![International Institute of Information Technology Bangalore logo]

Newsletter
February 2019

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From the Director's Desk

The month of February started well with Prime Minister Narendra Modi dedicating IIT-Dharwad and IIIT-Dharwad to the Nation on February 10. We mentor IIIT-Dharwad.

In the campus front, we had one more edition of RISE event, which showcases the research and entrepreneurship activities at IIITB.

In the national front, Prime Minister conferred the prestigious Shanti Swarup Bhatnagar awards for the years 2016, 2017 and 2018 on February 28. In total, 33 scientists won the award, instituted in the memory of late Dr (Sir) Shanti Swarup Bhatnagar, the founder director of the Council of Scientific and Industrial Research (CSIR), to encourage young scientific research talent. The awards are given on February 28, National Science Day.

In the technology front, there are no less excitement. Samsung launched its revolutionary phone with foldable display, Samsung Galaxy Fold on February 20, at the Bill Graham Civic Auditorium in San Francisco, the place where Steve Jobs launched Apple II way back in 1977.

Achievements

Vinay Chandrasekhar K. (IMT2015523) working with the Surgical and Assistive Robotics Lab (SARL), **has secured the prestigious S. N. Bose fellowship award** in February 2019. Vinay has been invited to work as an intern in the Summer of 2019 at Dr. Ebrahimi's Bio-electronics lab in Penn State, U.S.A., through the S. N. Bose fellowship. Congratulations!

The poster by **Aheesh K. N. (MS2017001), on "Ultrasound based imaging tool and a surgical method to help surgeons accurately locate and pin-point selected regions in human tissues" won the best poster award**. Prof. Subhajit Sen and Dr. Vikas are co-authors of the poster. Congratulations!

Ram S. (IMT2017521) and Deep Inder Mohan (IMT2017013) won the first prize in the YADALAM NANJAIAH SHETTY ROLLING SHIELD: Intercollege Debate Competition held during February 23-25, 2019. They received a trophy and a cash prize of INR 25,000/- in an event held at the Rotary Club Bangalore on February 25. Yadalam intercollegiate debate has been conducted by Rotary Club Bangalore for 30 years now. Congratulations!

11 girls from LeanIn chapter (Manasa (IMT2018040), Aarthi (IMT2018046), Aarushi (IMT2018001), Rutvi (IMT2018519) Janvi (IMT2018032), Abhigna (IMT2018002), Neetha (IMT2018050), Gayathri (IMT2018026), Arpitha (IMT2018504), Nikitha (IMT2018051)were selected for **Girlscript Summer of Code (GSSoC)**. GSSoC is a three month long Open Source program with an aim to help beginners get started with Open Source while encouraging diversity. Throughout the program, participants contribute to different projects under the guidance of an experienced mentor. Top participants get goodies and internship offers from sponsors. Additionally, Prateksha and Atibhi have been selected as mentors for GSSoC. Congratulations!

Campus News

📅 Events

Prof. Oliver Gunther, President of the University of Potsdam, Germany, visited IIITB on February 5, and had interactions on various research projects of the Web Science Lab (WSL) and a few startups incubated at IIIT Bangalore.

The **75th General Body Meeting (GBM)** was held on February 6.

IIITB intercollege sports tournament was organized during February 9-10 at IIITB. This inaugural edition of the intercollegiate sports event included two sports, Soccer and Basketball. Prof. G. Srinivasaraghavan and the sports committee organized the event. Finals in Basketball was won by IIITB (A) (45-11) details to be noted. The Football finals were held between IFIM and IIITB A team and was won by IFIM, (1-1). After extra time and 2-0 on Penalties) details to be noted. The guest for the closing ceremony was Prof Chetan Parikh. Trophies were handed out to both the Winning and Runner-up teams.

RISE @IIITB 2019 was organised during February 14-16 at IIITB. The event was organized in two different tracks. One is Research Track and another is Innovation Track. The events of Day-1 included the Ph.D. colloquium, IMACX Nova and a panel discussion with eminent panelists Profs. Sonde (IIITB Senate member), Ramani (former professor at IIITB) and Ram Subramanian moderated by Prof. Srinath Srinivasa (IIITB). Day-2 was dedicated to the Innovation track and several start-up enterprises gave presentation on their products. Day-3 was the Open House day, where the focus was to showcase the research and innovation being pursued at IIITB to the external world. The day started with a RISE keynote speech by Ms. Valarmathi (Deputy Director, ISAC, ISRO), who emphasised on the importance of team building, identifying problems, and persisting with it until the desired result is obtained. The poster and demo sessions followed, where a wide variety of research and innovations of our students was showcased.

The **second Industry Advisory Board (IAB) meeting** was held on February 16, at IIITB.

The **66th Senate Meeting** was held on February 20.

The **3rd edition of Happy Health Hour** was held on February 20. The event included several run/walk races, fun/recreational games, and healthy beverages/snacks.

Sangam, IIITB alumni day was held on February 23 at IIITB. Sangam entailed a program with several performances by the students, alumni and kids of alumni. The Entrepreneur's Panel Discussion included IIITB alumni who were also start-up founders - Mr. Paddy Raghavan (Compute.io), Mr. Khadim Bhatti (WhatFix), Mr. Ishwar Sridharan (Exotel) and Mr. Ananda Varma (Fasal). The panelists shared their experiences with the alumni and students which included their struggles and achievements. The other events included dance recitals, a play by the Parvaaz (Theatre Arts Club), and a musical performance by the team Shadow (Student's Music band). The guest performance of the event was by the renown stand-up comedian, Mr. Karunesh Talwar. The main event was followed by the DJ night and concluded with dinner.

The **Web Science for Development (WS4D 2019) workshop**, conducted on February 27 at IIITB, is a part of the web science research initiative at IIITB. WS4D 2019 is a workshop that brings together professionals from several domains, addressing three three thematic concerns, namely: Social Cognition, Data-driven Governance, and Digital Empowerment. WS4D 2019 has been organized by Prof. Srinath and the Web Science Lab (WSL). Prof. Rajagopalan gave the inaugural address and Dame Wendy Hall, Executive Director, Web Science Institute gave the keynote address on "AI through the looking glass". The invited speakers for the event included Gurucharan Gollerkeri and Asha Subramanian, Public Affairs Centre (PAC); Manish Gupta, Videoken/IIITB; Jai Ganesh, Mphasis Inc.; T. B. Dinesh, Servelots; Sakthi Balan, LNMIIT Jaipur; Bidisha Chaudhuri and Dipanjan Saha, CITAPP, IIITB; Raksha P. S., WSL, IIITB; Preeti Mudliar, CITAPP, IIITB; Sweety Agrawal, Funtoot. The workshop included breakout sessions by working groups, followed by the presentations by the groups. The event concluded with a valedictory session and high tea. For more details: http://wsl.iiitb.ac.in/index.php/2019/01/31/ws4d-2019/

A panel discussion on "**Bursting Career Myths**" was organised by YourDost and IIITB on February 28. Abhijit M. (MT2017001, Placement Committee member) and Prof. Sujit Kumar Chakrabarti participated in the panel discussion.

Hewlett Packard Enterprise (HPE) announced that, as part of its Corporate Social Responsibility efforts under its Living Progress program, the company has deployed end-to-end wireless infrastructure from Aruba, a Hewlett Packard Enterprise company at the I-MACX Studios located at the International Institute of Information Technology Bangalore (IIITB) Innovation Centre in Bengaluru, Karnataka

Publication Including Presentations

Prajwal Sharma (MT2016519) presented his paper titled "**Design and analysis of a minimally invasive and ECG controlled Ventricular Assistive Device**" in VLSI Design and Embedded Systems Conference held in New Delhi on January 6. The co-authors of the paper are Prashanthi S. K. (MT2016520), Vinay Chandrasekhar K. (IMT2015523), Krishna Nagaraj (IMT2015512), Dr. Vikas Vazhiyal (NIMHANS, PH2016014), and Prof. Madhav Rao. The work is done in the SARL lab @ IIITB, affiliated to the E-Health Research Centre (EHRC), at IIITB.
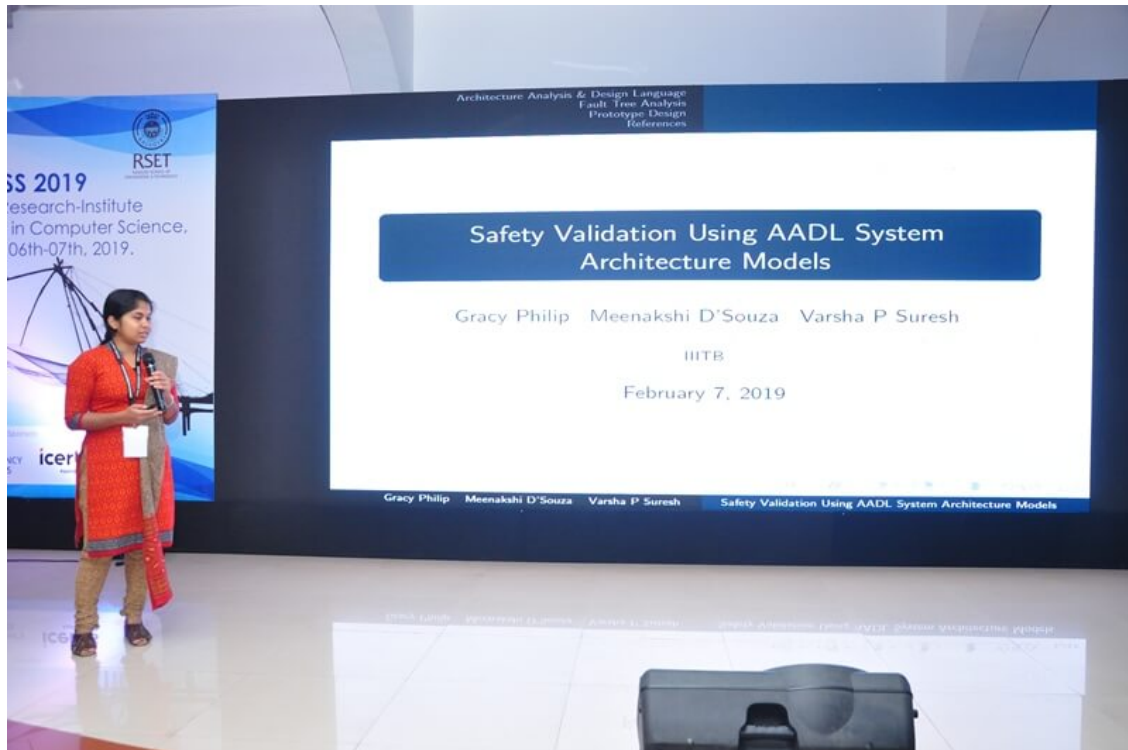
Prof. Meenakshi D' Souza presented her paper titled "**Avionics Self-adaptive Software: Towards Formal Verification and Validation**", co-authored by Rajanikanth N. Kashi (PH2011004), at the 15th International Conference, ICDCIT 2019, Bhubaneswar, India, during January 10-13.

The paper titled "**Creating an Accessible Technology Ecosystem for Learning Science and Math: A Case of Visually Impaired Children in Indian Schools**" by Supriya Dey (co-founder of Vision Empower and an alumnus, MS2014006), Vidhya Y. (co-founder of Vision Empower and an alumnus, DT2015009), Suprgya Bhushan (IMT2014056), Mounika Neerukonda (IMT2014035) and Prof. Amit Prakash, was presented at the workshop "BEING (MORE) HUMAN IN A DIGITISED WORLD" co-hosted by the Management Centre for Human Values (MCHV), the Indian Institute of Management (IIM), Calcutta and the Association for Information Systems - India Chapter (INAIS) held during February 1-2 at IIM Calcutta. The abstract of the paper available on the INAIS Repository: https://inais.org.in/inais-repository

Varsha P. Suresh (PH2016013) presented her work on "**Safety Validation using AADL System Architecture Models**" at the ACM IRISS Symposium held in Cochin,

during February 6-7. IRISS is an annual symposium held with the aim of facilitating exchange among research scholars in Computer Science in India to exchange their research.

Nandakishore K. N. (MS2015007) presented his paper titled "**Key Quality Attributes of Digital Platforms**" at the International Conference on Digital Economy (ICDE) 2019. This was an AIS India Chapter affiliated conference, organized in Raipur, Chhattisgarh, India, during February 8-9, by the Center for Digital Economy, IIM Raipur. The paper is co-authored by Prof. V Sridhar and Prof. T K Srikanth.

Balaji Parthasarathy presented a paper titled "**Governing frugal innovation for sustainable innovation for sustainable development: The hybrid domain**", at the workshop Capturing Frugal Innovation: Towards of Handbook on the Crossroads of Technology, Entrepreneurship and Global Sustainable Development, hosted by the Lorentz Center, Leiden, Netherlands, from 11-15 February.

H. Vijaya Sharvani presented her paper titled "**FrApple: A framework for apprenticeship learning**", at the 12th ACM Innovations in Software Engineering Conference held in Pune during February 14-16. This is joint work with Prof. Meenakshi D'Souza and a team of researchers from Accenture labs, as a part of internship done by Sharvani at the labs.

Nitin Bhatia (MS2015008) presented his paper titled **"Formalizing GPU instruction set architecture in Coq"** at the ACM Innovations in Software Engineering Conference (ISEC) Ph. D. Symposium held at Pune during February 16-18. This paper is co-authored by Profs. Meenakshi D'Souza and Sujit Kumar Chakrabarti.

Rajanikanth N. Kashi (PH2011004) presented his paper titled **"Mitigating Byzantine Failures in Multi-agent based Dependable and Adaptable Avionics Software"**, co-authored by Prof. Meenakshi D'Souza, at the Third IEEE International Conference on Electrical, Computer and Communication Technologies (IEEE ICECCT 2019), Coimbatore, India during February 20-22.

Ahmad Shayaan (IMT2014004) presented his paper titled **"Prediction of Malaria Vaccination Outcomes from Gene Expression Data"**, co-authored by Indu Ilanchezian (IMT2014024) and Prof. Shrisha Rao, at the 12th International Conference on Bioinformatics Models Methods and Algorithms, in Prague, Czech Republic during February 22-24. In this paper, the authors successfully predicted the outcome of a Malaria vaccine trial by using various statistical methods on gene expression of the volunteers. The citation for the paper is as follows: Ahmad Shayaan, Indu Ilanchezian, and Shrisha Rao. Prediction of Malaria Vaccination Outcomes from Gene Expression Data. Twelvth International Conference on Bioinformatics Models Methods and Algorithms (BIOSTEC 2019), Prague, Czech Republic, 2019.
http://insticc.org/node/TechnicalProgram/biostec/presentationDetails/72605

Aayushman Agarwal, Gaurav Koley (IMT2014019), Raksha P. S. (PH2015009), and Prof. Srinath Srinivasa participated in the RBCDSAI Web Science Symposium at IIT Madras, Chennai, during February 25-26. Poster presentations and an invited talk entitled "Characterising Online Social Cognition" were delivered as part of this participation.

The article titled **"Bringing the spring back in telecom"** by Prof. V. Sridhar has been published in Business Line on February 27. The same can be accessed here:
https://www.thehindubusinessline.com/opinion/bringing-the-spring-back-in-telecoms-step/article26378567.ece

Sridhar, V. (February 2019). **Net Neutrality: Contradicting postures in the U.S. and India**. CUTS International Washington DC Centre Policy Note #8. http://snip.ly/1ndfhr#http://cuts-wdc.org/pdf/Policy_Note-8.pdf

Faculty, Staff and Students

Prof. Sujit Kumar Chakrabarti gave an invited talk titled "**Stories from the Life of an Academic**" at Peepal Consulting, a career consulting firm on January 16.

Profs. Manish Gupta and Meenakshi D'Souza attended the **ACM India Annual Event and the ACM India Council meeting** held at Cochin during February 7-8.

Prof. V. Sridhar gave an invited talk on "**AI and its Impact on Labour Force**" at the International Colloquium on Ethics and Governance of Autonomous AI Systems for a better world, New Delhi, India, during February 18-19.

As a part of the faculty exchange program between DAIICT and IIITB, Prof. Madhav Rao conducted a 2-hour lecture on **Low Power VLSI Techniques** to M.Tech. students at DAIICT on February 14. During this trip, Prof. Madhav Rao gave an invited talk on "**3D Interconnect Engineering**" at Electrical Engineering Department, IIT-Gandhinagar, on 14th February.

Prof. Meenakshi D'Souza visited **IIT Kharagpur as Indian examiner for a Ph. D. viva voce examination at the Computer Science department** during February 25-26.

Late Reporting

Students, researchers and faculty members affiliated to the **Centre for Information Technology and Public Policy (CITAPP)** presented their work at the 10th International Conference on Information and Communication Technologies and Development (ICTD). The conference brings together researchers and practitioners working across domains including education, global health, agriculture, gender equality, digital financial services, internet access, and many more. The conference was held at IIM Ahmedabad during January 4-7, 2019. CITAPP members made the following poster presentations, and oral presentations in the open sessions and the doctoral consortium:

Poster Presentations

- Rajesh Hanbal (PH2015008) and Dr. Amit Prakash: A Rights-based Approach to Open Government Data
- Soumyo Das (MS2017015): The Datafication of Anti-Poverty Programmes: Evidence from the Public Distribution System in Karnataka. (With Dr. Silvia Masiero, Loughborough University, UK)

Open Sessions

- Apoorva Bhalla (DT2017002) and Dr. Bidisha Chaudhuri: Beyond IVR: Voice-User Interfaces for Emerging Smartphone Users. (With Linus Kendall, Sheffield Hallam University, UK)
- Dr. Bidisha Chaudhuri and Dr. Amit Prakash: Do Digital Identity Systems Have a Theory of Inclusion?
- Dr. Balaji Parthasarathy: Is This Time Different? The Novelty of ICT in ICTD. (With Brandon Liu, Everwell Health Solutions)
- Rajesh Hanbal (PH2015008): Open Government Data and Accountability: Hype, Reality or a Possibility? (With Sham Kashyap, Azim Premji University)
- Oindrila Matilal (PH2015019) and Mounika Neerukonda (IMT2013): Gender Equality in the Indian IT Workplace
- Dr. Balaji Parthasarathy: Is This Time Different? The Novelty of ICT in ICTD. (With Brandon Liu, Everwell Health Solutions)
- Rajesh Hanbal (PH2015008): Open Government Data and Accountability: Hype, Reality or a Possibility? (With Sham Kashyap, Azim Premji University)
- Oindrila Matilal (PH2015019) and Mounika Neerukonda (IMT2014035): Gender Equality in the Indian IT Workplace
- Srujana Kamath (DT2017010): Social Media, Politics, and the Process of Engagement in the Indian Context. (With Divya Siddharth et al., Microsoft Research India)

Doctoral Consortium

- Arvind Upreti (PH2016011): A Multi-Objective Optimization Framework for Task Automation
- Oindrila Matilal (PH2015019): Gender and Development in the Digital Social Enterprise
- Rajesh Hanbal (PH2015008): "Seeing the State" through Open Government Data (OGD)

Academic Milestones

Reddy Rani Vangimalla (PH2016009) completed her comprehensive examination on February 07.

Abhishek Singh (PH2015001) completed his state of the art seminar on "**Formal verification of ARINC 653 complaint RTOS for data races and timing properties**" on February 19.

Samvaad Talks

February 4: **"Modeling and Analysis of Distributed Control Algorithms: A Science-based for Smart Manufacturing & Service Systems"** by Prof. Vittal Prabhu

February 11: **"Fixed-Point Arithmetic in Somewhat Homomorphic Encryption Schemes"** by Prof. Srinivasa Vivek

February 18: **"Impact of Channel State Information Uncertainty on the Performance of Cooperative Cognitive Radio Networks"** by Prof. Priyanka Das

February 25: **"Beyond RADAR design limits"** by Prof. Vinod Reddy

Campus Visitors

February 04: Mr Girish, Director ITBT and Ms Champa from ITBT Government of Karnataka

February 04: Dr. Daniel Atlin, Vice President (External), Dr. Charlotte Yates, Provost and

Vice-President (Academic), Dr. Ray Darling, University Registrar from The University of Guelph

February 09: Shri. Gurucharan Gollarkeri, IAS (Retd), Director, Public Affairs Centre

February 22: Rahul Goel, Executive Director, Krishnan, Executive Director Col. Manish Nagpal-Military Attache

February 28: Mr. Gaurav Gupta, IAS, Principal Secretary – IT, BT & ST

February 28: Mr. Mahendra Jain, IAS, Chief Secretary – Urban Development

February 28: Mr. Naresh Shah, President, EG India, R&D Hewlett Packard Enterprise

Campus Calendar for March 2019

March 2-9: Mid term week

March 3: Formal announcement of admissions to research degree programmes (Master of Science by Research, Ph.D.) for August 2019

March 4: Holiday for Shivarathri

March 15-17: Spandan 2019

March 15-May 31: Admissions application for M.Sc. Digital Society programme open (website for details)

March 15-April 25: Online admissions application for research degree programmes submission live at the pravesh portal

March 23: 2nd edition of TedxIIITBangalore