

Newsletter April - May 2018



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From the Director's Desk



April and May are months of winding down for IIIT Bangalore. Unlike Term I, Term II winds down with the end goal of graduation for several sections of the student population. These months have been different at IIIT Bangalore this year, for a few reasons. We had small victories at the ACM ICPC finals. We have had an external speaker, Prof. Oliver Guenther at our Samvaad talk. We have had signing of an MoU with Sonata Software. E-Health Research Center co-organized and hosted a Global Accessibility Awareness Day event in May. There are many more interesting news, which you will see in this issue. Our 18th Convocation in July will be special, as ever. We will cover about it in the July edition.

There have been important news from around the world as well. On April 4, Dina Katabi from MIT was named the recipient of the 2017 ACM Prize in Computing, for developing a WiFi device that sees through walls. Her creative contributions in wireless systems can find diverse applications in our day-to-day life. At our end, the Computer Science fraternity in India, especially the closely-knit databases one, mourned the sudden demise of their

active and prolific researcher and former IIIT-Delhi faculty member, Dr. Ashish Sureka, on May 4. Interestingly, this year marks the 100th birth anniversary of the great physicist, Prof. Richard Feynman, on May 11.

HAPPY READING!

Achievements

Aditya Paliwal (IMT2013004), Simran Dokania (IMT2013044) and Shyam K. B. (IMT2014050) participated in the **ACM ICPC World Finals** held at Beijing, China on April 19 and **secured the 101st position** https://icpc.baylor.edu/scoreboard/ They were mentored as well as accompanied by Prof. Muralidhara V. N. and Vivek Yadav for the event. Team Mochizuki, as they call themselves, continued their performance streak for a second year in a row. They had secured the 99th position in 2017 ACM ICPC World Finals. In both years, IIIT Bangalore team has been listed under "Honorable Mention." IIIT Bangalore continues to be in the league of premier Indian institutions who have rankings in the contest, namely, IIIT-Hyderabad, and IITs (Delhi, Kharagpur, Madras, Patna, Roorkee, and Kanpur).

https://icpc.baylor.edu/community/results-2017

https://icpc.baylor.edu/worldfinals/results



The following **patent** was granted to Prof. G. N. S. Prasanna and his student team by the US Patent and Trademark Office (USPTO):

Patent Name: Polytope and Convex Body Database

Inventors: Neha Bhatia, Shriguru Nayak, Gorur Narayana Srinivasa Prasanna, Abhilasha Aswal, Anushka

Chandrababu, Manjunath Sindagi

PCT Number: PCT/IN2013/000389

Patent Publication Number: US 2015/0324397

For further information: https://tinyurl.com/y8w6d6vj

For patent publication:

https://patentimages.storage.googleapis.com/5c/1a/ca/1bd7a8412168b6/US20150324397A1.pdf

Campus News



Prof Oliver Guenter, President of the University of Potsdam, Germany, visited IIIT Bangalore on April 2. In addition to delivering the Samvaad talk for the day, he had discussions with the Director and several faculty members on different avenues of collaborative research in the areas of healthcare and education.

The **61st Senate Meeting** of IIIT Bangalore was held on April 4.

IBM Research Workshop was organized on April 4. The workshop covered topics on activities at the IBM Research Lab and technical talks on introduction to transfer learning, introduction to adversarial machine learning, and SE4AI (Software Engineering for Artificial Intelligence). It also included a tutorial on "deep learning from scratch". The workshop was organized by IBM Research Lab employees, Tanmayee Narendra and Tarun Tater, who are also alumni of IIIT Bangalore.

Sonata Software Limited, a global IT solutions company, announced a grant to IIIT Bangalore to support scientific research for accelerating digital and platform-based business transformation. The three-year project funded to the tune of INR 1.05 Crores, will focus on research fellowship and evangelization of technology for platform-based digital business transformation. Prof.

Srinivas Vivek is the principal investigator for the research component of the grant and the topic is platforms and data security.



Open Source Technology Lab was inaugurated by Prof. S. Sadagopan, Director, IIIT Bangalore on April 5. More than 30 participants attended the function, including faculty members, students and members from the Innovation Center. Prof. B. Thangaraju delivered the welcome address. The Director launched the OSTL website and emphasized on the necessity of open source initiative at IIIT Bangalore. Prof Thangaraju presented the OSTL strategic plan. The main points of the strategic plan covered the purpose, focus and key objectives of the OSTL, setting up of the OSTL committee in various domains, details of the ways of contributing to the existing open source projects, and description of a platform to create new projects, along with a listing of various open source forums where one can publish their OSS work.





The Centre for IT and Public Policy (CITAPP) at IIIT Bangalore conducted a 2-day workshop on "Digital Media Presence for the Not-for-Profit Sector" during April 12-13. The workshop has been organized as a part of the Niranthara Programme of Dhwani Foundation, which seeks to enable NGOs to achieve higher organizational maturity and sustainability. The workshop aimed at meeting emerging

requirements of their stakeholders and making greater impacts in the communities they serve. During the workshop, Operations Managers from 25 NGOs were introduced to good practices towards setting up of their respective organizations' online presence across various digital media platforms, including aspects related to data privacy and content management.









Industry Leaders Partnership event was organized on April 12 by the IIIT Bangalore Innovation Center. Following industry leaders participated in the event:

- 1. Mr. Vinay Shenoy, Managing Director, Infineon Technologies (India)
- 2. Mr. Sumeet Verma, Director, Strategic Engagements, Intel India
- 3. Ms. Rama N. S., CEO, ELCIA
- 4. Mr. Kumaran Venkatesh, Senior Director of Business Development, ARM
- 5. Mr. Ramaswamy Balasubramanya, Fidelity
- 6. Dr. Chavali Ramesh and Ms. Hemavathi, BEL
- 7. Mr. Gilbert Joseph, Head Corporate Affairs, Huawei Technologies India
- 8. Mr. Arnob Roy, President of Optical Products and Co-founder, Tejas Networks
- 9. Ms. Meenu Bhambhani, Vice President & Head Corporate Social Responsibility, Mphasis



IIIT Bangalore in coordination with the ICANN India has been conducting Readout sessions of the ICANN meetings held at various locations around the world. **The ICANN 61 Readout session** of the meeting held at San Juan, Puerto Rico, was convened at IIIT Bangalore on April 19. Active members from various ICANN Committees presented their observations. Mr. Samiran Gupta, ICANN India Head was at IIIT Bangalore and steered the event proceedings. Prof. Sridhar of IIIT Bangalore co-hosted the event.



The students from ASEAN countries visited IIIT Bangalore on May 2. This visit was under the ASEAN-India Students Exchange Program 2018, latest of the series where the Confederation of Indian Industry at the behest of Ministry of External Affairs has been organizing this Student Exchange Program from the ten ASEAN countries to India for the past 10 years. The Student Exchange Program organizes visits of ASEAN graduate and post-graduate students in the age-group of 20-28 years to India. 25 students from each of the ten ASEAN member nations are selected from among those who have displayed academic interest in India.



E-Health Research Centre at IIIT Bangalore and Rotary Bangalore, Abilities jointly organised a workshop on "Bringing an equitable ecosystem for accessibility" as part of the Global Accessibility Awareness Day 2018 on May 17. The event was organized as an effort towards creating awareness at all levels about the need to make technology and physical space accessible and inclusive for all users with a

disability. Speakers included accessibility advocates, leaders from tech companies and organizations working on improving accessibility in the workplace, as well as product companies building accessibility into their solutions. Prof. T. K. Srikanth has coordinated the organization of the event.





IIIT Bangalore and the Ministry of Communications and Information Technology (MCIT), Government of Indonesia have signed a **scholarship cooperation agreement** to facilitate education of Indonesian government officers and students at IIIT Bangalore. Under this agreement, **10 full-funding scholarships will be made available to Indonesian citizens**, identified by MCIT as potential future leaders of Indonesia, to undergo the unique and interdisciplinary 2-year Master's Programme in Digital Society at IIIT Bangalore. The MoU between the two organizations is one of the fifteen agreements, which are a part of the Indian Prime Minister's recently-concluded visit to Indonesia.



Sridhar, V., "What Facebook leakage means," Financial Chronicle, April 9, 2018. http://www.mydigitalfc.com/editorial/what-facebook-leakage-means

Karthik V. and G. N. Srinivasa Prasanna, **Improving Search Performance Of B-Tree On Flash Devices.** In Proceedings of ARSSS International Conference on Electrical, Electronics, Computer Science and Information Technology (ICEECSIT), April, 2018, Pune, India.

The paper is at: http://www.digitalxplore.org/up_proc/pdf/357-152584335618-22.pdf

The article titled "Making an informed career choice" by Prof. Sujit Kumar Chakraborti has appeared in the Deccan Herald on April 18.

https://www.deccanherald.com/features/dh-education/making-informed-career-choice-665294.html

The paper titled "Design and Analysis of High Impedance surface modified 3D antennas" got published in CSI Transactions on ICT, Springer India, in May. The authors are Prof. Madhav Rao and Sowmya N. https://link.springer.com/article/10.1007/s40012-018-0194-z

The article titled "Transparency in telecom services" by Rohit Singh, policy analyst, CUTS International and Prof. Sridhar, V. has been published in Financial Express on May 8.

https://www.financialexpress.com/opinion/transparency-in-telecom-services/1159038/

Sridhar, V., "Artificial Intelligence for all." Financial Chronicle, May 16, 2018. http://mydigitalfc.com/editorial/artificial-intelligence-all

The article titled **"EU GDPR and its effect on the internet"** by Prof. V. Sridhar has been published in Financial Express on May 26.

https://www.financialexpress.com/opinion/eu-gdpr-and-its-effect-on-the-internet/1181539/

Sreevalsan-Nair, Jaya, Akshay Jindal, and Beena Kumari, "Contour Extraction in Buildings in Airborne LiDAR Point Clouds Using Multiscale Local Geometric Descriptors and Visual

Analytics." IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, May 2018, Early Access. https://ieeexplore.ieee.org/abstract/document/8369345/

BITS OF LATE REPORTING

The article titled "Top 5 areas to watch out for in 2018" by Prof. V. Sridhar has appeared in YourStory on January 3.

https://yourstory.com/2018/01/top-5-areas-watch-2018/

The article titled "As Aadhaar project enters a critical year, here are the worries that still remain" by Profs. V. Sridhar and T. K. Srikanth has appeared in The Economics Times on January 25.

https://economictimes.indiatimes.com/news/politics-and-nation/as-aadhaar-project-enters-a-critical-year-here-are-the-worries-that-still-remain/articleshow/62656100.cms

The article titled **"View: Google needs to act responsibly and transparently"** by Prof. V. Sridhar has appeared in The Economics Times on February 24.

https://blogs.economictimes.indiatimes.com/et-commentary/view-google-needs-to-act-responsibly-and-transparently/

The article titled "Reliance Jio's latest bundling strategy might succeed in improving 4G penetration in India" by Prof. V. Sridhar has appeared in the Financial Express on March 8.

https://www.financialexpress.com/opinion/reliance-jios-latest-bundling-strategy-might-succeed-in-improving-4g-penetration-in-india/1090937/

The article titled "**Predicting the value of a bitcoin**" by Prof. V. Sridhar has appeared in the Live Mint on March 9.

https://www.livemint.com/Opinion/OtvN1nXxPEB4TZavQadkNM/Predicting-the-value-of-a-bitcoin.html

The article titled "Regulating new-age tech firms: Lot of homework to do" by Profs. V. Sridhar and T. K. Srikanth has appeared in the Financial Express on March 30.



IIIT Bangalore in Media

Amazon Web Services looks at skilling to grow user base in India

Betting big on R&D: Samsung set to lead IoT and AI in India

<u>Industrial engineering professor awarded Fulbright-Nehru Fellowship</u>

Industry-academia convergence to foster better entrepreneurship ecosystem: Nasscom study

<u>Innovation ecosystems: how to tap the rise of makerspaces, incubators ...</u>

Mphasis sets up CoE for cognitive computing with IIIT-Bangalore

Sonata Software Announces CSR Grant to IIIT-B to Fund Advanced Research in Platform-Based ...

Sonata Software gives Rs 1.05-cr grant to IIIT-B

Sonata Software Partners with IIIT-B to Fund Research in Digital ...

<u>Transformation through agri-tech startups: how Indigram Labs nurtures entrepreneurs in agriculture ...</u>

UK and India: Towards a hi-tech future



Faculty, Staff and Students

Balaji Parthasarathy was **invited to the workshop on the Developmental Implications of the Digital Economy**, at the University of Manchester's Global Development Institute. At the workshop, he made a presentation on the Developmental State and the Platform Economy. The workshop was held during April 11-12, with support from the UK's Economic and Social Research Council.

Balaji Parthasarathy was **invited to the workshop on Developing Principles for Fair Online Platform Work** in Geneva held on April 17. The workshop was hosted by Oxford University in partnership with the International Labour Organization (ILO) and the United Nations Conference for Trade and Development (UNCTAD).

Prof. V. Sridhar conducted a training session on "Regulatory Impact Analysis: Problem Definition" for officials of Telecom Regulatory Authority of India (TRAI) at New Delhi on April 16.

Prof. V. Sridhar was invited to be a panelist at "Futuristic, Resilient and Digital Infrastructure" held at Bengaluru during May 3-4. Topic of the panel discussion was "Financing Digital India and Next Generation Digital Infrastructure: Role of public and private sectors."

Prof. V. Sridhar gave an invited talk on "World Telecommunications and Information Society Day" at the Centre for Development of Telecommunications (C-DOT) and Bharath Sanchar Nigam Limited (BSNL) Bangalore Telecom District on May 17.

Prof. V. Sridhar was an invited discussant and panelist in the session on "Making technology markets work" in the Conference on Emerging Technologies: Innovation, Competition and Regulation held at Bengaluru on May 23-24.

Prof. V. Sridhar was **invited panelist for the session on "High Tech"** in the event organized by the Bangalore Chapter of Industry & Commerce with the high-level delegation from the Netherlands held at Bengaluru on May 25.

Balaji Parthasarathy spent the month of May fulfilling his responsibilities as **the Samuel von Pufendorf Fellow for 2017-18 at the Pufendorf Institute of Advanced Studies, Lund University, Sweden**.

The Fellowship required him to serve as an expert on the theme of social innovation.

STUDENTS

Feedback sessions with Graduating IMTech 2013 batch students were conducted on May 19 in two batches. 22 graduating students participated in these sessions. Prof. Madhav Rao, Prof. Chetan Parikh, and Prof. S. Sadagopan discussed on academic and non-academic activities with the students. As a constant endeavor to improve the overall "student experience" at IIIT Bangalore, the suggestions shared by the students will be considered for implementation during the upcoming academic year.



Jaya P. A. (PH2015003) completed her state-of-the-art seminar titled "Semantic Summarization of User Generated Short Reports" on April 13.

Pooja Venkatesh (MS2014004) completed her Master of Science by Research oral examination titled "Automatic Bharatanatyam Dance Expertise Prediction Based on Posture and Expression" on April 24.

Hari Bhaskar (PH2014007) completed his Ph.D. open seminar titled "Reference Architecture for Airline passenger satisfaction in changing Big Data Paradigm" on April 30.

Asha Subramanian (PH2013001) completed her Ph.D. oral examination titled **"Semantic Integration and Knowledge Representation of Open Data Powered by Linked Open Data"** on May 18.

Dibakar Das (PH2013010) completed his Ph.D. oral examination titled **"Efficient software defined network techniques for wireless access networks"** on May 31.

M.TECH. THESIS ORAL EXAMINATIONS

Kavin Kumar Thangadorai (SMT2015014) on "Enhancement of Interworking MAC and Security Algorithms Between WiFi Mesh Backhaul and Traditional WiFi Network for better QoS" on May 10.

Sudheer Kumar H. U. (SMT2014028) on "User Behavior Modeling and Segregation based Framework for Multimedia Broadcast and Multicast Services Operation on Demand" on May 10.

Mohanraja B. (SMT2015020) on "Efficient Initial Access Algorithm for MTC Devices in 4G-Advanced and Beyond Networks" on May 10.

Sabari Nathan A. (MT2016120) on "Enhanced Rerouting for Link Failure in MANET: QoS Perspective" on May 17.

B. Laasya (IMT2013008) on "Almost-surely Terminating Asynchronous Byzantine Agreement" on May 18.

Garimella Annapurna Gayathri (IMT2013015) on "Fault-tolerant Distributed Consensus in Directed Graphs" on May 18.

Rishabh Bhadauria (IMT2013034) on "Asynchronous Secure Distributed Computing Using Transferable Non-equivocation" on May 18.

Prajwal Sharma K. (MT2016519) on "Development and Analysis of Minimally Invasive Ventricular Assistive Device" on May 23.

Vimal Bastin Edwin Joseph (SMT2015035) on "Efficient Device to Device Direct Communication Protocols For WiFi and WiGig" on May 24.

Manasij Sur Roy (SMT2015018) on "Resource Engagement Inference Model To Improve Service Handling Delegation System In Multi-Tiered IoT Environment" on May 24.

Sridharan Natarajan (SMT2015027) on **"Enhanced Performance due to Novel Content Caching in LTE-Advanced Architecture"** on May 24.



Campus Visitors

April 04: Mr. Madhusudhan, CTO of Mindtree & Team

April 05: Dr. Nischal Nadhamuni, Massachusetts Institute of Technology, Department of Electrical Engineering & Computer Science

April 05: Samsung, South Korean Team

April 10: Shri M. B. Dyaberi, IAS (Retd), Chief Executive Officer (CEO), and Dr. Mallika, Dr. B R

Ambedkar School of Economics, Bengaluru

April 10: Mrs. Gurunath, Controller of Exam, BAES

April 10: HPE Team

April 11: American Express Team

April 12: Sanjukt K. Saha, Founder, One Billion Minds

April 13: Dr. Kavi Mahesh, Director, IIIT Dharwad

April 13: Mr. Basuki Yusuf Iskandar, Ms. Gati Gayatri, Mr. Hendra Fatadona, Ministry of Communication and Informatics, Republic of Indonesia

April 16: Shri. Bhavesh R. Trivedi, Director (DPA), and Shri. Vikram Singh, AO (FIN-II), MEA

April 16: Dr. C. S. Kedar, IAS (R) & Team

April 17: Mr. S. K. Murthy, Patent Counsel, Intel India

April 17: Vineet Kshirsagar Director – Government Business NetApp India Marketing & Services

April 18: Ms. Apurva Varma, Regional Manager, ARM

April 18: Mr. Srikar Reddy, CEO, Sonata Software

April 18: Mr. P. V. S. N. Raju, Chief Delivery Officer, Sonata Software

April 18: Mr. Om Prakash, Head Verticles, Sonata Software

April 18: Mr. Navin Mathew, Head Planning, Sonata Software

April 23: Dr. Kalpana Gopalan, IAS, Additional Chief Secretary, Government of Karnataka

April 23: Mr. Sachidanand Mangalabasavanna, Director, HCL Products India Lab, HCL Technologies Ltd



May 02: Dr. Vidyadhar Mudkavi, Director, CSIR Fourth Paradigm Institute, (CSIR-4PI)

May 02: Dr. Neil Jain, IRS

May 02: ASEAN students

May 04: Mr. Vijay Anand, Senior Vice President, Intuit Global Development Centers

May 07: The Morocco Delegation



May 14: Dr. Prasad Ram, Gooru Lab

May 16: KISED Team (Korea Institute of Startup & Entrepreneurship Development)

May 17: Ms. Parimala Sudhindra, Tech Mahindra

May 24: Dr. Raj Kumar Upadhyay, Doordarshan

May 28: Ms. Neha Yadav, AWS



May 30: Sri. P. Rajendra Cholan, IAS, Managing Director, BESCOM

May 31: Mr. Subramanya Bharadwaj, BOSCH



April 2: "Defining a University Strategy - A European Perspective" by Prof. Oliver Guenter, President of the University of Potsdam, Germany

April 9: "Large Scale Railway Systems" "Decimal FP ALU" "Robotics" by Prof. G. N. Srinivasa Prasanna

April 16: "Research@Multimodal Perception

Lab" by Prof. Dinesh Babu Jayagopi



April 23: **"Seeing Invisibility"** by Prof. Janaki Srinivasan





April 30:
"Using Spatial Locality for Visual
Analytics" by Prof. Jaya Sreevalsan Nair

Samvaad Talks had a summer hiatus through May, and will be resumed on June 11.



April 11: **"Guiding Policy through Research"** by Dr. Soumya Balasubramanya, Senior Researcher-Environment and Development Economics at International Water Management Institute (IWMI)



June 9: Round 2 of interviews for M.Sc. Digital Society admissions

June 11-19: Interviews and written test for Master of Science by Research and Ph.D. admissions for Term I

June 18-22: Summer School on Theoretical Foundations of Computer Science

June 20: 62nd Senate Meeting

June 21: International Yoga Day Celebrations













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