

Newsletter March 2019

International Institute of Information Technology Bangalore



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## **From the Director's Desk**



The eventful month of March saw UC Berkeley professor, and our former Board Member, Prof. Jitendra Malik getting IEEE Computer Pioneer award. ACM named Yoshua Bengio, Geoffrey Hinton, and Yann LeCun recipients of the 2018 ACM A.M. Turing Award (on 27th March) for conceptual and engineering breakthroughs that have made Deep Neural Networks a critical component of computing. Mathematician Dr. Karen Uhlenbeck become the first woman to win the Abel prize (on 19th March). Her work laid the foundations for the unification of two of the four fundamental forces of nature: electromagnetism and the weak nuclear force. Closer home, 13th March was celebrated at IISc Bangalore, as the "Artificial Intelligence (AI) Day", that provided just the right forum for discussions on the impact of AI on the various interleaved strands of education, research, industry, society and entrepreneurship. Right here on our campus, March was a hectic month with SPANDAN from 15th to 17th, TEDx on 23rd, and Wikipedia Edit-a-thon on Women's Histories on 30th March. We also had a number of our students Srikant Nadig, Meghana Reddy, Shashank getting admissions in premier institutes for Ph.D. More details about the other interesting developments in March in the newsletter.

### Achievements

One of the in-house products of Zense (IIITB's Student's Club), i.e., **CircuitVerse**, (<u>CircuitVerse.org</u>) has been selected as a participating organization for Google Summer of Code'19 (GSoC'19).

For details: <u>https://summerofcode.withgoogle.com/organ.../6560513423572992/</u>



VideoKen received a "Best in Class AI Start-up" award (one of three) at NASSCOM Technology & Leadership Forum 2019. This event was held in Mumbai with collaboration with Mphasis, an Information Technology (IT) solutions provider specialising in cloud and cognitive services, in an effort to advance the AI ecosystem of India.

https://www.linkedin.com/feed/update/activity:6504204624369680384/

Congratulations to the team!

Prof. Amit Chattopadhyay is a winner of a research grant under the CRG (Core **Research Grant)-scheme by SERB (Science and Engineering Research Board)** for a project titled "Topological Data Analysis: Tools for Multivariate". Prof. Amit Chattopadhyay is the PI of the project. The duration of the funding will be for three years and the total amount is approximately INR 30 lakhs. Congratulations!

Our student Shreekantha Nadig has been selected as an Intel® AI Academy Student Ambassador on Mar 26, 2019. The Intel® Student Ambassador Programme for AI is an exciting new programme for university students to engage with Intel around their work in Machine Learning, Deep Learning, and Artificial Intelligence. The Student Ambassador Programme is a developer affinity programme, designed to assist student experts in telling their story and share their expertise with other student data scientists and developers.

The goal of this programme is to help drive innovation and evangelism of Artificial Intelligence, Machine Learning, and Deep Learning worldwide by supporting students,

The team Parvaaz (Theatre Arts Club) came second in the stage play competition, Natyashastra in the National Cultural fest, Pearl at BITS Pilani, Hyderabad campus, held during March 22-24. They performed an adaptation of the play "Saawdhaan! Dulhe ki talaash hai" by Vijay Tendulkar.

professors, and researchers with education and technical resources. This effort is designed to drive innovation and advancements in the AI space and to co-create the future of AI together with Intel.

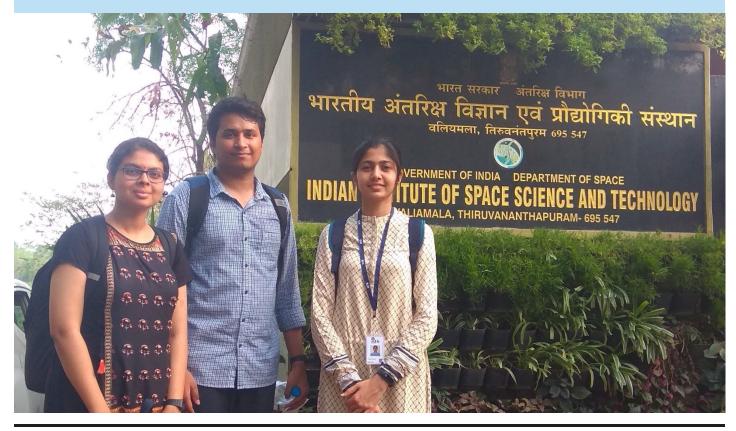
The project titled "Microarchitectural techniques to design a secure processor" has been approved by SERB (https://www.serbonline.in) for the Core Research **Grant Award**. The grant is of INR 60 lakh approximately over a period of 3 years. The proposal was submitted in June 2018, with Prof. Nanditha Rao as the PI along with Prof. Subir Roy as Co-PI.

Congratulations!

Prof. V. Sridhar received funding of Rs. 18,48,230/- for the project titled "The Future of Licensed Spectrum in a 5G-OTT World, from the Indian Institute of Management **IDEA Telecom Centre.**"

**3MPT Competition** is a platform for students to present their research work to their peers and experts in the field. It was conducted by IEEE Student Branch, Indian Institute of Space Technology (IIST) and IEEE Antenna Propagation Society Kerala Chapter in association with CONSCIENTIA-2019. From IIITB, Jhalak Sharma (MS2018005), Aheesh K. N. (MS2017001) and Spoorthi M. N. (MS2017007) were shortlisted to present at IIST during March 1-4. There were 2 rounds for the competition. In the first round, the key is to present the idea strictly within 3 minutes. The second round allowed 2 more minutes to add any additional information or demo the hardware etc. Jhalak and Spoorthi were selected to the second round, and Spoorthi won the first place in the competition.

Congratulations!



# **Campus News**



Events

At the time of **Rise IIITB 2019**, during the IMACX summit, start-ups - **Rytangle**, **New Age Analytics and Ziroh labs received recognition awards by the chief guest**, **Ms.Valarmathi N**, **Deputy Director - Indian Space Research Organization**.

The annual sports fest of IIITB - Spandan, was organized during 15-17th March. This year Spandan was organized by sports committee under the guidance and supervision of Prof. Srinivasa Raghavan and Mr. Harish Ponnappa. This was the first time Gym events were also included in Spandan, and also introduced rolling trophies for Football, Cricket, Gully Cricket, Basketball, Throwball, Tug of War, Volley Ball and gym events. In total, there was 496 individual registrations and 513 team registrations. Also, special events/sports events like Gully Cricket and Badminton are organized for faculty and staff.



**The second edition of TEDxIIITBangalore** was held on 23rd March at IIIT Bangalore. We had **9 speakers** from all over the country specialised in fields ranging from music to journalism. 'INDIGO 91.9 FM' was our radio partner and 'Your Design' was our merchandise partner for the event.

List of Speakers:

- 1. Rohini Rau Asian Games Gold Medalist/Doctor
- 2. Kumaran SS World Record Holding Drummer
- 3. Roopa Moudgil IPS Police Officer
- 4. Shashank Udupa Entrepreneur
- 5. Kanchan Kaur Professor of Journalism
- 6. Sairam Sagiraju Movie Director

- 7. Jagdish Chaturvedi Stand Up Comedian/ENT Surgeon
- 8. Richa Kumar Professor of Sociology
- 9. Akshay Saxena Educationalist/Entrepreneur









Centre for Information Technology and Public Policy (CITAPP) at IIITB organized a **Wikipedia Edit-a-thon** on March 30 and theme of the event was **"Women's Histories"**. As part of the event, a small but enthusiastic group of IIITB students and others got together on campus to contribute images and articles on women to Wikipedia. After 3 hours of intense activity led by an experienced Wikipedian, we had added content on notable women from various walks of life, including a violinist, an ISRO scientist and a historian of science. In addition, they built a crowdsourced list of notable women that we hope can be a useful starting point for future events. We look forward to building on this momentum and make our Edit-a-thon a monthly feature where we can work together remotely or in-person to bring visibility to relatively invisible communities and topics on Wikipedia. Our next two Edit-a-thons will focus on Dalit Histories (April) and Labour histories (May). We also plan to start a Wikicub on campus in the new academic year.



## **Publication Including Presentations**

The article titled **"A cautionary note on spectrum auctions"** by Prof. V. Sridhar and Heikki Hammaimen has been published in Financial Express on March 21.

The same can be accessed at: <u>https://www.financialexpress.com/opinion/5g-a-</u> cautionary-note-on-spectrum-auctions/1522848/

Prof. Sujit Kumar Chakrabarti delivered an invited talk on **"Machine Learning and Software Engineering"** at the Department of Computer Science, Indian Academy Degree College, Bengaluru on March 23.



Late Reporting

Debanjali Bhattacharya and Prof. Neelam Sinha presented their paper titled **"Structural MRI based texture analysis of corpus callosum in classifying Progressive supranuclear palsy"** in MedImage2018 (ICVGIP), December 2018.

"Brief on ICT Trends: Digital Identity", published by the United Nations Asia Pacific Training Centre for ICT and Development (UN-APCICT) in February 2019

http://www.unapcict.org/sites/default/files/inlinefiles/ICT%20TRENDS\_Digital%20Identity.pdf

"Brief on ICT Trends: Education", published by the United Nations Asia Pacific Training Centre for ICT and Development (UN-APCICT) in February 2019. URL: https://www.unapcict.org/sites/default/files/inlinefiles/ICT%20TRENDS\_%20ICT%20for%20Education.pdf

Contributors: Prof Amit Prakash, Tarun Pandey (MT2017128), and Srravya C (MSc. Digital Society)

Soumyo Das (MS2017015) and Prof. Bidisha Chaudhuri presented their paper titled, **"Automation & Skill: A Lesson in History"** at the Association for Information Systems Being (More) Human in a Digitised World Workshop held at IIM Calcutta, 1-2 February 2019.

"How the Blockchain Can Add Transparency to Healthcare" by <u>B Thangaraju</u> and <u>Vaibhav Aggarwal</u> (Imt2015045) has been published in OpenSource For U.com on February 8.

Tridib Sarma (MT2017525) presented a paper titled "Effect of Leakage Currents in Adiabatic Logic Circuits at Lower Technology Nodes" co-authored by Prof. Chetan Parikh, at the IEEE International Conference on Modelling of Systems, Circuits, and Devices (MOS-AK India 2019), at IIT Hyderabad, held during February 25 to 27.



### Faculty, Staff and Students

Prof. Shiva Prakash Malapaka gave an invited talk titled **"Using OpenMP and MPI in Modeling and Simulations"** at Department Of Computer Science And Engineering, Thiagarajar College Of Engineering, Madurai, Tamil Nadu, in the AICTE QIP Sponsored Short Term Course on High Performance Computing for Science and Engineering, held between February 4-10 as a Resource Person.

Prof. Meenakshi D'Souza visited St. Claret College, Bangalore on 1st of March 2019 to **inaugurate the ACM-W India chapter** there, and gave a lecture on Women in Computing History.

Prof. Shiva Kumar Malapaka gave an invited talk titled "Spectral, visualization and statistical studies of helicity forced and decaying 3D-MHD turbulent flows" at Solar Helicities in Theory and Observations: Implications for Space Weather and Dynamo Theory conference during March 4-29 at NORDITA, Stockholm, Sweden.

Prof. Pradeesha Ashok delivered an invited talk on the topic "Ramsey Theory" at Department of Mathematics, CMR Institute of Technology, Bengaluru on March 8.

Prof. V. Sridhar conducted a Ph.D. examination of Baidyanath Biswas on his dissertation titled "A framework for cyber risk management for organizations" at the Indian Institute of Management Lucknow on March 11.

Dr. Dinesh Babu J was an invited speaker at a couple of venues. The talk at the International Conference on Cloud Computing in Emerging Markets (CCEM) Pre-conference, Bangalore was titled "Human-Centered Multimodal Analytics and **Applications**" and given on March 1.

The talk at the **RIKEN-IITH Workshop on Machine Learning and Applications** held at IIT Hyderabad was titled "Applied human behavior tracking and perception" and delivered on March 15.



#### **Academic Milestones**

State of the Art Seminar of Ms. Chaitali Diwan, PH2016002, on Automatic Generation of Learning Pathways for Navigated Learning was held on 18th March.

Oral Thesis Defence of Ms. Sunita Katre (MS2016005) Improved voice call performance of tactical military networks by means of differential priority and variable MTU size selection mechanisms was held on 7th March.

State-of-the-Art Seminar of Manpreet Kaur Jaswal (PH2016006) on "Performance **Enhancement of Microprocessors through Value Prediction based on Dynamic** Data Flow Analysis" on March 25.



March 1: Mr. Manish Kumar, CEO, Rooman Technologies

March 1: Mr. Bharat Gera, St. John's National Academy of Health Sciences

March 1: Mr. Srinivas Garimella, Director at Microsoft

March 11: Prof. Lauren Kay Robel, Provost, and Mr. M.A. Venkataramanan, Vice Provost for Finance and Strategy, Indiana University, Bloomington

March 14: Prof. Banshidhar Majhi, Director, IIITDM Kancheepuram

March 14: Mr. Robert Bolton, Education Editor & Mr. Sriram Kasthuri, Director Investments- South Asia, Australian Financial Review

March 14: Ms. Polly Fryer, Commercial Director of Times Higher Education & Mr. Dipit Sharma, Regional Director - South Asia, Times Higher Education

March 15: Prof. Dr.-Ing. habil. Madhukar Pandit, University of Kaiserslautern, Germany

March 19: A team from Intel AI Academy (Bangalore, Mumbai, US) visited IIITB to discuss possible engagements between IIITB faculty/students and Intel AI Academy related to Intel Dev Cloud, Student Ambassador programme and programme curriculum usage and development. The team from Intel comprised of Mr. Jayaraman Mahalingam, Intel AI Academic Tech Programme Manager, Bengaluru; Mr. Sachin Kelkar, Head, Developer Marketing, Mumbai; Ms. Arti Gupta, Director of Developer Programmes strategy and experience, USA

March 21: Mr. Sanjay Sahay, IPS, ADGP, Police Computer Wing, Bangalore

March 21: Shri. N V Maslekar, Chief Executive officer at Sattva eTECH India Pvt. Ltd

March 21: Ms. Manasi Prasad, Project Director, Indian Music Experience

March 26: Shri. Bhavesh R Trivedi, Director (DPA), MEA and Shri. Robin Jain, AO (FIN-II), MEA

March 26: Dr. Satya Kalyan Mohanty, Manager, Strategic Accounts, Check Point Software Technologies

March 27: Mr. Ronnie Screwvala, Founder UTV Group

March 27: Dr. Rajiv Chetwani, Director, ISRO Headquarters

March 28: Prof. Raj Kamal, Prestige Institute of Engineering, Management and Research



March 13: "Remote User Authentication and Key Establishment Protocol for Smart Home" by Dr. Mohammad Wazid, Assistant Professor, Department of Computer Science and Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, India.

20 March 2019: Dr. Amit Bhardwaj, Haptics and Virtual Reality Laboratory, Pohang University of Science and Technology (POSTECH), South Korea, delivered a lecture on "Data-driven haptic rendering of viscoelastic deformable objects"

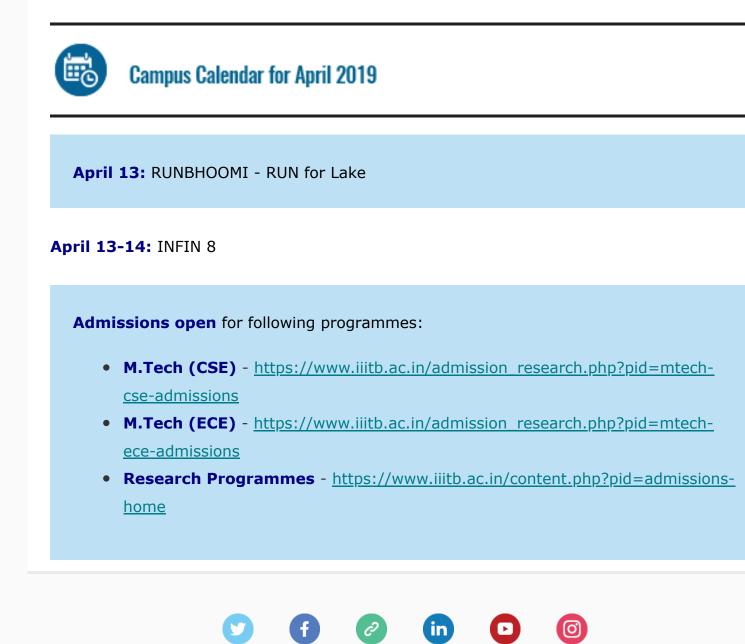
27 March 2019: Dr. N. Dayasindhu, CEO of itihaasa Research and Digital delivered a lecture on the **"Landscape of AI/ML Research in India."** 



Samvaad Talks

March 18: **"Agent-Based Models and Energy Efficiency Studies"** by Prof. Shrisha Rao

March 25: **"Problems in classical and modern channel coding theory"** by Dr. Arti D Yardi



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