2018
- Technical Program Committee Member, IEEE CIC, 2018
- Technical Program Committee member for BuildSys 2018
- Technical Program Committee Member, ICDCN, 2018
- Technical Program Committee Member, LCN, 2018
- Reviewer for DIS 2018
- Reviewer for CHI 2017
- Reviewer for IEEE Transactions on Mobile Computing 2017
- Reviewer for Pervasive and Mobile Computing (Elsevier) 2017
- Technical Program Committee Member, ICDCN, 2017
- Technical Program Committee Member, LCN, 2017
- Technical Program Committee Member, LCN, 2016
- Technical Program Committee Member, ICDCN, 2016
- General co-Chair for NetHealth 2016 Service_1

Rahul Mohanani

- Reviewed submitted research papers for Journal of Systems and Software (1), CHASE 2019 (3) and ESEM, 2019 (3) Conferences

Rahul Purandare

- Currently a Review Board member for the journal Transactions on Software Engineering (TSE) – the topmost journal in SE.
- Associate editor for Journal of Software Engineering Research and Development (JSERD).
- Have been a reviewer for all top SE journals including
 - TOSEM
 - FMDS
 - STVR
 - ASE
 - Software: Practice and Experience
- PC member for conferences including
 - ICSE (NIER)
 - MSR
 - ICSE (ResearchDemonstrations)
 - FormaliSE
 - APSEC
 - WEPL (at POPL)
 - COMPSAC-SETA
 - ICTAS
 - ForMABS
 - ACM Compute
 - ISEC
- Was invited to review the book “Lectures on Runtime Verification” published by Springer and edited by Ezio Bartocci and Ylies Falcone in 2018
- Served as an external reviewer for two IISc Master’s theses
- Have been a regular referee for DST research grant proposals
- Served as a panel member for MeitY (Ministry of Electronics and Information Technology) for Scientist promotions

Ratan Deep Suri

- Served as a reviewer for “The Information Society” Journal

Rajiv Raman

- Paper reviews: Symposium on Computational Geometry 2018/2019, Computational Geometry Theory and Algorithms 2019, Discrete Applied Math 2019

Rajiv Ratn Shah

- Publicity co-chair: 27th ACM International Conference on Multimedia (ACM MM) 2019
- TPC co-chair: 5th IEEE International Conference on Multimedia Big Data (IEEE BigMM) 2019
- Co-chair: Second Multimodal Representation, Retrieval, and Analysis of Multimedia Content (MR2AMC) workshop (as part of IEEE ISM 2018)
- Co-chair: First Multimodal Representation, Retrieval, and Analysis of Multimedia Content (MR2AMC) workshop (as part of IEEE MIPR 2018)
- Area chair: IEEE International Conference on Multimedia and Expo (ICME) 2019
- Area chair: The 3rd International Conference on Computer Vision & Image Processing (CVIP), 2018
- Area chair: The 2nd International Conference on Computer Vision & Image Processing (CVIP), 2017
- Session chair: The 20th IEEE International Symposium on Multimedia (ISM), 2018
- Session chair: The 26th ACM International Conference on Information and Knowledge Management (CIKM), 2017
- Program Committee Member: The ACM International Conference on Multimedia Retrieval (ICMR'19), 2019
- Program Committee Member: The 26th ACM Multimedia Conference on Multimedia (MM'18), 2018
- Program Committee Member: The 18th IEEE International Conference on Multimedia and Expo (ICME'18), 2018

Richa Singh

- Vice President, IEEE Biometrics Council, January 2019 – Present
- Associate Editor, Computer Vision and Image Understanding, 2018 – Present
- Associate Editor, Pattern Recognition, 2017 - Present
- Associate Editor, Information Fusion, 2019 - Present
- Associate Editor, EURASIP International Journal of Image and Video Processing, SpringerOpen, November 2013 - Present
- Associate Editor, IEEE Access, 2016 - November 2018
- Editorial Board Member, Information Fusion, Elsevier, November 2011 - December 2018
- Guest Editor
 - Special Issue on Adversarial Perturbations for Biometrics and Forensics
 - Computer Vision and Image Understanding
 - Elsevier, 2019-2020
- Lead Guest Editor
 - Special Issue on Domain Adaptation for Visual Understanding
 - Pattern Recognition
 - Elsevier, 2018-2019
- Lead Guest Editor
 - Special Issue on Deep Learning for Information Fusion,
 - Journal of Information Fusion,
 - Elsevier, 2017-2019

Conferences

- Program Committee Co-Chair: IEEE International Joint Conference on Biometrics, Houston, USA, September 2020
- Program Committee Co-Chair: IEEE International Conference on Automatic Face and Gesture Recognition, Lille, France, October 2019
- Program Co-Chair, Disguised Faces in the Wild - Competition and Workshop at IEEE/CVF ICCV, Seoul, Korea, June 2019
- Program Co-Chair, IEEE International Workshop on Biometrics and Forensics, Alghero, Italy, June 2018
- Program Co-Chair, International Workshop on Information Forensics and Security, Hong Kong, 2018
- Area Chair: IAPR International Conference on Pattern Recognition, China, August 2018
- Area Chair: IAPR International Conference on Biometrics, , Australia, February 2018
- Area Chair, IAPR International Conference on Biometrics, Sweden, June 2016
- Competition Chair: Disguised Faces in the Wild - Competition and Workshop at IEEE CVPR, Salt Lake City, June 2018
- Website Chair: IEEE International Conference on Biometrics: Theory, Applications and Systems, September 2019
- Website Chair: IEEE International Conference on Identity, Security and Behavior Analysis, January 2019
- Session Chair: IEEE International Conference on Automatic Face and Gesture Recognition, France, 2019
- Session Chair: International Workshop on Information Forensics and Security, Hong Kong, 2018
- Session Chair: IEEE International Conference on CVPR, DFW Workshop, Salt Lake City, USA, June 2018
- Session Chair: IEEE International Conference on CVPR, Biometrics Workshop, Salt Lake City, USA, June 2018
- Technical Program Committee: International Workshop on Bias Estimation in Face Analytics, 2019
- Technical Program Committee: International Conference on Computer Vision (ICCV), 2017, 2019
- Technical Program Committee: IEEE Conference on Computer Vision and Pattern Recognition (CVPR) – 2017, 2018, 2019
- Technical Program Committee: IEEE International Conference on Image Processing (ICIP) – 2017, 2018, 2019
- Technical Program Committee: IEEE International Conference on Biometrics: Theory, Applications and Systems (BTAS) - 2018, 2019
- Technical Program Committee: IEEE/IAPR International Conference on Biometrics (ICB) - 2019
- Technical Program Committee: Indian Conference on Vision, Graphics and Image Processing (ICVGIP) - 2018
- Technical Program Committee: European Conference on Computer Vision (ECCV) – 2018
- Technical Program Committee: CVPR Workshop on Biometrics - 2018
- Technical Program Committee: British Machine Vision Conference (BMVC) - 2018, 2019
- IEEE International Joint Conference on Biometrics (IJCB) – 2017
- Member, IAPR Education Committee, Present
- Member, IEEE Biometrics Council Education Committee, January 2012 - March 2017
- Member, IEEE Biometrics Council Conference Committee, October 2011 - March 2017

Saket Anand

- International Conference (CORE A*/A) Reviewing:
 - CVPR
 - ICCV
 - WACV
 - AAAI
- Other Conference Reviewing:
 - ICPR
 - ITSC
 - ICVGIP
- Journal Reviewing:

- IEEE TIP
- IEEE TKDE
- Elsevier Pattern Recognition

Sambuddho Chakravarty

- PC Member – 14th International Conference of Information Systems Security (ICISS), Bangalore, 2018
- Security infrastructure upgrade technical committee member – Jamia Hamdard University – May 2019

Samrith Ram

- Reviewer for Discrete Applied Mathematics (DAM) and Journal of the Indian Mathematical Society (JIMS).
- Reviewer for Mathematical Reviews (AMS).

Sanat K Biswas

- Co-convener, Global Navigation Satellite Systems session at 33th URSI General Assembly and Scientific Symposium, 2020, Rome, Italy
- Reviewer:
 - IEEE Transactions of Automatic Control
 - IEEE Transactions on Aerospace and Electronic Systems
 - IEEE Transactions on Wireless Communications
 - Advances in Space Research
 - GPS Solutions
 - Journal of Aerospace Engineering
 - Automatica
 - Journal of Low Frequency Noise, Vibration and Active Control
 - Artificial Satellites
 - ION GNSS+
 - Indian Control Conference
 - IEEE Conference on Decision and Control

Sanjit Kaul

- Reviewer for top IEEE transactions in Wireless Communications/ Networks and Conferences

Sankha S Basu

- Member of the Program Committee for the 8th Indian Conference on Logic and its Applications (ICLA 2019) held in March 2019 at IIT-Delhi, New Delhi, India
- Member of the Executive Council for the Association for Logic in India (ALI): Mar 2019 - Present

Sarthok Sircar

- Conference co-organizer, SIAM student chapter, DTU, New Delhi (April 18,19th, 2018)

Sayan Basu Roy

- Reviewer of 3 papers in IEEE Transactions on Neural Network and Learning Systems (TNNLS); impact factor: 7.982
- Reviewer of 6 papers in International Journal of Adaptive Control and Signal Processing (IJACSP); impact factor: 2.239
- Reviewer of 6 papers of 61st American Control Conference (ACC), 2019
- Reviewer of 2 papers in 3rd IEEE Conference on Control Technology and Applications (CCTA) 2019
- Reviewer of 9 papers in 58th IEEE Conference on Decision and Control (CDC), 2019

Shobha Sundar Ram

- Associate Editor, IEEE Trans. Aerospace and Electronics Systems
- Reviewer for numerous journals and conferences (over 50 papers in a year)
- Offered tutorials at IEEE APMC Conference 2016, IEEE Radar Conference 2017, IMARC 2018

Sneh Saurabh

- Editor: IETE Technical Review [Impact Factor: 1.618]: 2014-now, continuing for the 4th year in succession
- Reviewer for the following journals/conferences:
 - IEEE Transactions on Electron Devices
 - IEEE Transactions on Nanotechnology
 - IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems
 - IEEE Transactions on Very Large Scale Integration Systems
 - IEEE Journal of the Electron Devices Society
 - IEEE Access
 - Solid-State Electronics
 - Design Automation Conference
- Web Chair, 32nd International Conference on VLSI Design (VLSID) 2019, Delhi
- Session Chair for tutorials at 32nd International Conference on VLSI Design (VLSID) 2019, Delhi
- TPC member of 2017 Conference on Information & Communication Technology (CICT-2017), ABV IITM Gwalior
- External Examiner for M.Tech. Thesis at IIT Delhi
- Member of the Review Committee for Shastri Indo-Canadian Institute for the year 2018-19
- Member of interview panel for the Chief Minister's Urban Leadership Fellows Program

Sneha Chaubey

- Reviewer for Journal of Number Theory, Journal of Math. Analysis and Applications, Proceedings-Mathematical Sciences, Mathscinet.

Sriram K.

- Invited to present tutorial on "Mathematical models of circadian rhythms based on gene regulatory networks" in the workshop on Time, Brain, and behavior, organized by the Indian Society for Chronobiology, on March 6th 2019 at Meerut, India
- member of expert committee and reviewed proposals for DBT, on Indo-German Cooperation in Health Research, 2017

Sujay Deb

- Serving as **Associate Editor** of IET Computers & Digital Techniques (from 2017 – present).
- Served as **Registration chair** of **VLSI Design Conference 2019**.
- **Publications** Chair of THE Ninth INTERNATIONAL GREEN and SUSTAINABLE COMPUTING CONFERENCE (IGSC) 2019 and 2018.
- Served as track chair of IEEE International Symposium on Nanoelectronic and Information Systems (iNIS) 2016, 2017, 2018 & 2019.
- Delivered a half-day **tutorial** at IEEE International Conference on Embedded and VLSI Design conference (VLSID 2017), Title: Communication Infrastructure for Future Exascale Processors.
- TPC member of VLSI Design Conference 2018, VLSID 2016, VLSID 2015, VLSID 2014, VDAT 2016, NetHealth 2016, GLSVLSI 2018, iNIS 2017, iNIS 2016, iNIS 2015.
- Reviewer of TVLSI, TC, TCAD, TODAES, Access, TMSCS, JETC, SUSCOM, VLSI Design Conference, IGSC, GLSVLSI, VDAT, iNIS etc.
- Reviewer of TC, TVLSI, TCAD, TACO, JETC, TMSCS, SUSCOM etc.
- Served as Project reviewer for Core Research projects and high risk high return projects of SERB
- Served as technical expert for Technology Development Board.
- Serving as reviewer for Shastri Indo-Canadian Institute

Sumit J Darak

- Organized two special sessions in AP-URSI conference held in Delhi, 2019. These sessions were: 1) Distributed Communications in Congested and Contested Environments, and 2) Green Communications.
- Proposed a session on “Internet of Things for licensed and unlicensed spectrum” in URSI-GASS to be held in Rome, August 2020. The proposal has been accepted.
- TPC member of various conferences in India and abroad as well as reviewed various papers in reputed conferences and journals during academic year 2018-2019.
- Technical program committee (TPC) member of various conferences including CICT-2017, ANTS 2017, ICACCI 2017, ICT 2017
- Reviewed articles from various journals including IEEE TSP, IEEE IoTs, IET Communications, JCIN, TVLSI, NASA, IEEE Access, IEEE Electronics Letter
- TPC member: IEEE ANTS, IEEE ICACCI
- Journal reviewer : IEEE TVLSI, IET Communications, Journal of signal processing, ISCAS, China communications, Journal of Communications and Information Networks (JCIN), National Academy of Sciences (NASA)
- Conference reviewer: ICECS, ANTS, iNIS, ISWCS

Tanmoy Chakraborty

- PC member in Conferences/Workshops:
 - CIKM 2019
 - EMNLP-IJCNLP 2019
 - ECML-PKDD 2019
 - SIGKDD 2019
 - WSDM 2019
 - ACM Web Intelligence 2019
 - Complex Networks 2019
 - AAAI 2016, 2017, 2018, 2019
 - ICWS 2019
 - TheWebConf (WWW) 2018, 2019
 - NAACL 2018, 2019

- PAKDD 2017, 2018, 2019
- ParLearning 2018
- CODSCOMAD 2018, 2019, 2020
- Social Networking Workshop in COMSNETS 2017,2018
- WOSP in JCDL 2017, 2018
- ASONAM 2017, 2018, 2019
- TextGraphs workshop in ACL 2017
- Scholarly Web Mining (SWM) Workshop in WSDM 2017
- Reviewers in Journals:
 - IEEE Computational Intelligence Magazine
 - ACM Transactions on Knowledge Discovery for Data
 - Information Processing and Management
 - Nature Scientific Report
 - Data Mining and Knowledge Discovery
 - IEEE/ACM Transactions on Audio Speech and Language Processing
 - Knowledge Based Systems
 - ACM Computing Surveys
 - IEEE Access
 - Social Network Analysis and Mining (SNAM)
 - Information Processing Letters
 - Journal of Complex Networks
 - ACM Transactions on Intelligent Systems and Technology (ACM TIST)
 - Information Sciences
 - Language Resources and Evaluation (LREV)
 - IEEE Intelligent Systems
 - Communication of the ACM (CACM)
 - IEEE Transactions on Computational Social Systems (IEEE TCSS)
 - Scientometrics
 - Computers & Security
 - IEEE Transactions on Knowledge and Data Engineering (TKDE)
- Editor in Journal:
 - Information Systems Frontiers (Special Issue on “Exploitation of Social Media for Emergency Relief and Preparedness”)
 - Expert Systems (Wiley Online Library) - Special Issue on "Mining Knowledge from Scientific Data"
- Organizing Committee:
 - Demo Co-chair of CODS-COMAD’20
 - Co-organizer of SemEval 2020, Task: SentiMix - Sentiment Analysis for Code-Mixed Social Media Text
 - Co-organizer of SemEval 2020, Task: Memotion Analysis - Emotions of Memes
 - Tutorial Chair of ADMA’19
 - Co-organizer of Workshop on eHealth in the Big Data and Deep Learning Era, 20th ICIAP 2019
 - Co-organizer of Workshop on Exploitation of Social Media for Disaster Relief and Preparedness (SMERP 2) with WWW 2018
 - Co-organizer of Workshop on Exploitation of Social Media for Disaster Relief and Preparedness (SMERP) with ECIR 2017
 - Co-organizer of Workshop on Graph based Methods for Natural Language Processing (TextGraphs-10) with NAACL 2016

- Other Services
 - Steering Committee Member of Indiarxiv (March 2019 - Present)
 - Panelist and evaluation committee member of a pilot project by Office of the Principal Scientific Adviser to the Government of India
 - One of the committee members of India-Sweden AI workshop, organized by Sweden Embassy, April 11, 2019
 - Member of the preliminary selection committee of various grants of Shastri Indo-Canadian Institute under MHRD

Tavpritesh Sethi

- **Academic Editor and Regular Reviewer for:**
 - *Scientific Reports* (Nature Publishing Group)
 - *PLOS One*
 - *Journal of Genetics*
 - *Systems Medicine*
 - Regional lead for Australasia Region for International Association of Systems Medicine

Vibhor Kumar

- Part of BINC committee for question paper setting: BINC is National level certification exam setup by department of Biotechnology. (<http://bcil.nic.in/binc.html>)
- Reviewer for manuscripts in journals
 - PLOS one,
 - BMC Genomics etc

Vijaya Raghava

- PC member of ISWC 2019 (Resource track and Industry track) conference,
 - NLIWOD workshop
 - K-CAP 2019 conference
 - SEMANTICS 2019 conference (Posters & Demos track)
 - The Web (WWW) 2019, ESWC 2019
 - IEEE BigData Congress 2019
 - International Conference on Big Data Innovations and Applications 2019
 - ICDIS 2019
 - Semantic Web Journal

Vikram Goyal

- Tutorial Chair, International Conference on Big Data Analytics 2018
- Member of Project Monitoring Committee of Technology Development Board, Govt. of India
- Member of Expert Committee for DST on “Data for NSDI Applications”
- Member of Expert Committee for DST on “Technologies for NSDI Applications”.
- Member of Expert Committee on “Spatial Data Infrastructures (SDI) for Urban Governance Applications”
- PC Member Cods-COMAD, BDA, PDGC, IRI, FTNCT, ICSICCS
- Reviewer Applied Intelligence journal

Vivek Ashok Bohara

- Senior Member, IEEE (Since Jan 2019)
- Secretary-cum-Treasurer of IEEE ComSoC Delhi Chapter
- Publication Chair, IEEE ANTS 2019
- Local Arrangements Co-Chair: ACM MobiCom 2018
- Publicity Co-chair: Comsnets 2018
- Tutorial Co-Chair: IEEE ANTS 2018

- Mtech Thesis external examiner IIT-Delhi

Vivek Kumar

- HiPC'18 conference SRS review committee
- Reviewer for ACM TOPLAS journal submission
- Reviewer for IEEE TPDS journal submission

Appendix I: Impact

Aasim Khan

- GCRF funded grant, contributing to capacity building in civil society in Delhi

- Action-research based partnership under the GCRF grant Jankaar project with Goldsmith Uni
- As part of the project we are contributing to capacity building in two civil society organizations based in Delhi; NGO JOSH and SNS
- This contribution cannot be quantified easily, but the outputs from the project will be helpful developing new modes of digital service delivery and other mechanisms that will have positive impact on the communities where these NGOs are working

Anubha Gupta

- A cancer diagnostic tool has been deployed at AIIMS, New Delhi. Currently, the tool is being validated rigorously

Arun Balaji Buduru

- Started a company in the area of Anomaly Detection and Computer Vision –
 - We sat for placement last academic year and hired one of the student (with pay package 10LPA). Student is currently working with the company developing solutions
 - Deployed a preliminary version of the solution in the factory setting
- *We have deployed the solution for automatic control adaptation in a factory owned by DCM Tech Ltd. to enhance the efficiency of their yarn production. The solution is performing well and we are continuously working towards optimizing the tool*

Debarka Sengupta

- Invited to serve in Brookings India NFHS-4 Consortium to help the Government in making policy decisions in the health sector
- Discovery of a new brain cell type, which is arguable one of the most prominent contributions made by computational biologists of the country. The work enjoyed wide media coverage
- In collaboration with Circle of Life Healthcare Pvt. Ltd., his laboratory developed first of its kind AI backed antibiotic prescription engine called ZEVAC. ZEVAC has been deployed at AIIMS Delhi and AIIMS Rishikesh. Huge societal impact - AI to battle antimicrobial resistance, one of the greatest threats for mankind
- Built and published a risk prediction model for stem cell therapy in multiple myeloma. It is being adopted by clinicians at AIIMS

Donghoon Chang

- Collaboration with Transech (Indian start-up), Irisys (Korean SME), ETRI (Electronics and Telecommunications Research Institute, Korea) for the development of actual products which are supposed to be used in industry. Two graduated Mtechs are working in Irisys and two graduated B.Tech. students will work in Irisys as full-time since June 2018. In 2018/2019, Dr. Chang have been doing research projects with three companies, JiNI, NORMA, and NEXUSTECH
- Since September 2018, his crypto group, Chungbuk University (Korea), and SpringCloud (startup for autonomous car driving, Korea) started to work on developing and implementing new multilane detection algorithm. The algorithm would be tested on the actual road in Korea. This collaboration had been started to consider the security of autonomous car
- Since March 2019, his crypto group and SP2 robotics (startup in Korea) have been working on developing multi barcode detection algorithm. One of his main motivations of collaboration with SP2 is to find a way of controlling a robot to obey the command without being interrupted by an attacker. From August 2019, KJ tech (company working on fingerprint-based security access control) will start to work with his group
- In July 2018, during the visit of Mr. Moon, the president of Korea (south), with help of incubation centre of IIIT Delhi, we organized a one-day workshop in IIIT Delhi. Officers handling industry in Korea and 27 CEOs of Korean companies visited and we discussed possible collaboration together and IIIT Delhi introduced to them the research centers including Infosys Centre for AI

Ganesh Bagler

- **FlavorDB Database [Copyright]:** A structured compilation of diverse aspects of flavor compounds found in the natural ingredients. Published in Nucleic Acids Research (2018)
- **FlavorDB Android App [Copyright]:** An app for food pairing experiments for chefs, food & beverage experts, and culinary enthusiasts
- **SpiceRx [Copyright]:** Database of health impacts of culinary herbs and spices intended for their culinary recommendation as well as seeking for testable hypothesis linking their phytochemicals to specific diseases
- **DietRx [Copyright]:** Database of health impacts of food ingredients intended for
 - their culinary recommendations
 - seeking for testable hypothesis linking their chemicals to specific diseases
 - mining disease-gene and food-gene associations. Based on data of 2,222 Ingredients, obtained from 1,59,246 Recipes across the global cuisines, 7,610 linked MeSH Diseases Terms, 20,550 Gene Associations, 6,992 Food Chemicals, Associations text-mined using a state-of-the-art text-mining protocol from 37,714 MEDLINE Research Articles. Ref: <https://cosylab.iiitd.edu.in/dietrx/>
- **BitterSweet [Copyright]:** A state-of-the-art algorithm based on empirically reported data of taste compounds for predicting bitter-vs-sweet taste, relative sweetness, and bitter receptors. Ref-1: <https://cosylab.iiitd.edu.in/bittersweet/> Ref-2: 'BitterSweet: Building machine learning models for predicting the bitter and sweet taste of small molecules', R Tuwani, S Wadhwa and Ganesh Bagler*, bioRxiv 426692
- **A FAILED EXPERIMENT:** Flavidoscope—an android application for generating novel recipes (v1). This application that was designed based on the research on food pairing, despite initial traction (63 installations—50% from India and 50% from USA by May 2017) **failed to make the mark given its objectives.** *The algorithm and the app are suspended, and being developed by brining missing data and nuances*
- Delivered a TEDx talk at TEDxDAIICT. Also documented as a blog: Leveraging food for better health through data-driven approaches
- My Kilter idea for 'data-driven approaches for food and health' was most up-voted, leading to invitation for sharing ideas as well as building initiatives at the well-known Kilter event in Bangalore
- Keynote Talk at Le Cordon Bleu School of Hospitality, GD Goenka University, provided exposure for the work to the larger molecular gastronomy and hospitality community. IIT Guwahati's Research Conclave (invited talk along with other prominent academicians and Entrepreneurs) provided another big stage for the work and its applications
- Article titled 'Molecular essence of cuisine and its applications', highlighting opportunities for tourism and catering industry of India, was published in a Food and Beverages group magazine (Ingredients South Asia, Page 168, Issue: 16-30 November 2016)
- Visited 'Aditya Birla Science and Technology Company Private Limited (ABSTCPL)', Mumbai, on 29th June 2016 for a talk and discussions regarding application of computational biology research for food science and technology. "Science Café: The science of computational gastronomy", Organized by the Bangalore Life Science Cluster (BLiSc)
- Presentations of Computational Gastronomy research at the **Central Food Technological Research Institute (CSIR-CFTRI)**, Mysore, and **ICMR-National Institute of Nutrition**, Hyderabad, two premier Indian institutions in food and nutritional space
- 'Digital Gastronomy: An App A Day For Eating The Right Way', **A public talk** in the Food Standards and Safety Authority of India (FSSAI) 'Eat Right Mela', at Jan Path, India Gate, New Delhi, 16 December 2018. FSSAI, the Food Safety and Standards Authority of India is a premier policy and regulatory body of Government of India
- Moderated a session in the FICCI's (Federation for Indian Chamber of Commerce and Industries) Foodzania 2018 conference, 12 December 2018. FICCI, the Federation of Indian Chamber of Commerce is a major policy and advisory body

Gaurav Arora

- One journal article, one conference proceedings paper and one archived working paper (**total 3 papers**) were published on U.S. Department of Agriculture's online portal. Please see here https://www.nass.usda.gov/Research_and_Science/Cropland/othercitations/
- Research included in this category is one that (in general) complements or critically evaluates the US Department of Agriculture's satellite image processing efforts for characterizing agricultural land use in the country

Gourab Ghatak

- Responsible for advising two B.Tech. students on a BTP titled "AMBI+"
 - The aim of the project is to optimize placement and routes of ambulances in the city of Delhi.
 - The project deliverables include a complete end-to-end solution and product (in the form of a commercial app) to be prescribed to the hospitals in Delhi
 - The project is still in the early stages of development
- Active participation in EU project titled *5G-MiEdge (Millimeter-wave Edge Cloud as an Enabler for 5G Ecosystem)* <https://5g-miedge.eu/>

G.P.S. Raghava

- Portal for Health Informatics (PHI)
- Group Web Server at IIITD
- The group participated in two dream challenges successfully. Based on the performance in dream challenge, one of the team members Ms Devishi Kesar (B.Tech. computer science student) who was doing IP project got a reputed scholarship worth US\$ 1500 to attend the 10th RECOMB/ISCB conference of DREAM challenges in New York. This year organizers have offered travel grants to 3 students on the basis of their performance, she is one of them.

M S Hashmi

- Co-authored book "Load-Pull Systems for RF Power Amplifier Design" is used as text as well as reference books at many institutions in Europe, North America and Asia.
- Provided free consultancy and assistance to scientists and engineers from SSPL, DRDO on regular basis.

Manohar Kumar

- As a Postdoctoral Fellow in the Project 'A Change of Direction. Fostering Whistleblowing in the fight against Corruption in Europe' and was engaged in developing policy recommendations that was used to recommend better whistleblower protection laws in European Union
- Wrote a general non-technical article "Secrecy and the failure of DNC", *Daily Nous series 'Philosophers On' DNC Leaks*. 2016

Mayank Vatsa

- Member, Confederation of Indian Industry, 2018 – Present
- Expert Member, Committee on AI Advancements, DG-IS Army Headquarters
- Member, Niti Aayog on AI Report
- Science Engineering and Research Board - Reviewer, 2018
- Working Group Member, Standards for Biometrics, National Center for eGovernance
- Standards & Technology, Government of India, 2015 - Present
- Member, Technical Advisory Committee for Testing and Certification of Point-of-Sale (POS)
- Devises/Mobile Terminals for Automation of Fair Price Shops, Department of Electronics & Information Technology, Government of India, 2015 - Present
- Member, Working Group on R&D in e-Governance, Department of Electronics & Information Technology, Government of India

P B Sujit

- We started to work on a startup for developing an end-to-end communication system for disaster management. The product has been tested on the ground and need to be tested in the field. We are working with NGO's and in talk with NIDM for possible on field demonstration

Pravesh Biyani

- **EATM:** Involved in a startup called EATM wherein we have built an automated food vending machine based on RFID and camera based object detection algorithms. The startup involves one external founder, few students. The vending machine was built over a period of 2 years with various B.Tech. students who contributed towards building the technology through their B.Tech. Projects. The machine was deployed on field for the initial testing of few months
- The open data platform (OTD) developed by us has been now used by more than 500 users. Including Google and several other startups
- The routing algorithm is used by many companies (Yatra, BMTC, Chartr) for their internal route planning
- Armed with a modest grant from the state government of Delhi, we built first of its kind system that collects, de-noises and disseminates both static data (time table, routes, stops etc) and the real-time location of around 1800 buses with the maximum frequency of 10 seconds. The data through OTD is disseminated via APIs ([\url{https://otd.delhi.gov.in}](https://otd.delhi.gov.in)) using a standardised (GTFS) format. Within few weeks of the release of the APIs, we attracted more than 600 users ranging from research universities that work on intelligent transportation to mobility and map companies that consume the live transit data and present it on various APPs to users. Google maps in Delhi with a user base of few millions has integrated the static data and is in the process of integration of the real-time provided by us in their trip planner. Reputed international transit companies like Transport for London (TFL) have approached the lab for partnership projects in India. Finally, the bus transit company in the city of Bengaluru, BMTC, with a ridership of 5 million a day has shown keen interest in implementing a similar project

Pushpendra Singh

- I served as a Technical Advisor to CBEC between 2015-17. His duties were to advise on technical matters specifically related to development of computing infrastructure and services. The consultancy started in the context of GST implementation and continued for upgradation of various services and applications offered by CBEC. The consultancy services resulted in getting the infrastructure ready for GST implementation

Rajiv Ratn Shah

- I have worked closely with Humonics Global to build technology for them which are used in production in different areas. Thus, Dr. Shah have helped this company in expanding with the technology solutions
- Most of his projects and research papers have direct impact on people and society. We have transferred technologies to company to use the research in real-time problems. With the technology solutions company is providing service a good number of users from different domains
- Our current research focuses on automatic speech recognition from speech (called, ASR) and from silent videos (called, VSR) which has a huge impact on society. For instance, the solution can help patients with speech disorder to communicate. Moreover, the current research is also focuses on the detection of fake news and abusive content on social media which has a huge impact on society since these affects people lives significantly

Richa Singh

- Reviewer, SERB Early Career Research Grant
- Reviewer, SERB, Core Research Grant

- Reviewer, PMU-BIRAC, Department of Biotechnology and Bill & Melinda Gates Foundation

Tanmoy Chakraborty

- **[Hike Messenger]** collaboration with Hike Messenger
- **[Flipkart]** Research grant from Flipkart.
- **[Egregore lab]** We handed over the solution of generating knowledge graphs for financial markets has been handed over to Egregore Lab, an emerging startup working on financial section. Two students have been involved in that project
- **[VideoKen]** collaboration with VideoKen, a startup working on enriching educational videos for better delivery to the end user.
- **[Process Nine Technologies Pvt. Ltd.]** collaborating with Process9, a startup working on NLP solutions on English to Hindi machine transliteration system. They will provide us data and deploy the solution
- **[Wipro Research]** collaborating with Dr. Amitava Das, who is currently leading the NLP lab of Wipro Research. Wipro has been the industry partner in one of the project proposals, which we submitted to IMPRINT, DST

Vibhor Kumar

- published world's first single cell search engine, with me as co-corresponding author : www.cellatlassearch.com. It has been viewed more than 5000 times and used more than 350 times

Appendix J : Outreach Activities by Faculty

Aasim Khan

- Partnership with Aapti Institute
- Organized and participated in a workshop on mediated campaigns, held at the CSH Delhi (in collaboration with Science Po, Paris) in April, 2019. *Details in the external collaborations. Website;*

Aman Parnami

- Winter School on User Experience Design, December 2018, IIIT-Hyderabad, Co-taught with Dr. Ponnurangam Kumaraguru

Anubha Gupta

- Organized (along with Dr. Namrata Vaswani, ISU and Dr. Selin Aviyente, MSU) a 2-day dedicated symposium on "Big Data Analysis and Challenges in Medical Imaging" in IEEE GlobalSip 2016 conference, Washington DC, USA from Dec. 7 - 9, 2016
- conducted a GIAN course on "Robust PCA and its applications" with guest faculty Dr. Namrata Vaswani, Professor, Iowa State University, USA in December 2017

Anuradha Sharma

- Prof. J. K. Verma, Department of Mathematics, IIT Bombay). Received funding of around INR 8 lakhs from National Center for Mathematics (a joint initiative of IIT Bombay and TIFR Mumbai) to organize this School
- Delivered an invited lecture at the 2018 Annual Conference of Indian Women and Mathematics (IWM) during June 21-23, 2018
- Delivered an invited talk at the 14th Annual ADMA conference and Graph Theory Day during June 6-10, 2018
- Research group presented the following three works at the International Congress of Mathematicians 2018 in Rio de Janeiro during Aug. 1-9, 2018
- "Enumeration of self-dual, self-orthogonal and complementary-dual cyclic additive codes" (Oral Presentation: Anuradha Sharma)

- On the structure and distances of repeated-root constacyclic codes of prime power lengths over finite commutative chain rings” (Oral Presentation: Tania Sidana)
- "Multi-twisted codes over finite fields and their dual codes” (Oral Presentation: Varsha Chauhan)

Arun Balaji Buduru

- Attended Co-creation workshop on Analytics and SW Engineering for Industrial IoT organized by ABB. Engaged with multiple people from industry and academia. Visited the ABB-Bangalore facility between Mar 22-25, 2018

Ashish Kumar Pandey

- Taught two courses in Summer camp Convergence for high school students here at IIITD

Debarka Sengupta

- Led research and development activities at Circle of Life Healthcare Pvt. Ltd. to build world’s first personalised antibiotic prescription engine
- Provided deep learning based solution to NextOrbit for demand planning and price optimisation
- Partnered with IBM to develop executive diploma program on Data Sciences. We will start offering it starting next year (subject to board approval)
- Organised Data Science workshop, which attracted about 100 participants from NCR

Donghoon Chang

- Conducted a 3-credit course, “COL872: Special topics in cryptography”, at CSE department of IIT-Delhi to collaborate with professors and students

Ganesh Bagler

- Conducted "**Symposium on Computational Gastronomy: The emerging data science of food, flavors, and health**"

Kaushik Kalyanaraman

- One of faculty coorganizers for Convergence 2019: a mathematics olympiad and summer camp for high school students in Summer 2019

Manohar Kumar

- Workshop Philosophy and Cyber-Technology, IIIT-Delhi, February 2019
- Workshop ‘Intérêt public, intérêt général et bien commun’. GREQAM, Aix Marseille University, February 2018
- Corruption, Whistleblowing, and Democracy. GREQAM, Aix Marseille University, November 2017
- Enabled the creation of Film Club as part of Student Outreach activities

Mayank Vatsa

- Conducted Tutorial: M. Vatsa and R. Singh, Adversarial Perturbations in Deep Learning, IEEE International Conference on Security, Behavior and Analysis (ISBA), India 2019
- Conducted Tutorial: M. Vatsa and R. Singh, Role of Adversaries in Deep Learning, IEEE International Workshop on Information Forensics and Security (WIFS), Hong Kong December 2018
- Conducted Tutorial: R. Singh, M. Vatsa and N. Ratha, Adversarial Perturbations in Biometrics: Detection and Mitigation, IEEE International Conference on Biometrics: Theory, Applications and Systems, Los Angeles, USA September 2018

Events Organized

- Second International Workshop on Disguised Faces in the Wild, Competition and Workshop at IEEE International Conference on Computer Vision, Seoul, 2019
- Winter School on Artificial Intelligence and Machine Learning at IIIT-Delhi, 2019

- First International Workshop on Domain Adaptation and Visual Understanding, International
- Joint Conference on Artificial Intelligence, 2018
- First International Workshop on Disguised Faces in the Wild, Competition and Workshop at with IEEE International Conference on Computer Vision and Pattern Recognition, Salt Lake City, 2018

Monika Arora

- Olympiad and Summer camp was organized for the students of NCR who are in grade 9 to 12 with the intent of outreach
- Other activities like Women in Math workshop gave us opportunity to reach to prominent professors in Math and worked as a part of outreach

Ponnurangam K.

Industry Outreach Programs

- Privacy. Bosch Data Security Officers (DSO) APAC summit 2017, Bengaluru. October 24, 2017. 12+ participants
- Co-Organizer for Security and Privacy Symposium. Attended by 100+ participants, including faculty / researchers, and students from all around India. 6 April, 2018
- Co-Organizer Summer School on Privacy and Security in Online Social Media. 3 -- 7 July, 2017. This was organised at IIIT Hyderabad
- Co-organized Winter School on User Experience Design with Prof. Aman Parnami. Dec 4 - DEC 7, 2017. IIIT Delhi <https://iiitd.ac.in/uxd-winterschool2017/>
- Co-organized the Workshop on User Generated Content at IISc. 70+ participants
- Co-Organizer for Security and Privacy Symposium. Attended by 100+ participants, including faculty / researchers, and students from all around India. 10 -- 11 Feb, 2017

GOVERNMENT Outreach Programs

- Using Online Social Media for Law & Order, Intelligence, Investigation and Internal Security. NPA. Full course as instructor. Feb 11 -- 13, 2019. 60+ officers attended.
- The Challenges of Cyber Security in the context of National Security. NIA Academy, Delhi. Feb 22, 2019
- Using Online Social Media for Law & Order, Intelligence, Investigation and Internal Security. Pune Police. Feb 18, 2019. 50+ officers attended
- Social Media Analytics & Its Exploitation. Army War College, Indore. Feb 11, 2019
- Social Media Analytics & Its Exploitation. Army War College, Indore. Oct 6, 2018
- Using Online Social Media for Internal Security. NPA Hyderabad. Oct 1, 2018
- Using Online Social Media for Law & Order, Intelligence, Investigation and Internal Security. BPRD. May 17, 2018. 50+ officers attended
- Social Media for Policing. National Police Academy. March 23, 2018
- Social Media for Policing. National Industrial Security Academy. Feb 14, 2018
- Social Media Forensics. 24th All India Forensics Science Conference. Feb 11, 2018. 350+ participants.
- Social Media for Policing. CBI Academy. March 23, 2018
- Social Media for Policing. CISF, Delhi. Nov 2, 2017
- Using Online Social Media for Policing, National Police Academy (NPA), Hyderabad. May 16, 2017. 38 officers
- Social Media tracking for Issue Management: Point - Counterpoint. Organised for Indian Information Service Officers, May 11, 2017. In IIIT Delhi. 10 officers
- Using Online Social Media for Policing, Intelligence, L&O and Investigation
- Privacy. Bosch Data Security Officers (DSO) APAC summit 2017, Bengaluru. October 24, 2017. 12+ participants

Rahul Purandare

- Organised of the 1-week summer school on information technology at IIITDelhi for high-school (11th and 12th grade) students. was also the founder of this summer school
- Jury for the science exhibitions and various contests at the Indian schools over past several years
- Co-organized the first Winter School on Software Engineering (WSSE) in 2017 at TRDDC
- Co-organized the first Software Engineering Research India update meeting at IISc

Richa Singh

Tutorials:

- Winter School on Artificial Intelligence and Machine Learning at IIIT-Delhi, 2019
- 10 Year Celebration, IIIT Delhi, 2018
- First International Workshop on Domain Adaptation and Visual Understanding, International
- Joint Conference on Artificial Intelligence, 2018
- First International Workshop on Disguised Faces in the Wild, Competition and Workshop at with IEEE International Conference on Computer Vision and Pattern Recognition, Salt Lake City, 2018

Sarthok Sircar

- NPTEL MOOCS course on “Integral Transforms and their Applications”, 2019-2020
- Invited seminar: South-Asian University, March 31st, 2019

Sneha Chaubey

- Founded the IIIT-D chapter of Women in Math Association. The aim of this association is to encourage women and girls to study math and to promote equal opportunity and equal treatment of girls in the mathematical sciences.
- Co-organized the inauguration workshop of the Women in Math Association. Several imminent mathematicians from reputed math departments across India came to deliver lectures followed by a panel discussion on the state of art of women in mathematics.

Sujay Deb

- Involved as resource person in TechMahindra Education Lanes Certificate course in IoT
- Involved in developing Samsung Innovation Lab at IIIT Delhi
- Involved in collaboration with ST Microelectronics
- Being a part of organizing committee of VLSI Design conference 2019, he also ensured that IIITD becomes technical sponsor of the conference along with IIT Delhi. In the conference we had a large number of IIIT Delhi students as volunteers and participants
- We also organized a hackathon at IIIT Delhi, where the winners were given free student registration pass for VLSID conference

Sumit J Darak

- Organized 2-day workshop at IIIT-Delhi on “NGWiN: *International Workshop on Next Generation Wireless Networks*”
- Organized and conducted 6-day FDP at IIIT-Delhi on “*Hardware-Software Co-design*”
- Organized 2-day workshop at IIIT-Delhi on “*Software Defined Radio*”. This workshop was held in collaboration with Ettus Research, USA and NI
- Organized 2-day workshop at IIIT-Delhi on “*FPGA Design Flow*”. This workshop was held in collaboration with Coreel Technologies
- Organized half-day workshop at IIIT-Delhi on “*Design and Implementation of Wireless Communication Systems Using Matlab/Simulink and Zynq SoC*”
- Organized full-day workshop at IIIT-Delhi on “*Model Based Design for Software Defined Radio*” Using Matlab/Simulink and FPGA”

Tanmoy Chakraborty

- Invited talk at TCS Research Lab, Kolkata, India, Dec 2017
- Invited at Amazon AI Summit, Bangalore, Sep 2017
- Organizer of Workshop on AI for Computational Social Systems (ACSS), IIIT Delhi, Feb 2, 2019
- Co-organizer of Winter school on AI, IIIT Delhi, India, Jan 18-20, 2019

Tavpritesh Sethi

- Wrote pieces for lay audience in Wellcome Trust/DBT India Alliance's Research Outreach activities

Vibhor Kumar

- Organised a workshop with lectures and hands on training session on "BigData in Genomics" at IIIT Delhi -2017
- Organised a Workshop on "Regulatory Genomics" at IIIT Delhi. -2018
- National Workshop on Computation for Biomedicine and HealthCare in December 2018
- One day Workshop : Data science using R in december 2018

Vijay Raghava

- Co-organized the Knowledge Graph Technology and Applications workshop at The Web (WWW) 2019 conference, San Francisco, USA. May, 2019





INDRAPRASTHA INSTITUTE *of*
INFORMATION TECHNOLOGY **DELHI**

Indraprastha Institute of Information Technology, Delhi
Okhla Industrial Estate, Phase III
(Near Govind Puri Metro Station)