International Institute of Information Technology, Hyderabad  
Director’s Report on the Twenty-First Convocation  
9th July 2022

Distinguished Chief Guest and Convocation speaker Prof Alison Noble, University of Oxford; Chairman of the Governing Council Prof. Raj Reddy, distinguished guests, my colleagues from the institute, graduating students and parents, other students, members of the media, and friends: I am pleased and honoured to highlight our achievements of the past academic year, in brief.

IIIT Hyderabad is Deemed to be University that operates autonomously in terms of academic and non-academic aspects. Research-led education at the undergraduate level has enabled the institute to contribute much to society through technology solutions. Our primary endeavour remains to impart education to produce competent, creative, and caring individuals who are eager and ready to take up challenges offered to them by the world. I would like to remind the new graduates of their enormous responsibilities towards society as they go into the new challenges and adventures in the next stage.

I. ACADEMIC PROGRAMMES

The Institute has high-quality B.Tech programmes in Computer Science Engineering (CSE) and Electronics Communication Engineering (ECE). An innovative curriculum gives ample flexibility in selecting courses and undertaking research projects at the undergraduate level. Our trans-disciplinary programmes effectively combine Computer Science with domains such as Natural Sciences, Linguistics, and Humanities. Our Master’s programmes include both technology and domain areas. In the last academic year, we introduced M.Tech in Product Design and Management. I am delighted to inform that over 28% of today’s graduates – 155 out of 556 – earned a degree based on a high-quality thesis.

IIIT Hyderabad has several admission channels such as the JEE Mains, multiple Olympiads, SAT examinations, an in-house Undergraduate Entrance Examination (UGEE), and a lateral entry scheme into the dual-degree programmes for students completing their 2nd year B.E. or B.Tech from other institutes. The Special Channel (SPEC) admissions are extended to Jawahar Navodaya Vidyalaya (JNV) students this year. In the last round of admissions, we achieved our target of admitting 25% women students through the JEE Channel.

The Covid-19 pandemic dominated all aspects of life globally in the past two years and IIIT-Hyderabad was no exception. It is however refreshing to note that from March 2022, the institute has been able to move to in-person teaching and evaluations. This step was made possible with the coordinated efforts of all stakeholders including students, faculty, and other employees. Most students returned to campus during the months of February and March and have been advised to keep following the appropriate precautionary measures to prevent the spread of the virus. With all-around cooperation, we are happy to note that normal academic activities including in-person classes resumed in March 2022.

IIIT Hyderabad arranged multiple vaccination drives to provide vaccines against Covid-19 to all members of our campus including, students, faculty, staff, and other support workers. Despite the campus community being doubly vaccinated, many students and faculty were infected with the virus during the third wave of the pandemic.
Almost everyone had mild symptoms, but we deeply regret the passing away of a third-year dual degree student, T H Arjun.

II. FACULTY

Attracting enthusiastic and resolute individuals from all over the world as faculty members is a continuous endeavour at IIIT Hyderabad. Eleven new regular faculty members came on board in the past year and four existing faculty were promoted. As a sign of a maturing institute, two faculty members including Prof Rajeev Sangal who was instrumental in setting up the institute superannuated. Prof. K S Rajan was appointed as the Registrar recently after Prof Pradeep Ramanchandra completed two terms as Registrar successfully.

Faculty are given the flexibility of teaching loads to concentrate more on research, which creates a unique environment highly conducive to research. IIIT Hyderabad benefits immensely from subject matter experts from the industry for both teaching and research areas, their association with the institute as Adjunct Faculty is continuing as is - we have 14 of them, as of today. The Institute encourages faculty and students to undertake research exchange programs to promote our research excellence across the globe.

Some of our faculty achievements this year include:

- C V Jawahar receives the ACM India Outstanding Contribution to Computing Education (OCCE) Award for 2021, award selection is made by a committee comprising eminent international personalities.
- Pradeep Kumar Ramanchandra was awarded Outstanding Concrete Engineer of Telangana 2021 by Indian Concrete Institute (ICI). This award is given annually for outstanding contributions in the field of concrete technology, promotion of concrete structures, research in concrete, and more. He has also been appointed as a member and expert panel member of the Bridge Specifications and Standards Committee (BSSC) of the Indian Road Congress.
- Vishal Garg was elected as a member of the executive council of Alliance for an Energy-Efficient Economy (AEEE), one of the leading organizations in India that work on creating awareness about energy efficiency as a resource. He has also been appointed Project Committee Voting Member (PCVM) in the Standing Standard Project Committee (SSPC) 90.2 – Energy Efficient Design of Low-Rise Residential Buildings of The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).
- Deva Priyakumar received the Chemical Research Society of India (CRSI) Bronze Medal from the president of CSRI at the 27th CRSI National Symposium in Chemistry organized by the Indian Institute of Science Education and Research (IISER) Kolkata from 26 – 30 September.
- Ashok Kumar Das was appointed as an Associate Editor for Cyber Security and Applications (CSA) Elsevier journal and as an Associate Editor for the Journal of Cloud Computing (Springer).
- Syed Azeemuddin was selected as a co-guest editor for MDPI electronics special issue to help make decisions on RF CMOS-related papers.
- Nimmi Rangaswamy was invited to join the Editorial Board of Communication, Culture and Critique (CCC) journal. Published by the International Communication Association (ICA) and Oxford University Press, CCC is devoted to critical scholarship on communication, media, and cultural studies.
- Shatrunjay Rawat was nominated to the Insurance Ombudsman Advisory Committee of Insurance Regulatory and Development Authority India (IRDAI).
• Ravi Kiran Sarvadevabhatla is awarded Sir Vithal N Chandavarkar Memorial Medal for the best Ph.D. thesis of the Department of Computational and Data Sciences, IISc, Bengaluru for the year 2019. He received the award from the chief guest Shri Uday Kotak, CEO, Kotak Bank during the IISc convocation held on October 6, 2021. Ravikiran also received an unrestricted faculty grant from Google.
• Chiranjeevi Yarra has been awarded Prof. D J Badkas Medal for the best PhD thesis of the Department of Electrical Engineering, IISc, for academic year 2019 – 2020.
• Nazia Akhtar received a special commendation from the jury of the Jawad Memorial Prize for Urdu-English Translation. Nazia translated the Urdu short story Chhottam Jaan written by Zeenath Sajida. In 2017, Nazia was awarded a New India Foundation fellowship to write a book on Urdu prose by Hyderabad women.
• Makarand Tapaswi is awarded Outstanding reviewer for CVPR 2021 19th - 15th June 2021, Virtual.
• P Pravin Kumar Venkat Rao was awarded the “Young Engineer of the Year Award-2021” by the Institution of Engineers (India) on 15 September 2021 for providing new insights into different retrofitting techniques using low-cost and innovative composite materials for the safety of unreinforced masonry buildings and for implementing few of these techniques in one of the heritage structures located in Kolkata, West Bengal; He is also elected as a Member of the Indian Association of Structural Engineers (IAStructE); and elected as a Young Member of RILEM, France.
• Ponnurangam Kumaraguru was named a Distinguished Member of the Association for Computing Machinery (ACM) and was inducted into the Academic Council of The LNM Institute of Information Technology (LNMIIT) and received the Flipkart Faculty Award for his work on cyber security.
• Vinoo Alluri was featured in the fifth edition of The Life of Science’s (TLoS) yearly desktop calendar. It featured 48 Indian women, transgender, and non-binary persons working in various fields of science during 2022 – 2023. The calendar was launched on 11 February to mark the International Day of Women and Girls in Science. Dr. Alluri was featured under the theme of Music.
• Pawan Kumar has been awarded Microsoft Academic Partnership Grant for his research on Optimization Methods for Deep Learning.
• Research Study on Daily home-based meditation can increase the amount of grey matter in the brains of patients with mild Alzheimer’s disease by Prof. Bapi Raju and Dr. Amitabha Ghosh, Director and Head Department of Neurology, Apollo Multispeciality Hospital Kolkata, was featured on the Department of Science & Technology (DST) website.

III. RESEARCH

IIIT Hyderabad is structured around research centres and labs and not conventional departments. Each research centre focuses on a broad problem area and brings together experts from varied backgrounds to conduct research and development on specific problem areas, constantly pushing the boundaries of research to a higher level. The research centres, laboratories, and domain centres utilize technologies in diverse disciplines to find innovative solutions to challenges faced by society. This year, we clinched 8 consortium projects, 5 collaboration projects, and over 36 faculty-driven individual projects. Apart from R&D projects, 6 faculty members were awarded faculty research award grants/Unrestricted grants from Verisk, Mahindra & Mahindra, Qualcomm etc.
Ministry of Electronics & Information Technology (MeitY) has sanctioned projects for Rs 21 Crores under the National Language Translation Mission (NLTM), Govt of India. The projects include Machine Translation, Optical Character Recognition (OCR) etc. There is a large activity is taking place on that front. MeitY has also funded Blockchain and Machine Learning Powered Unified Video Know Your Customer (KYC) Framework.

A Centre for Computational Social Science (C2S2) was set up under the headship of Prof Ponnurangam Kumaraguru to pursue interdisciplinary research at the intersection of Computer Science and Social Science. The Centre for Quantum Science and Technology (CQST) was established in July 2021 to give a big push to the emerging area of quantum computing. The Raj Reddy Centre for Technology and Society (RCTS) was inaugurated in February 2022 to apply AI technologies in public health and grassroots education for the benefit of those at the bottom of the pyramid.

The institute collaborates with several national and international institutions and plays lead roles in several multi-institutional projects and the list include LLG – Butor (Reunion Island – France), Carnegie Mellon University, University of Pennsylvania, INRIA, UC Berkeley, Hebrew University, Bauhaus University, University of the Aegean, University of Dundee, Oxford University, Dublin City University, University of Colorado, Ecole Centrale Paris, Oak Ridge National Laboratory, Aalto University, University of Cambridge, University of Quebec, Tampere University of Technology, Vrije Universiteit, National University of Rosario, University of Burgundy, Uppsala University, University of Mainz, University of Paris-Sud, Michigan State University, University of Maryland, University of Shanghai, University of Leiden, Mälardalen University, University of Liverpool, University of Bordeaux and Lawrence Berkeley National Laboratory, the University of Aizu, Innpolis University, University of Agder, Yonsei University, ITE&C Dept, Govt of Telangana & Prof Jayashankar Telangana State Agricultural University (PJTSUA), Hyderabad; Conduira Online, Great Learning, Kathmandu University (KU), Nepal, Osmania Medical College, Hyderabad, Christian Medical College (CMC), Vellore, All India Institute of Speech and Hearing (AISH), Mysore, KG Reddy College of Engineering and Technology and Kakinada Institute of Engineering & Technology (KIET), Andhra Pradesh.

The institute is also associated with national reputed organizations such as DRDO, ISRO, Dept. of Atomic Energy (DAE), MCMEME, NRDC, BDL, BEL, Airport Authority of India (AAI) and, Survey of India etc. We have received sponsored research projects from DST, DBT, MeitY, MHRD, SERB etc. IIIT-H collaborates with institutions like Aravind Eye Hospital and Sree Chithra Tirunal Institute for Medical Sciences to take our research directly to the grass-root level.

We also work with several industry-funded research projects which include Texas Instruments (TI), Bosch, Nissan, TCS, Intel, Amazon, Honeywell, NVIDIA, Rockwell Collins, Flipkart, Novartis, Microsoft, Hitachi, Siemens, CA Technologies, Mathworks, Renault-Nissan, Wells Fargo, OpenText, Qualcomm, Google, Applied Materials, Inshorts Media Labs, Cyient, STAR Sports India Pvt Ltd, Rapyuta Robotics Company Limited, Japan, Huawei Technologies India Private Limited, Apple, AmpicQ and, Saint Gobain, Analinear Design Technologies Pvt Ltd, Rapyuta Robotics Company Limited, Intel Technology India Private Limited, Navam Innovation Foundation, and Agasty International Foundation jointly, Buzzark Simulations Private Ltd, Chennai, Hyderabad Eye Research Foundation (HERF), L V Prasad Eye Institute (LVPEI), EPAM Systems India Private Limited, Hyderabad, NALSAR, Apollo Hospitals, Hyderabad, ZF India Private Limited, Steel Authority of India Limited (SAIL) - Bokarao Steel Plant, Forus Health Private Limited, Bangalore, National
Payment Corporation of India (NPCI), Mumbai, Infinity Identity Technologies Private Ltd, Hyderabad, Mishran Semi-Conductor Private Limited, Spatial Guide Pvt Ltd., Fidelity Business Services India Pvt Ltd., and Centre for Sight Super Specialty Eye Hospital, Hyderabad. Collaboration with Pernod Ricard India Foundation (PRIF) granted Rs.3 crore to support 6 startups and research in areas with social impact, this year. Collaboration with Ripple, a leading Silicon Valley financial technology company has been going on for the Blockchain Centre of Excellence with a total support of $1 million USD for over 5 years.

The team of faculty, research students, research staff, and undergraduate students produced about 650 papers in the top journals and conferences. In all, 11 of our Ph.D. students have external competitive fellowships and several more students qualified for CSIR and UGC grants. Our faculty have received national and international recognition at academic conferences and research competitions.

Some of those milestones are:
- In September 2021, the Union Minister of Road Transport Nitin Gadkari kicked off an AI-powered road safety project in Nagpur titled iRASTE. It is a unique collaborative initiative between the government (Central Road Research Institute and Nagpur Municipal Corporation), industry (Intel and Mahindra & Mahindra), and academia (INAI and IIIT-H) towards advancing road safety; it trains bus drivers in defensive driving.
- Dr. Ankit Gangwal and Dr. Sudipta Banerjee (Co-PI) were granted a MeitY project on Blockchain and Machine Learning Powered Unified Video Know Your Customer Framework. This is a joint project with the Institute for Development and Research in Banking Technology (IDRBT) Hyderabad and IIT Bhilai.
- IIIT Hyderabad is the only Indian institute in the global consortium of 13 universities and labs participating in Facebook AI’s ambitious Ego4D [a project initiated by Facebook AI in collaboration with Facebook Reality Labs Research (FRL Research) and 13 partner institutes and labs from countries such as UK, Italy, India, Japan, Saudi Arabia, Singapore, and the United States].
- From Robotics Research Centre Team Cerebrus comes second with its janitorial assistant at the AI and Robotics Technology Park (ARTPARK) organised robotics challenge at IISc, Bengaluru. Team Lumos wins third place in the Open Cloud Table Organization Challenge organized by IEEE International Conference on Robotics and Automation (ICRA 2022), Philadelphia.
- IIIT Hyderabad won the Best User Application award at an international oneM2M hackathon organized by Korea Electronics Technology Institute to commemorate its 30th anniversary.

Book(s)
- Aftab Hussain, principal investigator of the PATrIoT (Processes Architecture and Technologies Research in IoT Lab) authored a textbook titled Introduction to Flexible Electronics. The textbook covers topics from a simple introduction to why things are flexible, to the materials and their properties that make up all electronic devices; from the integration strategies to the applications in devices that are now available such as flexible processors, memory, display, photovoltaics, and more.

Best Paper Awards
- Sanjana Gunna and Rohit Saluja were awarded the Best Paper Award for their paper on Transfer Learning for Scene Text Recognition in Indian Languages at the

- Bringing Linearly Transformed Cosines to Anisotropic GGX by Aakash K T under the supervision of Prof. P J Narayanan received the best paper award at ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D), 2022.
- A BIM Based Approach of Electrical Network Analysis and Applications Using GIS Tools by K S Rajan, Nagaraja Ravoori and Tejaswini Venkumahanti, Kesava Rao Pyla, and Sinha S K was given the Best Paper Award at 2nd International virtual conference on Sustainable Construction Technologies and Advancements in Civil Engineering (ScTACE 2021).
- Manisha Padala and Sankarshan Damle, Ph.D students working under the guidance of Sujit Gujar received Best Paper Award at the first Indian conference on Deployable AI conference (DAI) organized by Robert Bosch Center for Data Science and AI, IIT Madras for their work on Building Ethical AI: Federated Learning Meets Fairness and Differential Privacy. They received a cash prize of US$500.
- Ponnurangam Kumaraguru and his students received the best student paper award for their research work on What’s Kooking? Characterizing India’s Emerging Social Network, Koo at the 2021 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM-21) held virtually from 8 – 11 November 2021.
- Salma Khan, a Ph.D student working under the supervision of Syed Azeemuddin received the best student paper presentation award at Asia Pacific Conference on Circuits and Systems (APCCAS-2021) for her research work on High-Speed CMOS Ramp Generator using Proteretic Comparator held in hybrid mode from 22 – 26 November at Malaysia.
- Research work on Classroom Slide Narration System by Jobin K V, Ajoy Mondal working under the supervision of C V Jawahar won the IAPR best paper award at the 6th IAPR International Conference on Computer Vision & Image Processing held at IIT Roper in a Hybrid model from 3rd to 5th December 2021.
- R Pradeep Kumar’s external student, Mangesh Shendkar from IIT-BHU received the best paper award for his work on the Response reduction factor of RC-infilled frames using different methods by the Indian Concrete Institute (ICI) Journal.

Student Achievements

- Sourav Kumar, a 5th-year dual degree student working under the supervision of Dipti Misra Sharma, and Salili Aggarwal, a 4th year dual degree student working under the supervision of Radhika Mamidi ranked second globally at a Workshop on Asian Translation (WAT 2021) shared task.
- A team of 8 students – Aditya Kadam (UG3), Anmol Goel (RA), Jivitesh Jain (UG4), Mallika Subramanian (UG4), Manvith Reddy (UG4), Prashant Kodali (Ph.D), Arjun T H (UG3), Jushaan Singh Kalra (UG4, Delhi Technological University) and faculty members Prof. Ponnurangam Kumaraguru and Prof. Manish Shrivastava from Precog participated in the Hate Speech and Offensive Content Identification in English and Indo-Aryan Languages (HASOC-2021) shared task as a part of the CEUR workshop organized by FIRE 2021 from 13 – 17 December 2021 ranked 3rd amongst the teams that participated in all six tasks.
- IIIT team Tesla Protocol of Sai Anurudh Peduri, Arjun Pitchanathan, and Devansh Gautam ranked 46th globally at the ACM-ICPC competition held on 27th June 2020.
- Avantika Latwal working under the supervision of Rehana Shaik was awarded second prize under the theme Geospatial Technologies in Water Resources
Engineering for research work on Water Quality Estimation Using Remote Sensing Technique.

- IIIT-Hyderabad team won Best User Award at International IoT Standards Hackathon for Smart Energy Solution. The team led by SSVSN Surya Suhas Vaddhiparthy with Usha Sai Goparaju, C.G.S. Ganesh, Aakash Dantre, and ruthwik Muppula under the guidance of Deepak Gangadharan and Anuradha Vattem, Lead Architect of the Living Lab, built a solution to optimize indoor energy consumption.

- Sarvesh Thakur a Ph.D with Madhava Krishna and Jhansi Mallela (Ph.D – ECE) working under the supervision of Chiranjeevi Yarra and Ruthwik Muppala (Ph.D – ECE) working under the supervision of Aftab M Hussain were awarded the Kohli Research Fellowship for the academic year 2021 – 2022.

- IIIT-Hyderabad students – Rishikesh Bose, MSc 1st year; Ayush Kumar Lall, 3rd-year Dual Degree; Nilesh Bawankar, MSc 1st year; and Ansh Khandelwal, 3rd Year B.Tech Honors were declared as the winner of the water challenge hackathon. The team was led by Sachin Chaudhari on the theme low-cost retrofit for digitization of analog water meters, a viable replacement for expensive digital water meters.

- Team PauliZ with team members Alapan Chaudhuri, (CSD UG3); Kushagra Garg, (CND UG3); Rutvij Menavlikar, (CSD UG3); Shreyas Pradhanam (CND UG3), and Zeeshan Ahmed, (CSD UG3) secured first place in Quantum Chemistry Challenge of QHack 2022 conducted from 14 – 25 February.

- Dipanwita Guhathakurta and Pravalika Mukkiri’s academic and career aspirations get a boost with this unique initiative from Micron India that targets talented women engineers in their pre-final years receiving URAM Scholarship.

- Adithya Sunil Edakkadan, a 4th year B.Tech student from Centre for VLSI and Embedded Systems Technology (CVEST) working under the supervision of Dr. Abhisheek Srivastava has been selected for the Chanakya Undergraduate Fellowship in Quantum Technologies by the I-Hub Quantum Technology foundation at IISER Pune.

- Qualcomm Innovation Fellowship (QIF) award 2022 - A team comprising of students Pranay Gupta and Debanu Gupta under the mentorship of Dr. Ravi Kiran Sarvadevabhata won this year’s edition of the prestigious Qualcomm Innovation Fellowship. It is the second consecutive fellowship award for the institute coming on the heels of last year’s win by a faculty team of Prof. Madhava Krishna and Dr. Vineet Gandhi with students Unni Krishnan Nair and Nivedita Rufus for their work on Language-based Navigation with Object Referenced Spatiotemporal Constraints in Autonomous Driving.

- Harshithanjani Athi and Rasagna Chigullapally under the mentorship of Dr. Lalitha Vadlamani and Dr. Prasad Krishnan were winners of this year’s edition of the prestigious Qualcomm Innovation Fellowship (QIF) award.

- Kumar Neelabh, working under the supervision of Dr. Vishnu Sreekumar, has been selected for the Mathematical Methods in Computational Neuroscience Summer School to be held at Eresfjord, Norway from 20 July to 5 August organised by the Norwegian University of Science and Technology (NTNU).

- Feminist Theory - Research article on Controlled empowerment of women: intersections of feminism, HCI and political communication in India authored by Prof. Nimmi Rangaswamy and Isha Mangurkar, a Ph.D. Student in the School of Philosophy, Psychology, and Language Sciences, University of Edinburgh, UK and a former student of Nimmi Rangaswamy is published in the journal-I Feminist Theory.
- A collaborative effort between TCS and IIIT Hyderabad that strategically deploys game theory and Machine Learning techniques in a smart grid network bagged first place at the annual niche tournament, PowerTAC.

**Rankings & Recognitions**

- National Institutional Ranking Framework (NIRF) announced by the Ministry of Education, Government of India in September 2021 ranked IIIT-Hyderabad as Top 54 in the engineering category and 83 in the university category.
- Atal Ranking of Institutions on Innovation Achievements (ARIIA) has recognized IIIT Hyderabad in the Promising Band in the category of Private / Self-financed University (Technical) for the year 2021.
- India Today’s July 2022 Survey ranked IIIT-Hyderabad as India’s No.2 in All India Best Engineering Colleges.
- IIIT-Hyderabad ranked as India’s number 1 private engineering institution, as well as India’s number 1 and Telangana’s number 1 private university in a survey conducted by Education World (EW) for the year 2022 - 23. In its 2021-22 survey, IIIT-Hyderabad stood in No.2 position and Telangana’s No.1 Private university.
- DataQuest Best T-Schools survey ranked IIIT-H top 3rd at the All-India level and top 2nd in the South Zone. The survey focused on UG programs offered at higher education institutions and technical institutions. The institute also ranked 3rd in DataQuest’s Employability Index Survey 2021.
- IIIT-Hyderabad ranked prominently in different categories of The Week Magazine - 1st in private engineering colleges, South Zone; 1st in Private engineering colleges, Hyderabad; 2nd in all India private engineering colleges, 2nd in engineering colleges, South Zone; and 14th in all India engineering colleges includes both Govt. & Private categories.

**IV. OUTREACH**

The Institute’s Education Outreach has made efforts to deliver executive education programs and College research affiliate program throughout the year. The College Research affiliate program is a three-facet program that caters to the needs of students and faculties as well as creates value for the institutes. It impacted seven participating colleges [KIET, HITAM, KGRCET, VCE, GNITS, SVPCET and SCE], 535 students, and 25 faculties in 2 technology areas - IoT and speech processing. For the next cohort, we are signing up the MoU with more colleges to amplify the research connections.

The executive education programs are being delivered in a hybrid model and have produced over 3,400 professionals in about 3 years. Currently, the 19th batch of the Artificial Intelligence and Machine Learning (AI&ML) program in collaboration with Talent Sprint is in place. This joint initiative was rated as one of the best in the country, being recommended by NASSCOM. A similar program in Software Engineering for Data Science (currently 3rd batch), Blockchain, and Distributed Ledger Technologies (currently 7th batch) has also seen much traction in the past year. Recently there is a tie-up for the e-Masters program with the National Payment Corporation of India (NPCI) to inbuilt the DeepTech skills in their employees.
This year our flagship annual R&D Showcase was held in a hybrid model, both physically on campus and for the first time on metaverse on the 12th of March 2022. The theme for the showcase was *Pandemic Tech-Away*. The keynote speaker for the event was Vinay Nandicoori, Director CCMB who spoke on "How Research is integral to the World Today and Tomorrow". As a part of the showcase, we also had confluence roundtables on Quantum Technology and Cyber-Physical Systems: Hardware Software Convergence with panelists from diverse backgrounds.

The Institute and its faculty from research centres including Kohli Center on Intelligent Systems (KCIS) have organized various International and National Conferences, Workshops, Distinguished lectures and, talks by eminent personalities. Several individuals from industry and academia have shared their wisdom with our students, faculty, and entrepreneurs. Some of them are:

- Prof. Qing Zhao, Cornell University gave a Distinguished Lecture on Random Walk on a Tree for Stochastic Optimization and Learning on 10th August 2021.
- Kohli Centre on Intelligent Systems (KCIS) commemorated the birth anniversary of Sri F C Kohli on 19th March 2022 with a special program celebrating his life through research and innovation.
- Organized 5th Summer School on Artificial Intelligence with a focus on Computer Vision & Machine Learning held from 2nd to 31st August 2021.
- Organized a Summer School on 3-D Vision - held from 22nd to 28th May 2022.
- Organized a Crash course on blockchain technologies - jointly conducted by IIIT-Hyderabad, IIT-Hyderabad, Centre for Development of Advanced Computing (CDAC), and National Informatics Centre (NIC) from 7th August to 4th September 2021.
- Conducted a workshop on Water Quality Management and Pollution Control under Climate and Anthropogenic Influences held on 26th February 2022.
- A five-day refresher Workshop was conducted on Universal Human Values (UHV) in the Telugu Language held during 5-9 Sep, 2021; A 12-day advanced Universal Human Values (JeevanVidya) coordinated by Prof. R Pradeep Kumar (on Virtual mode) held from 4th to 30th October 2021.
- 11th Advanced Summer School on NLP (IASNLP-2022) held from 20th June to 8th July 2022.
- 1st National Symposium under the Quantum Enabled Science and Technology (QuEST2022) program initiated by DST held from 11th to 13th April 2022 for which the participants from various parts of India attended physically.
- 27th International Conference on Database Systems for Advanced Applications (DASFAA-2022) held online mode from 11th to 14th April 2022.
- 21st International Conference on Autonomous Agents and Multiagent Systems (AAMAS’22) held from 9th to 13th May, 2022.
- IndicWiki project of the IIIT-Hyderabad has organized a Wikimedia Technology Summit 2021 on 19th and 20th November 2021.
- National Quantum Science and Technology Symposium (NQSTS-2021) was organized on Virtual mode from 26th July to 3rd August 2021.
- 22nd International Annual Meeting of the Association of Internet Researchers (AoIR), Interfacing, Interacting, Interneting in Pandemic Times (Virtual) co-hosted by Dr. Nimmi Rangaswamy on 4th October 2021.
• Design Thinking and collaborative problem-solving workshop with a specific focus on Software Products were organized by Dr. Raghu Reddy, Software Engineering Research Centre (SERC) on 9th October 2021.
• Prof. Jan Halborg Jensen, Department of Chemistry, University of Copenhagen, Denmark gave a talk under ML4Science Research Café Series of IHub Data on 19th November 2021 under the Chemical Space Exploration series.

CSR Scholarships to Support Needy Students

The institute opened a special channel for admission into its BTech program for rural and economically disadvantaged students in 2018. I am glad to announce that the first batch of these students are graduating today with jobs in global companies such as Ola, Jio InfoComm, Salesforce, Google, Walmart, MathWorks, Samsung, Qualcomm, Zomato, Cropin, etc.

I want to take this occasion to acknowledge the firm support of CGI Inc, a global company, for the students of the special channel we created. CGI is supporting the education of 30 students of this channel with a generous CSR grant of Rs. 3,87,30,00. Of these 30 students, 10 students are in the top 20% of the class - featuring in Deans Merit List 1, 2, 3 i.e., 1/3rd of the students are high academic achievers. I would like to recognize Mr Nirbhay Lumde and Ms Kavitha Natarajan personally present here, along with the entire CGI team for believing in IIITH and these students. CGI is the reason we could launch and sustain this initiative. Subsequently, AT&T has given a financial support of about Rs. 1 crore for later batch of SPEC students as well 34 girl students of the diversity channel.

The Centre for Innovation & Entrepreneurship (CIE) was set up in 2008 and has since grown to be the largest academic incubator in the country. CIE is a technology incubator with rich experience in seeding, nurturing, and growing DeepTech startups in emerging segments like MedTech, Tech4Social, visual informatics, data engineering, Machine Learning, language technologies, gaming, robotics etc. CIE, with a research-led innovation as its primary mandate, focuses on amplifying technology through research collaboration and co-creation models for startups to work with research groups at IIIT Hyderabad. Under the CIE umbrella, there are three active incubators: Deeptech Incubator, MedTech incubator (Ojas BioNEST) & the social incubator (AIC IIIT-H). In the past 13 years, we have grown to be the largest academic incubator in the country, housed over 400+ startups that have raised about 200Cr funding, and created over 2000 jobs. It is organizing focused programmes on emerging technology startups, research-based startups, medical technologies, and social technology startups, frequently.

Programs & New Initiatives

• In November 2021, CIE was awarded INR 3Cr by the Department for Promotion of Industry and Internal Trade (DPIIT) under Startup India Seed Fund Scheme to provide financial assistance to early-stage technology startups.
• CIE along with Arka Media Works, the new age production house which produced movies like Bahubali has launched the AI in Media-Tech Accelerator. The accelerator is also supported by the Department of Science and Technology (DST) under NIDHI Accelerator Scheme.
• In the past year, 3 cohorts of Avishkar Deeptech accelerator and two cohorts of Ojas Medtech accelerator were successfully run 10 startups facilitated with funding and three streams of mentorship.
CIE has launched Mentor Cafe, a one-of-a-kind event wherein many startups get to meet many mentors in a single sitting. The program connects about 15 startups with 15 mentors every month. Match-ups with mentors will help them solve a short-term or long-term problem aligned with their problem statement.

Investments & Grants
- NIDHI Entrepreneur in Residence (EIR) is a co-creation model to enable entrepreneurs to leverage research output from IIIT-H labs leading to Deeptech startups with social or commercial applications. It has boarded 25 startups to date.
- CIE has launched a pre-acceleration program, ZeroTo1 in collaboration with IHub Data, with funding of INR 10L.
- Under MeitY TIDE 2.0 scheme, CIE supported three startups with INR 7L funding.
- Demo Day 2021 – CIE organized the January edition of demo day with 14 promising startups pitching to over 30+ investors from various Venture Capital and Angel firms.

Corporate programs
- Optum Global Solutions (India) Private Limited, part of Optum and United Health Group (a Fortune 5 company), announced the launch of ‘Optum Startup Studio’ in India, in partnership with IIITH, with the aim of fostering innovative ideas and startups to solve healthcare’s toughest problems to accelerate value delivery. A call for applications for Cohort 1 was announced.
- In collaboration with IIIT Hyderabad, Pactera EDGE, an AI and digital technology company based in Redmond, USA, has launched the ‘AI Innovation Challenge’. Early-stage startups with technologies that can address problems in the retail and manufacturing sectors may apply. Specifically leveraging Computer Vision for Human Activity Detection, Visual Inspection in manufacturing.
- Pernod Ricard India Foundation (PRIF) is a non-profit subsidiary of Pernod Ricard India (P) Ltd. (PRIPL) and has collaborated with CIE-IIIT-H through its CSR initiative support. Over a year, 5 startups have been funded with over 1 crore. It aims to provide a platform for Women Entrepreneurs and Women-led Social Enterprises with access to mentorship, business development support, and technology etc.
- ZF India, a technology company supplying systems to automobiles, has signed an MoU with IIIT Hyderabad for collaboration in research projects. The MoU opens the possibility of a co-development research model for ZF in India and the IIIT-H.
- The Demo day of January 2022 featured promising startups from Avishkar (Deeptech Accelerator), Ojas (MedTech accelerator), and other micro-accelerators at the incubator with 39 investors across India.

Atal Incubation Center (AIC) at IIIT Hyderabad Foundation is supported by Atal Innovation Mission, NITI Aayog to nurture Tech-based social enterprises and help India achieve Sustainable Development Goals (SDGs). From April 2021 to May 2022, AIC-IIIT-H conducted 22 startup-related events including seven training boot camps for startups.

- AIC has signed MoUs with 5 partners and 10 mentors in order to provide expert mentorship.
- AIC has built partnerships with corporates to support startups. Through partnerships with HDFC Bank and EPAM Systems, AIC has facilitated financial support of nearly 55 lakhs to 7 startups.
- AIC-supported startups have generated over INR 70+Cr funding and generated nearly 300 jobs, so far.
Technology Transfer Office (TTO) is constantly evaluating technologies with market potential licensees of the deep tech work done in our research centres. Bringing new technology, innovation, or processes to the industry and nurturing them into societal or commercially marketable technology has always been an end goal for IIIT Hyderabad. The institute has 9 granted patents, and 29 published patents, so far. During the last year, 8 have been filed and another 20 are in the process of filing.

**Patents & Recognitions**

- Dr. Raghu Reddy (SERC) and his students Neeraj Mathur and Sai Anirudh Karre were granted a U.S patent for their research work on a system and method for evaluating and facilitating customized guidelines using usability code pattern analysis.
- Indian patent granted to Dr. Abhishek Srivastava (CVEST), and his collaborators Dr. Devarshi Das; IIT Ropar, Dr. M Shojaei Baghini, IIT Bombay for their research work on SAW Resonator Oscillator Based Injection Locked OOK Transmitter.
- Centre for Innovation & Entrepreneurship (CIE) incubated start-up recently bagged a coveted Design Award at the Vision Systems 2021 Innovation Awards for its patented omnidirectional 3D Vision Systems.
- Neural Sync AI's Affordable Lip-sync Tech- A deep Tech AI web app built by two Ph.D scholars of the Centre for Visual Information Technology (CVIT) is all set to disrupt the art of video-editing and dubbing. The patented software from the newly launched start-up can morph authentic-looking speeches with a single video clip of a human or digital avatar, in a matter of minutes, in the language of your choice.

Product Labs has enabled nearly 8 crore revenue to the institute through various projects in the past 18 months, which is taking Product Labs towards a self-sustenance path. During the R&D Showcase of this year, 52 patent-holders tied up with 23 Research Centers were honored for their synergistic efforts. TTO in association with the Internal Quality Assurance Cell (IQAC) of IIIT Hyderabad has organised an IP awareness session on 8th September 2021 for the benefit of faculty and the students.

Our Internal Quality Assurance Cell (IQAC) established in 2016 is actively monitoring academic performance and administrative functioning at regular intervals. The Statistical Cell, which is coordinating with our regulatory and statutory bodies viz., MoE (MHRD), UGC, AICTE, AIU, NBA, and NAAC to adapt their innovative programs, policy matters, and best practices on the campus. It also promotes the Institute branding by participating in various International and National Rankings viz., QS, THE, NIRF, ARIIA, and private rankings such as DataQuest, India Today, The Week, Outlook and Education World etc.

**IHub-Data Technology Innovation Hub**

IIIT-H IHub Data Foundation (IHub-Data) is a Section 8 corporation, focusing on Data Banks, Data Services, and Data Analytics. Its major objective is to coordinate, integrate, amplify, and further research in the above-mentioned areas under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) scheme. IHub-Data wishes to achieve its targets and objectives through four dimensions -Technology Development, Human Resource & Skill Development, Innovation & Entrepreneurship, and startup ecosystems. IHub-Data fellowships were awarded to 20 research students between January 2021 – July 2022 for their potential to contribute to the mission of the center through their research objectives and projects in the focus areas of Mobility, Healthcare, Buildings, Systems, India Specific Research etc.
Collaborations
Currently, IHub-Data is collaborating with International Organizations such as ThermoFisher, Insilico Medicine and Biocon Foundation etc. At national level, they are working with Apollo Hospitals, Grace Cancer Foundation, NMICPS, Nizams Institute of Medical Science (NIMS), Rajiv Gandhi University of Knowledge Technologies (RGUKTs), CSIR India, IGIB, Wish Foundation, CPathlabs, DST, NTPC, Paras Defence, Government of Goa and, Government of Telangana. Since its inception, research fellows of the centre have published a total of 54 research articles in the domains of both, Mobility and Healthcare. IHub-Data in collaboration with CIE is running four programs to identify, train and nurture startups to scale beyond. The programs are

- **Grant challenge** is a three-month program for startups seeded from research and leveraging emerging technologies. The startups with a validated proof of concept can build an MVP through the grant.
- **Root Node** is a three-month research advisory program for technology review, idea validation, and approach and product development with guidance from renowned research faculties at IIIT-Hyderabad and Research Labs to foster novel ideas.
- **ZeroTo1 lab** is a unique and accessible program for three months, where startups will be given the necessary mentoring/resources to get their first customer and first fund. It prepares start-ups for the scope of scaling beyond.
- **EIR (Entrepreneurship in Residence)** is a six-month entrepreneurship development program under which the selected individuals undergo a variety of programs, which are designed to scale beyond.

Human Resource & Skill Development
- IHub-Data organized a Summer school in AI, Foundations of modern machine learning, Machine Learning for chemistry and drug design, Divyang Warriors training etc.
- IHub-Data supports students’ research in a big way ushering them with sponsors and fellowships at various levels. A total of 91 fellowships for graduates and 41 post-graduate fellowships have been awarded.
- At the Doctoral level a total of nine fellowships are awarded and at the Postdoctoral level, a total of 12 fellowships were awarded. While one faculty fellowship was awarded.

IHub-Data has organized numerous programs focusing on different areas. Some of them are:
- International Day for Women in Science and Technology
- International Data Privacy Day
- Autonomous Navigation in Unconstrained Environments
- A Mini-Symposium to facilitate paper presentations from the first and second batches of research scholars for IHub-Data Fellows
- Panel Discussion – Data-Driven Drug Discovery- Distraction or Disruption
- Deep Learning Application for ECG/EEG
- Lecture on Machine Learning for science
- Awareness session on Cervical Cancer
V. STUDENT ACTIVITIES

For the 2022-23 session, a new student parliament body was elected. The Student Parliament is a self-less student body that strives to resolve issues faced by the students in the institute and make the IIITH community stronger, safer, and better. The previous term had been one of the toughest terms the student parliament has seen in recent years. Although more than half of the past academic year was in hybrid mode in view of the 3rd wave, our students have managed to take time out of their intense academic and research schedules to organize various activities that showed their leadership qualities, creativity, and caring nature. They organized several technical, cultural, social, and sports programs, and celebrated national festivals such as Independence Day, Republic Day, Gandhi Jayanthi Celebrations etc. Our students have formed more than 20 clubs and have organized about 300 events and activities, including a few national and international ones. The events ranged from activities related to debates, quizzes, photography, music, dance, art, literature, Ping newsletter, gaming, hacking, e-Cell, electronics, and astronomy to seminars and talks. In March 2022, the 22nd edition of Felicity, the students’ annual mega techno-cultural fest, has been organized in physical mode after a small break from being online in 2021. It was a huge success with a large turnout that included new alumni students as well.

There were many talks, workshops, and programs in diverse fields. To enlist a few: a series of Art and Wellbeing sessions, World Science Day for Peace and Development, Clothes donation drive, Webinar on the Awareness of Lung Cancer, International Mother Language Day Celebrations, Special Webinar Yogic Management of Hormonal Problems for Women on International Women’s Day, Mental Health Workshop, Talks on Gender Sensitization, etc. As usually done every year, a flagship Classical Music Concert was organized and this year it was by Prof. Subhendu Ghosh.

Our students were also engaged in various social activities like spreading awareness during Covid-19 pandemic through posters, organizing cloth collection drives, green challenge initiatives, webinars on Hope for Farm Animals, Vijay Diwas, Doctor’s Day, World Environment Day etc.

Physical Education Center (PEC) took many initiatives to keep the campus community physically and psychologically fit. It encouraged participation by Campus Community with the introduction of Monsoon Sports and organized several events. This is in addition to the regular Academic Credit Courses such as International Bicycle Day which was celebrated with large participation from the Campus Community, PEC also encouraged students in participating inter-college competitions for Football, Basketball, Volleyball, and Cricket.

Many Yoga activities have been organized to keep the campus community in good health. To name a few, Yoga Mahotsav Month during Jun-2022 with a series of events on weekends in addition to 2 flagship sessions on International Yoga Day Celebrations with the theme Yoga for Wellbeing. Some of the events organized as part of Yoga Mahotsav are Tratak Kriya (Eye exercise), Kapola Shakti Vikasam (Face Yoga), Yogic Remedies for Insomnia (Sleeping Disorder), and concluded the Mahotsav with a session on Yoga Nidra.
New Infrastructure & Facilities

- **Student Workspaces**
  Students now have new workspaces on campus. The student workspaces are set up as a facility where any student can come and work in a quiet space. These spaces are designed and built recently in 2022 with modern facilities such as ergonomic chairs and desks, discussion rooms, whiteboards, and the like. Put together, these facilities can accommodate 200 students at any given time. The space is designed with good ventilation and fire escape doors and fire extinguishers as per safety standards.

- **Open Air Gymnasium**
  An additional infrastructure in the form of an Open-air Gym has been added to the existing Sports facilities which have received a good response from the Campus Community.

- **New Placement Office**
  The new Placement Office at Nilgiri was inaugurated on October 12\textsuperscript{th} to enhance the experience of the companies visiting to recruit the students of the institute.

- **New Library space**
  The current library space is extended with a new reading room, stock area, sufficient IT infrastructure, furniture etc.

Overall, the student life activities were not affected by the pandemic or online platform. And once again it is proved that students bring life to any institute.

VI. ALUMNI

The alumni have contributed a total of Rs. 2.1 crores as of date, towards a scholarship program for needy students. Last year, Rs. 51 lakhs alone were added to the fund and 56 students are supported with financial assistance and 29 student beneficiaries returned the favor by sponsoring another bunch of deserving students. Currently, 8 students are being supported by the Alumni Fund. The alumni helped to raise over 30 lakhs towards the medical expenses of one of our students (T H Arjun, a dual-degree CSE student) during the pandemic. The virtual Alumni Meet held on 12\textsuperscript{th} December 2021, drew a big alumni crowd from across the globe. We have showcased the experiences of 8 alumni through our blogs, Alumni Speak Series, Alumni Startup Showcase etc. Our alumni were also featured as speakers on our Foundation Day (2\textsuperscript{nd} September) and F C Kohli Day Celebrations (19\textsuperscript{th} March).

A few alumni achievements

- Ishan Misra from Meta-FAIR is in the MIT Tech Review 35 under 35 list under the AI & Robots category. Ishan entered IIIT-H in 2008 as a BTech student in CSE and worked in CVIT, then at CMU and is now in FAIR.
- Tarun Nayak, B.Tech-2006 batch at IIIT Hyderabad an IPS officer in Madhya Pradesh was awarded the Police Gallantry Medal, recently. Tarun was at IIIT-H from 2002 – 2006 and was inducted into IPS in the year 2009. Tarun, a diligent officer with a great passion for his work, is currently commandant of Hawk Force Police Head Quarters [PHQ], Bhopal. He was earlier SP in Ashok Nagar district, Neemuch, Seoni, and Sidhi and Commandant in Special Armed Force Battalion in Indore and Mandla.
- Ms. Garima Agarwal (B.Tech and MS by Research – batch of 2015) Additional Collector, Karimnagar along with Collector Mr. R V Karnan launched the first-of-its-kind Vaaradhi App (Bridge in English) which will be a boon for unemployed youth.
and aspirants of competitive exams. This is going to be a game-changer for Telangana government job aspirants preparing for around 1.00 Lakh jobs announced recently.

- Practical Natural Language Processing - a book co-authored by 3 IIIT-H alumni, has caught the eye of the global AI community, snagging a place in the top 1% of all general and technical books sold on Amazon. Anuj Gupta, Harshit Surana, and Sowmya Vajjala shared the backstory on how their book was published by industry giant O'Reilly Media, a rare feat for an all-Indian team of writers.
- BlueSemi, a CIE-incubated startup founded by IIIT-H alumnus Sunil Kumar Maddikatla has received impressive funding of US$69 million from Luxembourg-based investment group GEM Global Yield LLC. The infusion is set to fuel the growth of its soon-to-be-launched disruptive health tech product that is inspired by ikigai.

VII. GRADUATING STUDENTS

This year, the graduating batch size is **556** in number (Dual Degree – 100; B.Tech Honours – 83; B.Tech – 72; MS by Research – 33; M.Tech -136; Ph.D. – 22 and MSIT – 110). This is the largest graduating class in the institute’s history. The Covid-19 pandemic did not affect the placements. A total number of **151** companies registered for conducting placements; 78 companies have conducted online recruitment and, 57 companies have made job offers to these graduating students.

VIII. SUMMARY

I welcome the new graduates of IIIT Hyderabad to the fold of the most powerful club in the world, namely, that of the alumni of the institute. The alumni numbers will cross 6000 very soon. You bear a great responsibility towards the world as competent, creative and above all caring individuals who make the world around you better each day. There is ample opportunity to apply the skills and above all the worldview you gained at the institute to your professional careers, your personal life, as well as to the society around you. We expect nothing less than the very best from you and are confident you will live up to your potentials. The institute will be with you in every step of yours as it has been our privilege to be a part of a critical stage of your lives. I urge you to stay connected with the institute and help in its journey towards becoming a top academic institution in the world. We will soon enter the 25th year of the institute which gives additional opportunities to connect with the global alumni. Great academic institutions are fundamentally defined and owned by their alumni. I urge you all to move forward with confidence and conviction in your life’s journey while keeping IIIT Hyderabad in your hearts.

Thank you.

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