Institute Activities Report
2019
presented at Convocation 2019
RESEARCH & EDUCATION
THAT MAKES A DIFFERENCE...
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>About the Institute</td>
<td>02</td>
</tr>
<tr>
<td>Governing Council</td>
<td>03</td>
</tr>
<tr>
<td>Director’s Message</td>
<td>08</td>
</tr>
<tr>
<td>Profile of Convocation Chief Guest</td>
<td>10</td>
</tr>
<tr>
<td>Academic Programmes</td>
<td>11</td>
</tr>
<tr>
<td>Meritorious Students</td>
<td>13</td>
</tr>
<tr>
<td>Research</td>
<td>14</td>
</tr>
<tr>
<td>Faculty</td>
<td>26</td>
</tr>
</tbody>
</table>
ABOUT THE INSTITUTE

International Institute of Information Technology, Hyderabad (IIITH) is an autonomous university, founded as a not-for-profit public private partnership (N-PPP) in 1998, and is the first IIIT in India under this model. Over the years, the institute has evolved strong research programmes in various areas, with an emphasis on technology and research with applications to industry and society.

The institute facilitates interdisciplinary research and a seamless flow of knowledge. Several world-renowned centres of excellence are part of IIITH’s research portfolio. It has established various joint collaborations and co-innovation models via an industry outreach arm. This spans significant national and multinational companies.

Its innovative curriculum allows students the flexibility of selecting their courses and projects. Apart from academics the institute provides students with a comprehensive environment that promotes art and culture, sports, societal contributions and self-governance. Even undergraduate students get to participate in ongoing research and technology development - an opportunity unprecedented in India. As a result, a vibrant undergraduate programme co-exists along with a strong postgraduate programme.
GOVERNING COUNCIL

Prof. Raj Reddy
University Professor of Computer Science & Robotics, School of Computer Science, Carnegie Mellon University (CMU), Pittsburgh, USA

Shri C S Srinivasa Rao
Managing Director, Peepul Capital Advisors Pvt. Ltd., Hyderabad

Ms. Anu Acharya
CEO, MapMY Genome

Mr. Dilipkumar Khandelwal
President, SAP HANA Enterprise Cloud and Managing Director, SAP Labs India, Bangalore.

Shri. Ajit Rangnekar
Director General, Research and Innovation Circle of Hyderabad [RIC], Hyderabad.

Prof. Sanghamitra Bandyopadhyay
Director, Indian Statistical Institute Kolkata.

Ms. Debjani Ghosh
President, NASSCOM, New Delhi

Shri. Jayesh Ranjan
(Ex-officio) Principal Secretary, Industries & Commerce & IT Departments, Government of Telangana

Dr B Janardhan Reddy
(Ex-officio) IAS, Principal Secretary, Higher Education Department, Government of Telangana
PANEL OF PAST DIRECTORS

Prof. Narenda Ahuja
(Ex-officio) Dean (Academic), International Institute of Information Technology, Hyderabad

Prof C V Jawahar
(Ex-officio) Professor & Dean (RnD), International Institute of Information Technology, Hyderabad

Prof. R Pradeep Kumar
(Ex-officio) Registrar, International Institute of Information Technology, Hyderabad.

ADVISORY PANEL

Dr. Vinton G Cerf
Vice President and Chief Internet Evangelist, Google

Prof. Narendra Ahuja
Donald Biggar Willet Professor of Engineering, University of Illinois, USA

Prof. Rajeev Sangal
Former Director, Indian Institute of Technology (Banaras Hindu University), Varanasi

ALUMNI OBSERVERS

Mr. Vipul Kedia
Director, Partnerships, Affle India Pvt. Ltd, Gurgaon

Dr. V Soujanya
Product Manager / Sr. Tech Lead, R&D, i.amt LLC, Singapore
We continued another year of accomplishments in teaching, research and outreach. Our faculty and students won several awards and accomplishments this year as well as published 325 research papers. Over 45 of our students including several undergraduate students travelled to conferences abroad to present their papers and participate in academic discussions. In all, 25 of our PhD students have external competitive fellowships from TCS, Google, Intel, Visvesvaraya, etc., and several more from CSIR, UGC and other sources. Faculty and students also organized and conducted more conferences and secured interesting projects.

IIT Hyderabad reached a significant milestone of completing 20 years last year and celebrations were attended by the founders as well as several well-wishers from industry, government and academia. We are both humbled as well as motivated by the support to take the institute to greater heights in the coming years.

IIT Hyderabad took several steps in the past year along its path towards being a globally visible academic institution with positive impact on society. We are working with several corporates on joint work and are actively pushing for the adoption of our research to the world out there. We started work with STAR Sports, Airport Authority of India, and Bharat Dynamics Limited – and many others – towards this. The Kohli Centre on Intelligent Systems remains the strongest AI group in the country and organised the first-of-its-kind workshop on AI for Journalists.
Marthanda Varma Sankaran Valiathan  
Ch.M, FRCS, FRCS (C), FRCP, D.Sc

Professor M V S Valiathan (b 1934), graduated in medicine from Kerala University and received training in surgery in UK with subsequent specialization in cardiac surgery in the US. He became a Fellow of the Royal College of Surgeons of England in 1960 and a Master of Surgery from the University of Liverpool two years later. He received the Fellowship of the Canadian Royal College in cardiac surgery in 1970.

Professor Valiathan served on the faculties of Georgetown University Hospital, Washington; Postgraduate Medical Institute, Chandigarh and IIT, Chennai (Biomedical Engineering) before moving to Trivandrum as the architect of the Sree Chitra Tirunal Institute, Trivandrum where he remained as Professor of Cardiac Surgery and Director for 20 years. After leaving the Chitra Institute, Professor Valiathan served as the first Vice-Chancellor of Manipal University.

He is a Past-President of the Indian National Science Academy, Association of Indian Universities and currently a National Research Professor. Professor Valiathan’s professional and scientific interests were cardiac surgery in children, studies on the causation of a tropical heart muscle disease, and the development of technology for cardiovascular devices. Among these, a disposable blood bag was transferred for production three decades ago and currently accounts for 36 million bags per year. Another device, a tilting disc heart valve, is also manufactured in Trivandrum and has been implanted in over 1,20,000 patients so far. These devices and several others developed at Chitra laid the foundation for a medical devices industry in India.

For over a decade, Dr Valiathan has taken up a serious study of Ayurveda and published five books including the redaction of the ancient texts of Charaka, Susruta and Vagbhata. His interest in supporting research in modern biology based on cues from Ayurveda has led to the creation of a Task Force in Ayurvedic Biology in the Department of Science and Technology under his chairmanship.

He is a recipient of the Fellowship of the National Academies of Medicine, Science and Engineering in India; many honorary doctorates and several international honours including the Hunterian Professorship of the Royal College of Surgeons of England, Chevalier in the order of ‘palmes academiques’ of the French Government and Dr Samuel P. Asper Award for International Medical Education, Johns Hopkins University in the US. He received the Padma Vibhushan from the Government of India in 2005.
ACADEMIC PROGRAMMES

The institute’s programmes at the undergraduate and postgraduate levels combine course-work with research and development. Students get actively involved with technology development, some of which has been adopted by the industry. The institute offers:

**Single Degree Programmes**

- B.Tech in Computer Science and Engineering (CSE)
- B.Tech in Electronics and Communication Engineering (ECE)

**Dual Degree Programmes**

- B.Tech in Computer Science and Engineering and M.S in Computer Science and Engineering by Research (CSD)
- B.Tech in Electronics and Communication Engineering and M.S in Electronics and Communication Engineering by Research (ECD)
- B.Tech in Civil Engineering and M.S in Building Science and Engineering by Research (BSE)
- B.Tech in Computer Science and M.S in Computational Linguistics by Research (CLD)
- B.Tech in Computer Science and M.S in Computational Natural Sciences by Research (CND)
- B.Tech in Computer Science and M.S in Computing & Human Sciences by Research

**Postgraduate Programmes in IT and its applications to various related fields:**

<table>
<thead>
<tr>
<th>Computer Science and Engineering</th>
<th>Exact Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Tech, M.S by Research, Ph.D</td>
<td>Ph.D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electronics and Communication Engineering</th>
<th>Cognitive Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S by Research, Ph.D</td>
<td>Ph.D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Computer Science and Information Security</th>
<th>Spatial Informatics</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Tech</td>
<td>Ph.D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Computer Aided Structural Engineering</th>
<th>IT in Building Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Tech</td>
<td>M.S by Research, Ph.D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Computational Natural Sciences</th>
<th>Civil Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S by Research, Ph.D</td>
<td>M.S by Research, Ph.D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bioinformatics</th>
<th>IT in power Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Tech, M.S by Research, Ph.D</td>
<td>Ph.D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Computational Linguistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S by Research, M.Phil, PG diploma, Ph.D</td>
<td></td>
</tr>
</tbody>
</table>
PG Student Status Programme (PGSSP)
For working professionals in Hyderabad who are keen on pursuing their interest in a wide range of disciplines.

Master of Science in Information Technology (MSIT)
A two year innovative multi-university interdisciplinary post-graduate programme in Computer Science offered by Consortium of Institutions of Higher Learning (CIHL), formed by the Universities.

Along with high calibre interdisciplinary IT education, IIITH also grooms global citizens. The overall nurturing of each student is achieved through an integrated curriculum with a wide-range of IT courses, relevant research projects, interaction with industry, preparation in entrepreneurship, courses in languages, humanities, social sciences, and a strong programme in human values.
MERITORIOUS STUDENTS

The IIITH Gold Medal - 2019

The IIITH Gold Medal is awarded in recognition of outstanding academic performance throughout the year to the student with the highest cumulative grade point average in his or her graduating class. The IIITH Gold Medal is awarded to

Programme Gold Medal

- Patel Chaitanya Pankajkumar
  B.Tech CSE
- Ishan Bansal
  B.Tech in ECE
- Dhruv Khatkar
  Dual Degree in CSE
- Susobhan Ghosh
  Dual Degree in CSE (Lateral Entry)
- Bhoopatriju Rekha Devi
  Dual Degree in ECE
- Aagam Shah
  Dual Degree in Computational Natural Sciences
- Mahajan Gaurav Pramod
  M.Tech in CSE
- Nikita Garg
  M.Tech in Computer Science & Information Security
- Yerramsetti Sree Apoorva
  M.Tech in Computer Aided Structural Engineering

B.Tech - Best All Rounder- 2019

Notable contributions and performances in different areas such as academics, extracurricular activities and IIITH services were considered in the selection of the best all rounders.

- Sreya Mittal
  B.Tech in CSE
- Pranav Bhasin
  B.Tech in CSE
RESEARCH

IIIT-Hyderabad is organised as a set of research centres and laboratories instead of schools and departments. Each research centre focuses on a broad problem area and brings together experts from varied backgrounds to conduct research and development on specific aspects in a problem area, constantly pushing the boundaries of research to the next level.

The research centres and laboratories at IIITH are either focussed on creation and development of new technologies or application of technologies to unusual domains in innovative ways.

**Technology**

<table>
<thead>
<tr>
<th>Centre for Security, Theory and Algorithms (CSTAR)</th>
<th>Centre for Visual Information Technology (CVIT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre for VLSI and Embedded Systems Technology (CVEST)</td>
<td>Data Sciences and Analytics Centre (DSAC)</td>
</tr>
<tr>
<td>Language Technologies Research Centre (LTRC)</td>
<td>Robotics Research Centre (RRC)</td>
</tr>
<tr>
<td>Signal Processing and Communications Research Centre (SPCRC)</td>
<td>Software Engineering Research Centre (SERC)</td>
</tr>
</tbody>
</table>
## Domains

<table>
<thead>
<tr>
<th>Building Science Research Centre (BSRC)</th>
<th>Centre for Computational Natural Sciences and Bioinformatics (CCNSB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre for Education Technology and Learning Science (CETLS)</td>
<td>Centre for Exact Humanities (CEH)</td>
</tr>
<tr>
<td>Centre for IT in Education (CITE)</td>
<td>Cognitive Science (CogSci)</td>
</tr>
<tr>
<td>Earthquake Engineering Research Center (EERC)</td>
<td>IT for Agricultural and Rural Development (ITARD)</td>
</tr>
<tr>
<td>Lab for Spatial Informatics (LSI)</td>
<td>Research Centre for eGovernance (RCeG)</td>
</tr>
</tbody>
</table>

## Development Centres

<table>
<thead>
<tr>
<th>Centre for Innovation and Entrepreneurship (CIE)</th>
<th>Product Labs</th>
</tr>
</thead>
</table>
RESEARCH
Kohli Center on Intelligent Systems (KCIS)

Kohli Centre on Intelligent Systems (KCIS) was established at IIIT Hyderabad in 2015 with funding from Tata Consultancy Services (TCS) Foundation to give a fillip to research, teaching and entrepreneurship in the broad field of Intelligent Systems. The current areas of focus are language technology, computer vision, data sciences, robotics, cognitive sciences and machine learning.

An agreement was signed with TCS Foundation in September 2018 for the second phase of funding of the Kohli Centre on Intelligent Systems for the next 5 years.

The centre is led and steered by an advisory board consisting of Turing Award winner Dr. Raj Reddy, an early pioneer in Artificial Intelligence and University Professor at Carnegie Mellon University (CMU); Dr. F. C. Kohli, also known as the Father of Indian Software Industry; Dr. Manuela M. Veloso, Herbert A. Simon University Professor, School of Computer Science, Carnegie Mellon University, USA; and Dr. Mark S. Fox, Director, Centre for Social Services Engineering Department of Mechanical and Industrial Engineering, University of Toronto, Canada.

KCIS organized various Distinguished Lectures and Talks by
- Prof. Anil Jain, Michigan State University
- Prof. Andrew Zisserman, Oxford University
- Prof. Shmuel Peleg, Hebrew University
- Manoj Saxena, Executive Chairman, CognitiveScale
- Prof. Subbarao Kambhampati, Arizona State University
- Prof. Richard Socher, Chief Scientist, Salesforce
- Sandeep Gupta, Product Manager, Google
RESEARCH

International collaborations are a long-standing tradition. Several top international institutions are part of this engagement - Carnegie Mellon University, University of Pennsylvania, National Institute for Research in Computer Science and Automation (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, Lawrence Berkeley National Laboratory and Innoopolis University, Russia, University of Agder, Norway and Yonsei University, Korea.

National organizations like Defence Research and Development Organisation (DRDO), Indian Space Research Organisation (ISRO), Department of Atomic Energy (DAE), Indian Institute of Remote Sensing (IIIRS), National Institute for Smart Government (NISG) etc are also involved with IIITH for collaborative engagements.

The institute has also collaborated with medical research institutions like Aravind Eye Care Institution and Sr Chitra Tirunal Institute of Medical Sciences and Technology.

Research funding has been received from multiple agencies such as Department of Science & Technology (DST), Ministry of Communication and Information Technology (MCIT), Direct Benefit Transfer (DBT), Biotechnology Industry Research Assistance Council (BIRAC), Ministry of Earth Sciences (MoES), Department of Electronics and Information Technology (DeitY), Ministry of Human Resource Development (MHRD), Science and Engineering Research Board (SERB), Council of Scientific and Industrial Research (CSIR), North Eastern Space Application Centre, Indo-US Science and Technology Forum, Indo-French Centre for the Promotion of Advanced Research.


STAR Sports India Private Limited has entered an MoU with IIITH this year on sports and related technologies that may lead to a Centre of Excellence. The Institute has also signed MoUs with Airport Authorities of India and Bharat Dynamics Limited to provide research support.

Peenod Ricard India Foundation (PRIF) gave IIITH Rs. 3 crores to support six startups and research in areas with social impact. Ripple, a leading Silicon Valley financial technology company selected IIIT Hyderabad for a Blockchain Centre of Excellence with a total support of 1 million USD over 5 years. The centre would help to promote greater understanding and utilization of blockchain, cryptocurrency, cryptography and related topics of shared interest and foster widespread adoption and innovation in these fields globally.
ACHIEVEMENTS

Our researchers received national and international recognition at academic conferences and competitions. Some of the special achievements this year include:

**Prof. Vishal Garg** received the Arthur H Rosenfeld Urban Cooling Award from the Global Cool Cities Alliance in California, USA.

**Prof. Pradeep K. Ramanchandra** is elected Vice President (South) of Indian Association of Structural Engineers (IASTructE).

**Dr. Nimmi Rangaswamy** has been inducted into the board of advisors for United Nations University Institute on Computing and Society (UNU-CS) at United Nations University (UNU), located in São Lázaro, Macau, China.

**Prof. P Krishna Reddy** has been appointed as a member of the executive committee of Indian Society of Agricultural Information Technology (INSAIT), from October 2018.

**Prof. C V Jawahar** has been elected a Fellow of the Indian National Academy of Engineers (INAE) with effect from November 2018.

**Divija Swetha**, PhD student of SPCRC working under the supervision of Dr. Lalitha Vadamani, has been awarded Qualcomm Innovation Fellowship India 2019 for their proposal - Codes for Distributed Computing and Sharding. The participating institutes included 9 IITs, IISc as well as IIIT Hyderabad. Out of 28 finalist teams, 10 winning teams were awarded the fellowship. Each winning team will receive 10 lakhs INR fellowship and mentorship from Qualcomm engineers.

**Sreeja Kamisheetty** working under the supervision of Praveen Paruchuri was selected for the Google Venkat Panchapakesan Memorial Scholarship which is awarded annually to 6 Indian students in Computer Science or a closely related field.

**1st Year UG student Mukund Choudhary** was one of the top 20 finalists among 470 submissions from 60 countries to attend the Global Peter Drucker Forum in Vienna.

**Best Doctoral Dissertation**

IIITH faculty **Dr. Ravi Kiran S** and student Yashaswi Verma received the IUPRAI (Indian Unit of Pattern Recognition and Artificial Intelligence) Best Doctoral Dissertation Awards at the ICVGIP 2018 Conference.
Best Paper Awards

Two papers by IIITH were selected among the best 25 papers in the history of HIPC - Accelerating Large Graph Algorithms on the GPU Using CUDA by Pawan Harish, P J Narayanan (2007) and A performance prediction model for the CUDA GPGPU platform by Kishore Kathapalli, Rishabh Mukherjee, M. Suhail Rehman Suryakant Patidar, P J Narayanan, Kannan Srinathan (2009).

Dr. Priyanka Srivastava and her team – Anurag Rimzhim (CCSU, US), Palash Vijay (IIITH), Shruti Singh (IIITH), Sushil Chanaa (INMAS, DRDO, New Delhi) presented a paper on Desktop VR is better than Non-ambulatory HMD VR for spatial learning at EuroVR 2017, Laval, France in December 2018. The paper was awarded one of the best papers from Euro VR 2017 in a peer-reviewed journal Frontiers in Robotics and AI (2018) in July 2019.

Dr. Abhishek Srivastava won the best paper award for his research on Analysis and Design of Low Phase Noise LC Oscillator for Sub-mW PLL-free Biomedical Receivers at the 32nd International Conference on VLSI Design and 18th International Conference on Embedded systems (VLSID 2019).

Dr. Lallitha Vadlamani and Aadiyya M Nair won first runner-up best paper award at the National Conference on Communications (NCC 2019) for their research on Maximally Recoverable Codes with Hierarchical Locality at the Silver Jubilee edition of National Conference on Communications (NCC 2019) at Indian Institute of Science, Bengaluru.


Saurabh Saini and P J Narayanan were awarded the Best Industry Paper Honourable Mention for their paper Semantic Priors for Intrinsic Image Decomposition at the British Machine Vision Conference 2018.

Prof. P K Vinod, Prof. C V Jawahar and Sairam Tabibu (research fellow) published a paper on Pan-Renal Cell Carcinoma classification and survival prediction from histopathology images using deep learning in Nature Scientific Reports.

Best Poster Awards

Venkata Appa Rao Yempada, Research Scholar, Center for VLSI and Embedded Systems Technology (CVREST) working under the supervision of Dr. Srivatsa Jandhyala, was awarded the best poster award for his work on Simulation study of III-V Lateral Tunnel FETs with Gate-Drain overlap at the 23rd International Symposium on VLSI Design and Test (VDAT) at IIT Indore.

Rahul Suresh Vishwakarma (4th year dual degree student in EERC) working under the supervision of Prof. Pradeep Kumar Ramancharta won the Excellent Young Researcher Award for the best poster presentation of his research work on Analysis of Hill Slope Buildings for Twist Variation with Change in Aspect Ratio at the 17th International Symposium on New Technologies for Urban Safety of Mega Cities in Asia at IIIT Hyderabad.

Other Awards and Recognitions


Dr. Shaik Rehana received a travel grant from India-UK Water Centre (UKWC) to attend a workshop on Science and Innovation for Catchment Management held at the University of Warwick, UK in May 2019. She also gave an invited talk on Assessment of Regional Evapo-transpiration over a Large River Basin of India at the workshop.

Divija Swetha a PhD student at SPCRC was awarded the Qualcomm Innovation Fellowship India 2019 for her proposal on Codes for Distributed Computing and Sharing.

A total of 43 students got partial travel support from grant funds by Google, Microsoft, etc. to attend and present their papers in top tier conferences.

Four patents applications were submitted under Indian provisional and one under US patent.

Four major research translational efforts were carried out this year - Badminton Analytics, Document Bot, OCR for KYC form and Neuro Rehabilitation.

IIIT Hyderabad Research Park Foundation, a section-8 company has been formed to promote, develop, collaborate, undertake technologies-based enterprises, industries, start-ups and research & development labs of the institute and to carry on, develop, create, establish, research commercialization activities across the globe to help companies projects and its activities.


Dr. Ashok Kumar Das was appointed as an Associate Editor of IET Communications journal for a three-year term from February 2019. He is also one of the guest editors in the special issue on Blockchain Technologies and Applications for 5G Enabled IoT in ICT Express (Elsevier) journal.

Dr. K S Rajan was appointed as Associate Editor of the Journal of Indian Society of Remote Sensing (JISRS).

Prof. C V Jawahar gave a keynote talk on Deep Learning Revisiting Handwriting: LetNet to HWNet at the International Conference on Pattern Recognition (ICPR-2018), Beijing, China from 20 – 24 August.

Dr. Sachin Chaudhari was elevated to the grade of IEEE Senior Member.

Several faculty members serve on different national level committees and initiatives.
A NOVEL PLENTITUDE IN REMOTE SENSING
- Advancement in the era of Hyperspectral RS

N. N. Saiguna, Jamali Sundar, P. Rama Chandra, N. Ram Rao
Lab for Spatial Informatics

Hyperspectral data has much atmospheric errors and cloud. As flying these data again and again for a region is costly and tedious.

Everyone have finished their project with data. But I have field data, I have to upscale leaf spectra to canopy level spectra.

Harry!!! The answer is SENES 4D (Sentinel Image Model for Upscaling Leaf Spectra and its properties). A novel approach of canopy modeling Hyperspectral reflected spectra and biophysical parameters.

I removed the clouds and I have finish my project. All thanks to Benson and R.F.

I have immediate remedy for you too.

I have immediate remedy for you too.

- A bad that converts Sentinel data to hyperspectral data.
- I removed the clouds and I have finish my project. All thanks to Benson and R.F.
## RESEARCH PROJECTS

### Consortium Projects

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Faculty</th>
<th>Funding Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWAYAM - The National Massive Open Online Courses (MOOCs)</td>
<td>Dipti Misra Sharma</td>
<td>LTRC</td>
</tr>
<tr>
<td></td>
<td>Consortium Leader Members: Karunesh Arora, C-DAC, Noida Sobha L, AUKBC, Chennai</td>
<td>MHRD</td>
</tr>
</tbody>
</table>

### Joint Collaboration Projects

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Faculty</th>
<th>Funding Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual reality based solution for effective neuro anatomy teaching</td>
<td>Jayanthi Sivaswamy</td>
<td>CVIT</td>
</tr>
<tr>
<td></td>
<td>Jointly collaborated with Dr. T R Kapilamoorthy, Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Trivandrum, Kerala</td>
<td>Science &amp; Engineering Research Board, DST, Govt. of India</td>
</tr>
<tr>
<td>Learning from Egocentric Videos</td>
<td>C V Jawahar</td>
<td>CVIT</td>
</tr>
<tr>
<td></td>
<td>Jointly collaborated with Dr. Chetan Arora, IIT Delhi</td>
<td>Science &amp; Engineering Research Board, DST, Govt. of India</td>
</tr>
<tr>
<td>Structural, biological neuropsychological and social effects of meditation an early dementia and MCI patients and in dementia caregivers</td>
<td>Bapiraju S</td>
<td>CSL</td>
</tr>
<tr>
<td></td>
<td>Jointly collaborated with Dr. Amitabha Ghosh, Apollo Gleneagles Hospitals, Kolkata</td>
<td>Department of Science and Technology</td>
</tr>
<tr>
<td>Design and Fabrication of Autonomous Passenger Drone</td>
<td>Madhava Krishna K</td>
<td>RRC</td>
</tr>
<tr>
<td></td>
<td>Jointly collaborated with Dr. Vineeth N Balasubramanian, IIT Hyderabad and Dr. Raja Vara Prasaad Y, IIT Sri City, Chittoor</td>
<td>Ministry of Electronics and Information Technology</td>
</tr>
</tbody>
</table>

### Individual Research Projects

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Faculty</th>
<th>Funding Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convergence estimates of linear solvers for heterogeneous saddle point problems in Phase Field models (MATRICS)</td>
<td>Pawan Kumar</td>
<td>CStar</td>
</tr>
<tr>
<td>Phenomenology with Exotic Particles – Probing Physics Beyond the Standard Model at the Large Hadron Collider</td>
<td>Subhadip Mitra</td>
<td>CCNSB</td>
</tr>
<tr>
<td>Graph Theory, Linear Algebra and coding theory applied to broadcast communication</td>
<td>Prasad Krishnan</td>
<td>SPCRC</td>
</tr>
<tr>
<td>Investigating temporal dynamics in functional MRI (fMRI) time series data</td>
<td>Avinash Sharma</td>
<td>CVIT</td>
</tr>
<tr>
<td>Inspire Faculty Award -SERB, DST</td>
<td>Santosh Nannuru</td>
<td>SPCRC</td>
</tr>
<tr>
<td>Explainable and Robust Models for AI</td>
<td>Naresh Manwani</td>
<td>MLL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CognitiveScale Software India Pvt. Ltd</td>
</tr>
<tr>
<td>Project Title</td>
<td>Faculty</td>
<td>Funding Agency</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>--------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Vision and learning with limited to ND supervision: Applications to autonomous navigator to beyond</td>
<td>C V Jawahar CVIT</td>
<td>Intel Technology India Pvt. Ltd</td>
</tr>
<tr>
<td>Detection and Estimation of Direction of Arrival Frequency of operation and pulse parameters of multiple threat Radars</td>
<td>Azeemuddin Syed CVEST</td>
<td>CARS DRDO</td>
</tr>
<tr>
<td>Earthquake Disaster Risk Indexing (EDRI) for important cities and 1 model district in Seismic Zone IV &amp; V areas</td>
<td>R Pradeep Kumar EERC</td>
<td>National Disaster Management Authority</td>
</tr>
<tr>
<td>Autonomous Urban Exploration -II</td>
<td>Madhava Krishna RRC</td>
<td>Rockwell Collins Inc.,USA</td>
</tr>
<tr>
<td>Modern log analysis using ML techniques</td>
<td>Vikram Pudi DSAC</td>
<td>Qualcomm</td>
</tr>
<tr>
<td>Object detection in streaming video using Deep CNN</td>
<td>Santosh Ravi Kiran CVIT</td>
<td>RCI, DRDO HYderabad</td>
</tr>
<tr>
<td>Exploring multiple cues of environmental and developmental signal transduction networks in microbial systems</td>
<td>Bhaswar Ghosh CCNSB</td>
<td>Department of BioTechnology, Govt. of India</td>
</tr>
<tr>
<td>Document classification and information extraction from clinical trial data</td>
<td>Manish Shrivastava LTRC</td>
<td>Novartis healthcare Pvt. Ltd</td>
</tr>
<tr>
<td>Indexing and retrieval of Indian Language document images for digital libraries</td>
<td>C V Jawahar CVIT</td>
<td>IIT Kharagpur</td>
</tr>
<tr>
<td>Spacebots</td>
<td>K S Rajan LSI</td>
<td>Cyient limited</td>
</tr>
<tr>
<td>Document Layout Analysis</td>
<td>C V Jawahar CVIT</td>
<td>Open Text</td>
</tr>
<tr>
<td>Multi-Armed-Bandit Mechanisms for Smart Power Grids</td>
<td>Sujit P Gujar MLL</td>
<td>Department of Science and Technology</td>
</tr>
<tr>
<td>TopoMap investigates and assembles technology aimed to create topological maps based on sensor data</td>
<td>Madhava Krishna RRC</td>
<td>Rapyuta Robotics Pvt. Ltd.</td>
</tr>
<tr>
<td>Ambient living in a calm smart home environment</td>
<td>Kamal Karlapalem DSAC</td>
<td>Abu Dhabi Department of Education and Knowledge</td>
</tr>
<tr>
<td>Expanding ISHRAE weather files and data book for South AsianCountries</td>
<td>Vishal Garg BSRC</td>
<td>IndianSociety of Heating Refrigerating and Air Conditioning (ISHRAE)</td>
</tr>
<tr>
<td>Computational Imaging and Visualization of Traditional Indian Dance</td>
<td>Avinash Sharma CVIT</td>
<td>Science &amp; Engineering Research Board, DST, Govt. of India</td>
</tr>
<tr>
<td>Age Specific atlas development for the Indian Population</td>
<td>Jayanthi Sivashwamy CVIT</td>
<td>Vijaya Diagnostics Centre</td>
</tr>
<tr>
<td>Development of Biometric de-duplication and verification solutions for UIDAI</td>
<td>Anoop Nambodiri CVIT</td>
<td>Unique Identification Authority of India (UIDAI)</td>
</tr>
<tr>
<td>Safe Navigation Requirements in Unstructured Conditions</td>
<td>Madhava Krishna RRC</td>
<td>Intel Technology India P. Ltd</td>
</tr>
</tbody>
</table>
## Individual Research Projects

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Faculty</th>
<th>Funding Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech to Speech Translation &amp; performance measurement platform for Broadcast Speeches and Talks (e.g Mann kiBaat)</td>
<td>Anil Kumar Vuppala</td>
<td>LTRC Ministry of Electronics and Information Technology</td>
</tr>
<tr>
<td>Activity analytics in industrial setup</td>
<td>Ravikiran S and Avinash Sharma</td>
<td>CVIT DENSO Corporation, Japan</td>
</tr>
<tr>
<td>Investigation of the behavioural, clinical and Neural networks associated with empathy/cognitive control biased by social perceptions of rape victims</td>
<td>Kavita Vemuri</td>
<td>CSL Department of Science and Technology</td>
</tr>
<tr>
<td>Development of Security Search Engine</td>
<td>Raghu Reddy</td>
<td>SERC Department of Science and Technology</td>
</tr>
<tr>
<td>Deep learning approaches for search and retrieval of audio information</td>
<td>G V Vijaya lakshmi</td>
<td>LTRC Science &amp; Engineering Research Board, DST, Govt. of India</td>
</tr>
<tr>
<td>Molecular basis of protein osmolyte interactions</td>
<td>Shampa Raghunathan</td>
<td>CCNSB Science &amp; Engineering Research Board, DST, Govt. of India</td>
</tr>
</tbody>
</table>

## Centre of Excellence (CoE)

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Faculty</th>
<th>Funding Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoE on IoT at IITH supported by India-EU ICT standardization project</td>
<td>Sachin Chaudhari</td>
<td>SPCRC India-EU ICT</td>
</tr>
<tr>
<td>Ripple BlockChain Centre of Excellence</td>
<td>Dean (RnD)</td>
<td>IIITH Ripple, a leading Silicon Valley financial technology company</td>
</tr>
<tr>
<td>Joint Working and Development of Artificial Intelligence Related Use Cases</td>
<td>Head (Research Outreach)</td>
<td>IIITH Bharat Dynamics Limited, Hyderabad</td>
</tr>
</tbody>
</table>

## Internal Projects

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Faculty</th>
<th>Funding Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIF CoolRoofs</td>
<td>Vishal Garg</td>
<td>CBS Pernod Ricard India Foundation</td>
</tr>
<tr>
<td>IoT Enabled Smart Cities: Pollution, Health and Governance</td>
<td>Sachin Chaudhari</td>
<td>SPCRC Ripple, a leading Silicon Valley financial technology company</td>
</tr>
<tr>
<td>Joint Working and Development of Artificial Intelligence Related Use Cases</td>
<td>Head (Research Outreach)</td>
<td>IIITH Pernod Ricard India Foundation</td>
</tr>
</tbody>
</table>
FACULTY
Abhijit Mitra
Professor, Ph.D (IIT Kanpur)
Quantum chemical computation of noncovalent interactions, molecular mechanisms of functional biomolecules, geometries and interaction energies of noncanonical base pairs, structure and dynamics of functional RNAs, riboswitches, metabolomics, education and values

Abhishek Sarkar
Senior Research Scientist, Ph.D (IIT Kanpur)
Biped/humanoid locomotion: walking, jumping, running, optimal path planning and gait generation on uneven terrain, compliance, soft-robotics and human-robot interaction

Abhishek Srivastava
Assistant Professor, Ph.D (IIT Bombay) (On Leave)
Analog and radio frequency integrated circuits and systems for wireless communication and healthcare applications

Aditi Mukherjee
Visiting Faculty, Ph.D (Delhi University)
Sociolinguistics, literacy studies

Aftab M Hussain
Assistant Professor, Ph.D (KAUST, Saudi Arabia)
Flexible and stretchable electronics, IoT devices, sensor systems

Alok Rai
Visiting Professor, Ph.D (University College London)
Modern English literature, cultural processes in modern north India, with particular reference to issues of language and literature

Aniket Alam
Associate Professor, Ph.D (JNU, New Delhi)
Western Himalayas and mountain societies; history of state and its institutions; historical methods; geography and history

Anil Kumar Vuppala
Assistant Professor, Ph.D (IIT Kharagpur)
Speech processing in wireless environment, speech recognition, speaker recognition

Anoop M Namboodiri
Associate Professor, Ph.D (Michigan State University)
Pattern recognition, machine learning, computer vision, biometrics

Aruna Chaluvadi
Part-time Visiting Professor, Ph.D (MTW University)
English and American literature, complexity in second language motivation, communicative language training, feminist research, science writing

Ashok Kumar Das
Associate Professor, Ph.D (IIT Kharagpur)
Key management in wireless sensor networks, user authentication in wireless sensor networks, access control in wireless sensor networks, key agreement in mobile ad hoc networks, proxy signature, remote user authentication using smart cards, hierarchical access control

Avinash Sharma
Assistant Professor, Ph.D (INRIA Rhone-Alpes)
Computer vision, machine learning

Bhaswar Ghosh
DBT- Ramalingaswamy Re-entry Fellow, Ph.D (Bose Institute, Kolkata)
Systems biology, biophysics, bioinformatics

Chandrasekher Mukku
UGC Research Scientist, Ph.D (Imperial College, London)
Gravitational theories, quantum field theory, heat kernels, dynamical systems and chaos, computational techniques

Deva Priyakumar U
Associate Professor, Ph.D (Pondicherry University)
Computational chemistry to study chemical molecules and reaction mechanisms, biomolecular simulations to investigate DNA, RNA, proteins and protein interactions and computer aided drug design

Dipti Misra Sharma
Professor, Ph.D (Delhi University)
Machine translation, linguistics

Girish Varma
Assistant Professor, Ph.D (TIFR Mumbai)
Deep learning, computer vision, machine learning
Govindarajuju R
Professor Emeritus, Ph.D (IIT Kanpur)
Programming languages and systems, microprocessors and computer architecture, compilers

Harjinder Singh
Professor, Ph.D (Princeton University)
Theoretical, computational chemistry and biology, chemical dynamics electronic structure and properties calculations

Indranil Chakrabarty
Assistant Professor, Ph.D (Bengal Engineering and Science University)
Quantum information (relativistic and non-relativistic), fisher information

Jawahar C V
Professor, Dean (RnD), Ph.D (IIT Kharagpur)
Computer vision, machine learning, multimedia systems

Jayanthi Sivaswamy
Professor, Dean (Academics), Ph.D (Syracuse University)
Image processing, medical image analysis and biological vision

K Madhava Krishna
Professor, Ph.D (IIT Kanpur)
Mobile robotics, robotic vision, outdoor robotics, multi-robotic systems and mechanism design

Kamalakar Kariapalem
Professor, Ph.D (Georgia Institute of Technology)
Database system, data visualization, data analytics, multi agent systems, workflows and electronic contracts

Kannan Srinathan
Assistant Professor, Ph.D (IIT Madras)
Cryptography, security

Kavita Vemuri
Assistant Professor, Ph.D (IIIT Hyderabad)
Cognitive neuroscience of empathy, game design and engineering, innovation and entrepreneurship, fiber optic and liquid crystal devices for optical communications and sensors, control systems

Kishore Kothapalli
Associate Professor, Ph.D (John Hopkins University)
Multicore and many core algorithms, distributed algorithms

Krishna Reddy P
Professor, Ph.D (IITD, New Delhi)
Data mining, data management, transaction models, distributed computing, performance evaluation, and information technology for agriculture

Lakshmi B S
Part-time Visiting Professor, Ph.D (University of Udine)
Dynamical systems, chaos

Lalitha Vadlamani
Assistant Professor, Ph.D (IISc Bangalore)
Coding theory, information theory, signal processing, distributed storage systems

Lavanya Ramapantulu
Assistant Professor, Ph.D (NUS) (On Leave)
Parallel and distributed systems, computer architecture and modelling and performance evaluation

Lini Teresa Thomas
Visiting Assistant professor, Ph.D (IIT Hyderabad)
Skylines, clustering, graph mining, medical document mining

Manish Shrivastava
Assistant Professor, Ph.D (IIT Bombay)
Natural language processing, machine learning, machine translation, NLP for Indian languages

Marimuthu Krishnan
Assistant Professor, Ph.D (IIT Bombay)
Computational molecular biophysics, computer simulation of interfacial phenomena in nano-biomaterials, phase behaviour of polymer nanocomposites, computational physics of ion transport through nanopores and in polymer electrolytes

Narayanann P J
Professor & Director, Ph.D (University of Maryland)
Computer vision, graphics

Naresh Manwani
Assistant Professor, Ph.D (IISc Bangalore)
Machine learning, data mining, deep learning, natural language processing

Nimmi Rangaswamy
Visiting Associate Professor, Ph.D (University of Mumbai)
Sociology of digital media, ICT for development
<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>Research Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nishad Patnaik</td>
<td>CEH</td>
<td>Visiting Assistant Professor, Ph.D (The New School for Social Research, New York) German idealism, classical phenomenology, Marx and critical theory, ethics, psychoanalysis and deconstruction</td>
</tr>
<tr>
<td>Nila Parekh</td>
<td>CCNSB</td>
<td>Associate Professor, Ph.D (JNU, New Delhi) Pattern recognition (viz., identifying repeats, genomic islands), comparative genomics and data mining, dynamical systems modeling and graph theory approaches to biological networks</td>
</tr>
<tr>
<td>Pawan Kumar</td>
<td>CSTAR</td>
<td>Assistant Professor, Ph.D (INRIA) Parallel computing, scientific computing, numerical methods for machine learning and data mining</td>
</tr>
<tr>
<td>Peter M Scharf</td>
<td>LTRC</td>
<td>Visiting Professor, Ph.D (University of Pennsylvania) Linguistics, philosophy</td>
</tr>
<tr>
<td>Prabhakar Bhimalapuram</td>
<td>CCNSB</td>
<td>Assistant Professor, Ph.D (Cornell University) Thermodynamics and statistical mechanics of equilibrium and non equilibrium systems</td>
</tr>
<tr>
<td>Pradeep Kumar Ramancharla</td>
<td>EERC, BSRC</td>
<td>Professor &amp; Registrar, Ph.D (University of Tokyo) Earthquake engineering and structural dynamics, analysis and design of RC structures, numerical simulation of non-engineered buildings, development of awareness raising tools for earthquake disaster mitigation, collapse analysis of structures</td>
</tr>
<tr>
<td>Prasad Krishnan</td>
<td>SPCRC</td>
<td>Assistant Professor, Ph.D (IISc Bangalore) Codes for wireless communications, index coding, coded caching, network coding, codes for DNA storage</td>
</tr>
<tr>
<td>Praveen Paruchuri</td>
<td>DSAC, MLL</td>
<td>Associate Professor, Ph.D (University of Southern California) Artificial intelligence, multi-agent systems, game theory</td>
</tr>
<tr>
<td>Priyanka Srivastava</td>
<td>CogSci</td>
<td>Senior Research Scientist, Ph.D (University of Allahabad) Visual and auditory perception, cognition, human factors, spatial perception and representation, and virtual reality</td>
</tr>
<tr>
<td>Radhika Krishnan</td>
<td>CEH</td>
<td>Assistant Professor, Ph.D (JNU, New Delhi) Technology studies, ecology, development and labour</td>
</tr>
<tr>
<td>Radhika Mamidi</td>
<td>LTRC</td>
<td>Associate Professor, Ph.D (University of Hyderabad) Computational morphology, machine translation, dialog systems, pragmatics, humour studies</td>
</tr>
<tr>
<td>Raghu Babu Reddy Y</td>
<td>SERC</td>
<td>Associate Professor, Ph.D (Colorado State University) Model driven development, software requirements and architecture, verification &amp; validation, usability and software engineering education</td>
</tr>
<tr>
<td>Rajeev Sangal</td>
<td>LTRC, CEH</td>
<td>Professor, Ph.D (University of Pennsylvania) Natural language processing, artificial intelligence, machine translation, speech processing</td>
</tr>
<tr>
<td>Ramachandra Prasad P</td>
<td>EERC, LSI</td>
<td>Assistant Professor, Ph.D (Osmania University) Application of geospatial tools in – forest ecosystem, island ecology, climate change, land use - land cover changes, integrated water resource management (IWRM) studies</td>
</tr>
<tr>
<td>Ramesh Loganathan</td>
<td>SERC, CIE</td>
<td>Professor of Practice, Co-innovations, M.E (College of Engineering, Guindy, Anna University) Software engineering, entrepreneurship, innovation</td>
</tr>
<tr>
<td>Ravi Kiran Sarvadevabhatla</td>
<td>CVIT</td>
<td>Assistant Professor, Ph.D (IISc Bangalore) Computer vision, machine learning, virtual reality, robotics, affective computing, document analysis, multimedia</td>
</tr>
<tr>
<td>Sachin Chaudhari</td>
<td>SPCRC</td>
<td>Assistant Professor, Ph.D (Aalto University) Next-generation wireless communication systems; 5G and beyond, internet of things, cognitive radios</td>
</tr>
</tbody>
</table>
Santosh Nannuru  
Assistant Professor [INSPIRE], Ph.D (McGill University)  
Signal processing, target localization and tracking

Sarma K R  
Professor of Emeritus, Ph.D (Cornell University)  
Communication, instrumentation and displays

Sarja T K  
Lecturer, Ph.D (Sri Padmavathi Mahila Viswa Vidyalayam, Tirupathi)  
Indian Classical music with focus on South Indian music

Semparthi Aravindan  
Senior Systems Scientist, Ph.D (II Kanpur)  
Energy flow in molecules, structure and dynamics of molecular clusters

Shaik Rehna  
Assistant Professor, Ph.D (IISc Bangalore)  
Hydrologic impacts of climate change, statistical downscaling, uncertainty modeling, water quality management, reservoir operation, irrigation planning

Shratunjay Rawat  
Systems Associate Professor, M.S (BITS Pilani)  
Computer networks, information security, network forensics, e-governance, human values, Vedic darshan (philosophy)

Soma Paul  
Research Assistant Professor, Ph.D (University of Hyderabad) [On Leave]  
Computational morphology, computational syntax and semantics and theoretical linguistics

Subhadip Mitra  
Assistant Professor, Ph.D (II Kanpur)  
High energy physics theory/phenomenology, cosmology

Sujit P Gujar  
Assistant Professor, Ph.D (IISc Bangalore)  
Game theory, mechanism design, machine learning, and cryptography applied to modern web and AI applications (auctions, internet advertising, crowdsourcing, and multiagent systems)

Sunitha Palliserry  
Visiting Assistant Professor, Ph.D (IIT Madras)  
Seismic design of buildings, seismic nonlinear behaviour of buildings

Suresh Purini  
Associate Professor, Ph.D (University of Maryland)  
Compilers, parallel and distributed systems, virtualization, cloud computing and complexity theory

Suryakanth V Gangashetty  
Assistant Professor, Ph.D (IIT Madras)  
Speech processing, neural networks, signal processing, pattern recognition, soft computing, machine learning, image processing, natural language processing, artificial intelligence, fuzzy logic

Sushmita Banerji  
Assistant Professor, Ph.D (University of Iowa)  
Indian cinema, world cinema, literature film adaptations, world literature, film and literary theory, narrative theory and genre theory, culture studies, post-colonial theory, American cinema and pop culture

Syed Azeemuddin  
Assistant Professor, Ph.D (Southern Illinois University, Carbondale)  
RFIC design integrated RF devices incorporated with patterned ferromagnetic materials, micro/nano electronics and integrated photonics, optical devices using ring lasers

Tapan Kumar Sau  
Associate Professor, Ph.D (IIT Kharagpur)  
Nanomaterials: developing inorganic nanomaterials with controlled properties for probing, sensing, imaging, and energy-related applications; exploring the nature of interactions between nanomaterials & their surroundings

Ubaidulla P  
Assistant Professor, Ph.D (IISc Bangalore)  
Signal processing, wireless communication, robust and distributed algorithms for communication systems, convex optimisation

Vasudeva Varma  
Professor, Ph.D (University of Hyderabad)  
Information retrieval, social media analysis, semantic search, cloud computing and software engineering

Venkata Suresh Kumar N  
Senior Research Scientist, Ph.D (IIIT Hyderabad)  
Electronic structure theory based modeling of the chemical processes involving amino acids and nanoclusters
<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Research Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venkatesh Choppella</td>
<td>SERC, COS</td>
<td>Programming languages, S/W architectures, formal methods, CS education</td>
</tr>
<tr>
<td>Venkateshwaru M</td>
<td>EERC, BSRC, CETLS</td>
<td>Discrete systems, wave phenomena in solid media, finite element models, probability, statistics, stochastic processes in engineering</td>
</tr>
<tr>
<td>Vikram Pudi</td>
<td>DSAC, COS</td>
<td>Data mining, artificial intelligence, database systems</td>
</tr>
<tr>
<td>Vineet Gandhi</td>
<td>CVIT</td>
<td>Computer vision and multimedia, human detection and tracking, computational photography and cinematography, depth reconstruction and applications</td>
</tr>
<tr>
<td>Vinod P K</td>
<td>CCNSB</td>
<td>Computational systems biology, nonlinear dynamics, network biology, systems pharmacology</td>
</tr>
<tr>
<td>Vinoo Alluri</td>
<td>CogSci</td>
<td>Cognitive science, neuroimaging, music information retrieval, music cognition, music therapy, cross-cultural studies, audio signal processing</td>
</tr>
<tr>
<td>Vishal Garg</td>
<td>BSRC, EERC</td>
<td>Task control of lighting, heating, air-conditioning using fuzzy logic, smart occupancy sensors, fuzzy logic based protocol for wireless sensors network, intelligent building, I.T in building science</td>
</tr>
<tr>
<td>Viswanath K</td>
<td>SERC</td>
<td>Mathematical computer science, pedagogical issues</td>
</tr>
<tr>
<td>Zia Abbas</td>
<td>CVEST</td>
<td>Low power VLSI design, statistical variations aware modelling and optimization of CMOS and FinFET circuits, high yield designs, reliability issues in nanoscale CMOS and FinFET circuit circuits, current mode circuits</td>
</tr>
</tbody>
</table>
LECTURERS

Jayachandran S
The confluence of dance, temple architecture and temple rituals

Rajesh Kumar Tavva
Ontology engineering, vaisesika darsana, mereology

DISTINGUISHED FACULTY

Anandan P
Microsoft Research India

Ashok Jhunjhunwala
IIT Madras

Kesav V Nori
Chief Information Officer (Retd.), Tata Consultancy Services

Narendra Ahuja
Donald Biggar Willett Professor of Engineering, University of Illinois

Shaji K G
Story of baked earth (art of terracotta)

Sunil M Lohar
Folk art and aesthetic

Ramamoorthy M
IEEE Fellow, Former DG of EPRI & Advisor, Electrical Research and Development Association, Vadodara

Sitharam N
Non-Executive Part-time Independent Director, Bharat Electronics Ltd.

Vidyasagar M
Executive Vice President, Advanced Technology Center, Tata Consultancy Services

Vineet Chaitanya
IIT Hyderabad

IIITH@20 alumni meet, Bangalore 2018
ADJUNCT FACULTY

Anil K Jain
University Distinguished Professor, Dept. of Computer Science & Engineering, Michigan State University, USA
Pattern recognition, computer vision & biometric recognition

Arun Kumar Pati
Quantum Information and Computation (QIC) Group, Harish Chandra Research Institute, Jhusi, Allahabad
Quantum computation, quantum information, and fundamental aspects of quantum theory

Bapi Raju S
University of Hyderabad
Cognitive science, neuroimaging, neural & cognitive modeling

Gopalakrishnan B
Tata Consultancy Services
Bioinformatics and structural Biology; protein Biophysics, NMR of biomolecules receptor-ligand interactions; structure/activity/property-based computer-aided drug design; functional annotation of genes, protein trafficking in Plasmodium falciparum

Kishore S Prahalad
Apple, USA
Audio, speech and language processing, machine learning, multimedia systems

Manish Gupta
Microsoft, India
Web mining, data mining, databases, algorithms

Manoj Kumar Chinnakotla
Microsoft, AI and Research, India
Information retrieval, natural language processing and artificial intelligence

Monojit Choudhury
Researcher, Microsoft Research India
Information retrieval and natural language processing, artificial intelligence, cognition and music analysis

Naveena Yanamala
Staff Scientist,
Health Effects Laboratory Division,
National Institute for Occupational Safety and Health (NIOSH), Center for Disease Control and Prevention (CDC), Interdisciplinary approaches in investigating structure and dynamics of biological molecules; molecular modeling and docking; machine learning techniques for structure based drug design

Ponnurangam Kumaraguru
Associate Professor, IIIT-Delhi
Ph.D (Carnegie Mellon University, USA)
Cybersecurity, Privacy, Privacy & Security in Online Social Media and Social Computing

Vamshi Ambati
Founder & CEO, Predera Technologies
Data science, machine learning, natural language processing, crowdsourcing, big data, cloud computing

AFFILIATE FACULTY

Niyati Chhaya
Computer Scientist, Big Data Experience Lab, Adobe Research, India.