RIISE

INDRAPRASTHA INSTITUTE *of* INFORMATION TECHNOLOGY DELHI

Research, Innovation & Incubation Showcase

31st Jan 2020

Digital Healthcare

Internet of Things (IOT)

Information Security

Human-Centered Design (HCD)

Sustainability

ACADEMIA

INDUSTRY

GOVERNMENT

ABOUT RIISE

Research Innovation and Incubation Showcase (RIISE) aims to bring together stakeholders from government agencies, industry and academia. There will be five parallel sessions on the topical themes of Digital Health, Human Centered Design, Information Security, Internet of Things and Sustainability. Talks and panels to discuss the state-of-the-art, the way forward, and opportunities for future collaboration along with networking and poster sessions.
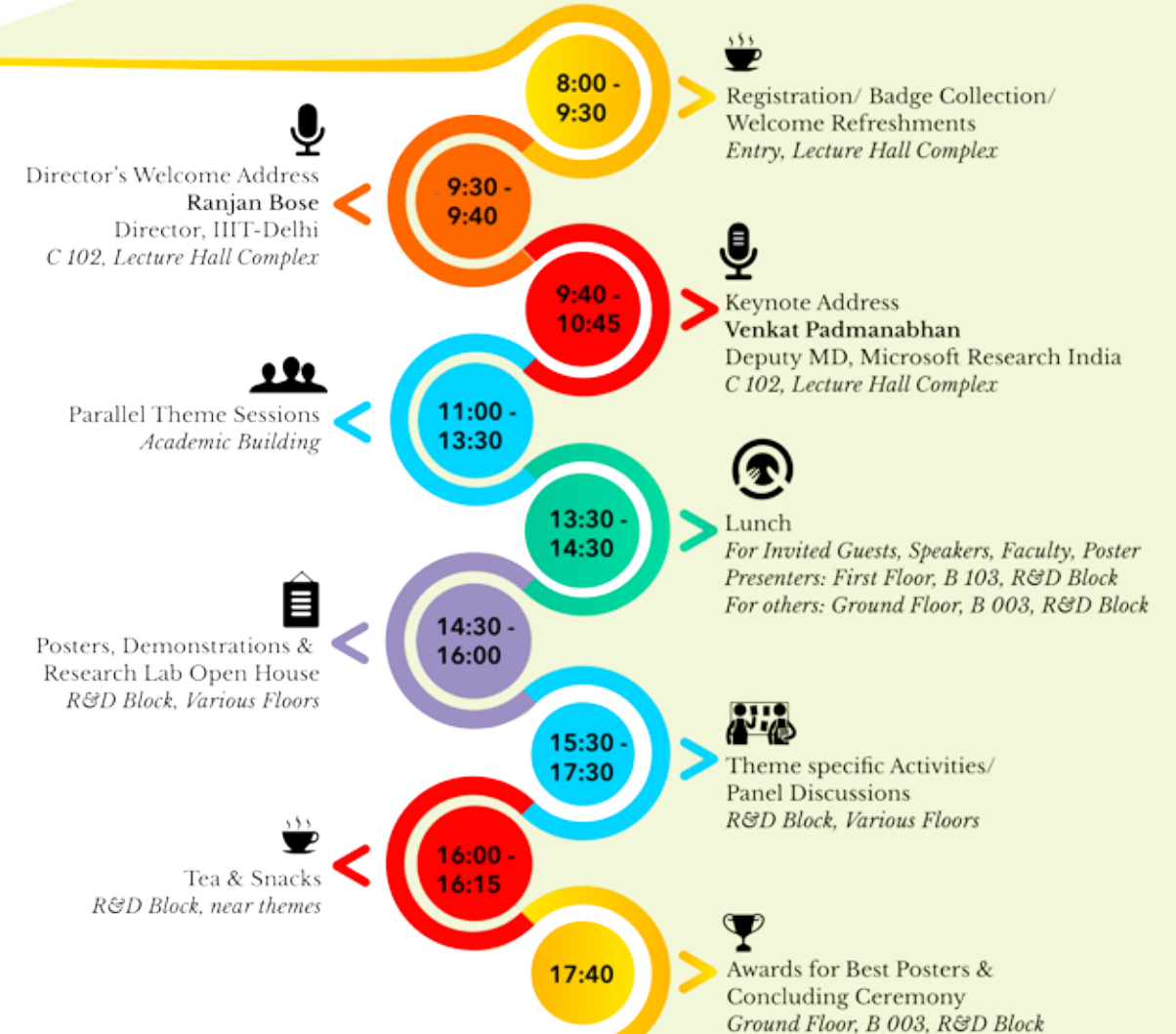
Friday
31st
Jan 2020

📍 IIIT-Delhi

🕐 08:00- 17:30 hrs

SCHEDULE

8:00 - 9:30
Registration/ Badge Collection/ Welcome Refreshments
Entry, Lecture Hall Complex

9:30 - 9:40
Director's Welcome Address
Ranjan Bose
Director, IIIT-Delhi
C 102, Lecture Hall Complex

9:40 - 10:45
Keynote Address
Venkat Padmanabhan
Deputy MD, Microsoft Research India
C 102, Lecture Hall Complex

11:00 - 13:30
Parallel Theme Sessions
Academic Building

13:30 - 14:30
Lunch
For Invited Guests, Speakers, Faculty, Poster Presenters: First Floor, B 103, R&D Block
For others: Ground Floor, B 003, R&D Block

14:30 - 16:00
Posters, Demonstrations & Research Lab Open House
R&D Block, Various Floors

15:30 - 17:30
Theme specific Activities/ Panel Discussions
R&D Block, Various Floors

16:00 - 16:15
Tea & Snacks
R&D Block, near themes

17:40
Awards for Best Posters & Concluding Ceremony
Ground Floor, B 003, R&D Block

KEYNOTE SPEAKER

Venkat Padmanabhan

Deputy Managing Director,
Microsoft Research India

● **Bio:**

Venkat Padmanabhan is Deputy Managing Director at Microsoft Research India in Bengaluru. He was previously with Microsoft Research Redmond, USA for nearly 9 years. Venkat's research interests are broadly in networked and mobile systems, and his work over the years has led to highly-cited papers and paper awards, technology transfers within Microsoft, and also industry impact. He received the Shanti Swarup Bhatnagar Prize in 2016 and the ACM SIGMOBILE Test-of-Time paper award both in 2016 and 2019. Venkat holds a B.Tech. from IIT Delhi (from where he received the Distinguished Alumnus award in 2018) and an M.S. and a Ph.D. from UC Berkeley, all in Computer Science, and has been elected a Fellow of the INAE, the IEEE, and the ACM. He is an adjunct professor at the Indian Institute of Science and was previously an affiliate faculty member at the University of Washington. He can be reached online at:
http://research.microsoft.com/~padmanab/.

● **Title: HAMS: Harnessing AutoMobiles for Safety**

Road safety is a major public health issue the world over. In the Harnessing AutoMobiles for Safety (HAMS) project at Microsoft Research India, we employ a dashboard-mounted smartphone, and the array of sensors it includes, as a virtual harness, with a view to monitoring drivers and their driving to improve safety. We focus primarily on the camera sensors of the smartphone, both the front camera, which faces the driver, and the back camera, which looks out to the front of the vehicle. We address the challenges arising from our choice of low-cost generic sensors instead of more expensive specialized sensors, the need for efficient processing on a smartphone, and demands of robust operation in uncontrolled environments. HAMS has been piloted as part of a driver training program, with promising results, and has been deployed for smartphone-based automation of driver license testing.

Digital Health

Come join us to engage with cutting-edge research at the interface of Digital Health in India. With eighty-eight percent of doctors in India using mobile-health apps or digital health technology, we are at the juncture of pervasive technology adoption in healthcare. Research is the prime driver of innovations and the Digital Health Theme will showcase research spanning lab to market. Key areas of discussion include digital platforms for preventive health, Big-data, Omics, innovations in Artificial Intelligence and the roadmap to healthcare deployment. The day will feature keynotes, talks, poster sessions, lab visits and networking sessions to connect academia, industry, and government stakeholders for mainstreaming digital health research into practice.

11:00 - 11:30 hrs
Title: *IIITD as a Shaper of Research, Innovations & Entrepreneurship in Digital Health*
Venue: C 01, Academic Block

Tavpritesh Sethi
Assistant Professor, IIIT-Delhi

Sharmila Mande
Chief Scientist, TCS Research,
Tata Consultancy Services

11:30 - 12:00 hrs
Title: *Solving Health Challenges with a Gut full of Data*
Venue: C 01, Academic Block

12:00 - 12:15 hrs **Break**

12:15 - 12:45 hrs
Title: *mHealth applications in healthcare from medical college, Community Medicine perspective*
Venue: C 01, Academic Block

Nandini Sharma
Director, Professor & Head,
Maulana Azad Medical College

12:45 - 13:10 hrs
Title: *Bringing Precision Health to Life*
Venue: C 01, Academic Block

Saher Mehdi
Co-founder & Chief Scientist,
wellOwise

13:10-13:35 hrs
Title: *Ideas take flight*
Venue: C 01, Academic Block

Aman Iqbal
Founder, Vantage Enterprise

13:35 - 14:30 hrs **Lunch**

14:30 - 15:30 hrs
Student posters & presentations
Venue: 1st Floor, R&D Block

15:30 - 16:00 hrs
Title: *Health Futures in a Digital World*
Venue: B 105, R&D Block

Anurag Agrawal
Director, CSIR-IGIB

Vidur Mahajan
Associate Director, Mahajan Imaging Pvt. Ltd.

16:00 - 16:25 hrs
Title: *AI in Healthcare: How it's different*
Venue: B 105, R&D Block

16:25 - 16:40 hrs Tea Break

16:40 - 17:05 hrs
Title: *The Genetics of Predictive & Preventive Health*
Venue: B 105, R&D Block

Pallab Mitra
Founding Director, QoaLife Healthways Pvt Ltd

Rohit Gupta
Co-founder & Chief AI Officer, BuddhiMed Technologies

17:05-17:30 hrs
Title: *Revolutionizing Healthcare Using AI - Initial Learnings & Opportunities in the Indian Context*
Venue: B 105, R&D Block

Human-Centered Design

Department of Human-Centered Design (HCD) at IIIT-Delhi focuses on innovative research in design which impacts our daily lives. We have interdisciplinary programs on B.Tech. and PhD to develop next-generation designers with robust computing skills coupled with design thinking capabilities and knowledge in diverse areas ranging from Artificial Intelligence to Animation, Deep Learning to Digital Media, Robotics to Virtual Reality, Gaming to Music, etc. We also actively engage with industries to develop industry-facing projects. Come and explore Design, the IIIT-D Way!

11:15 - 11:45 hrs
Title: *Overview of HCD Dept., its research areas & progress*
Venue: C 21, Academic Block

Pushpendra Singh
Head (HCD), Professor (CSE, HCD), IIIT-Delhi

Anirudha Joshi
Professor, IDC School of Design, IIT Bombay

11:45 - 12:15 hrs
Title: *Digital health & emergent users*
Venue: C 21, Academic Block

12:15 - 12:45 hrs
Title: *Social Communication- Humanizing technology for Health Behavior Change*
Venue: C 21, Academic Block

Debjani Roy
Faculty, HCD, Srishti Institute of Art, Design & Technology

12:45 - 13:15 hrs
Title: *Responsible Research & Innovation in AI*
Venue: C 21, Academic Block

Krishna Ravi Srinivas
Consultant at Research & Information System (RIS) for developing countries, Managing Editor of Asian Biotechnology & Development Review

13:30 - 14:30 hrs **Lunch**

14:30 - 16:00 hrs
Student posters and presentations
Venue: 4th Floor, R&D Block

Research Lab Open House
Venue: Ground Floor, B 004 & 4th Floor, A-wing, R&D Block

InformationSecurity

The cyberspace has become the 21st century battleground for wars, dissent and geopolitics. Security issues - ranging from vulnerable personal computing resources, corporate and business equipment, government and defence cyberinfrastructure, cyber dissidence, espionage and counter-espionage. The role of cybersecurity research is to explore complex problems of such varied natures and provide efficient ingenious solutions. It is an interdisciplinary field, involving cryptography, software systems, computer networking, social media, computer hardware, policy management, law and ethics.

11:15 - 11:45 hrs
Title: *'Blockchain Technology & Implications'*
Venue: C 02, Academic Block

Vinay J. Ribeiro
Associate Professor, CSE Department, IIT Bombay

Kaarthik Sivakumar
Principal Engineer, Cisco

11:45 - 12:15 hrs
Title: *Absolute security is a myth*
Venue: C 02, Academic Block

12:15 - 12:45 hrs
Title: *IoT: Security Challenges*
Venue: C 02, Academic Block

R. K. Shyamsundar
JC Bose National Fellow & Distinguished V. Professor, IIT Bombay

K. Gopinath
Professor, Computer Science & Automation, IISc Bangalore

12:45 - 13:15 hrs
Title: *Privacy & Identity Management*
Venue: C 02, Academic Block

13:30 - 14:30 hrs Lunch

14:30 - 15:45 hrs
Student posters & presentations
Venue: 2nd Floor, R&D Block

15:45-17:00 hrs
Panel Discussion: *Conducting good security research*
Venue: A 007, R&D Block

Internet of Things (IOT)

Future IoT applications anticipate an explosion in the plethora of use-cases and services, which can not be sustained by incremental improvements on the existing CPS technologies. On the one hand, applications such as virtual and augmented reality require high-speed access links, whereas on the other, use-cases such as critical control and disaster search and rescue, need hi-fidelity ultra-reliable systems often working in lower speeds. The IoT track of the Research and Innovation Showcase at IIIT Delhi aims to connect experts in academia, leaders in the industry, and policymakers in the government, involved in research, development, and roll-out of the next generation IoT systems. We invite participants to engage with this track featuring a keynote address, research talks, panel discussion, poster sessions, and networking events.

11:00 - 11:30 hrs
Title: *Efficient Association-Free WiFi for Disconnected IoT Nodes*
Venue: C 11, Academic Block

Mukulika Maity
Assistant Professor, IIIT-Delhi

L. Behera
Chair Professor, Dept. of Electrical Engg., IIT Kanpur

11:30 - 12:15 hrs
Title: *Imitation Learning in Robotic Systems & Other Research Activities at ISCON lab at IITK*
Venue: C 11, Academic Block

Alok Mittal
Sr. Group Manager, STMicroelectronics

12:15 - 12:50 hrs
Title: *Life Augmented with IoT & Smart Technologies*
Venue: C 11, Academic Block

12:50 - 13:00 hrs Break

13:00 - 13:45 hrs
Title: *Recent Advances in IoT Security*
Venue: C 11, Academic Block

Rajeev Shorey
Principal Scientist, TCS Innovation Labs

13:45 - 14:30 hrs Lunch

14:30 - 15:30 hrs
Student posters & presentations
Venue: 2nd Floor, R&D Block

15:30 - 16:20 hrs
Title: *IoT – Architecture & industry solutions*
Venue: A 006, R&D Block

Subodh Gajare
Lead Architect, Cisco

16:20- 16:30 hrs Break

16:30-17:30 hrs
Panel Discussion: *IoT in the Indian Context: Present& Future Panelists: Subodh Gajare (Cisco), Chander Kaher (STM), Rajeev Shorey (TCS), & Sumit Darak (IIITD); Moderator: Anand Srivastava (IIITD)*
Venue: A 006, R&D Block

Sustainability

In pursuit of rapid economic growth and development, the human-kind created large-scale environmental stressors including population explosion, overexploitation of natural resources, hazardous pollution and climate change. Recent scientific findings warn that our planet might be nearing a tipping point of irreversible damage to the environment. IIIT-Delhi is taking its first step in this direction by hosting a thematic session on Sustainability at our annual Research Innovation and Incubation Showcase (RIISE) to seek out mitigation and adaptation mechanisms for tackling environmental risks. Eminent scholars will discuss the specific role of information and communication technologies in tackling issues of environmental sustainability.

11:15 - 11:50 hrs
Title: *Looking past the illusion of efficiency, in pursuit of sufficiency*
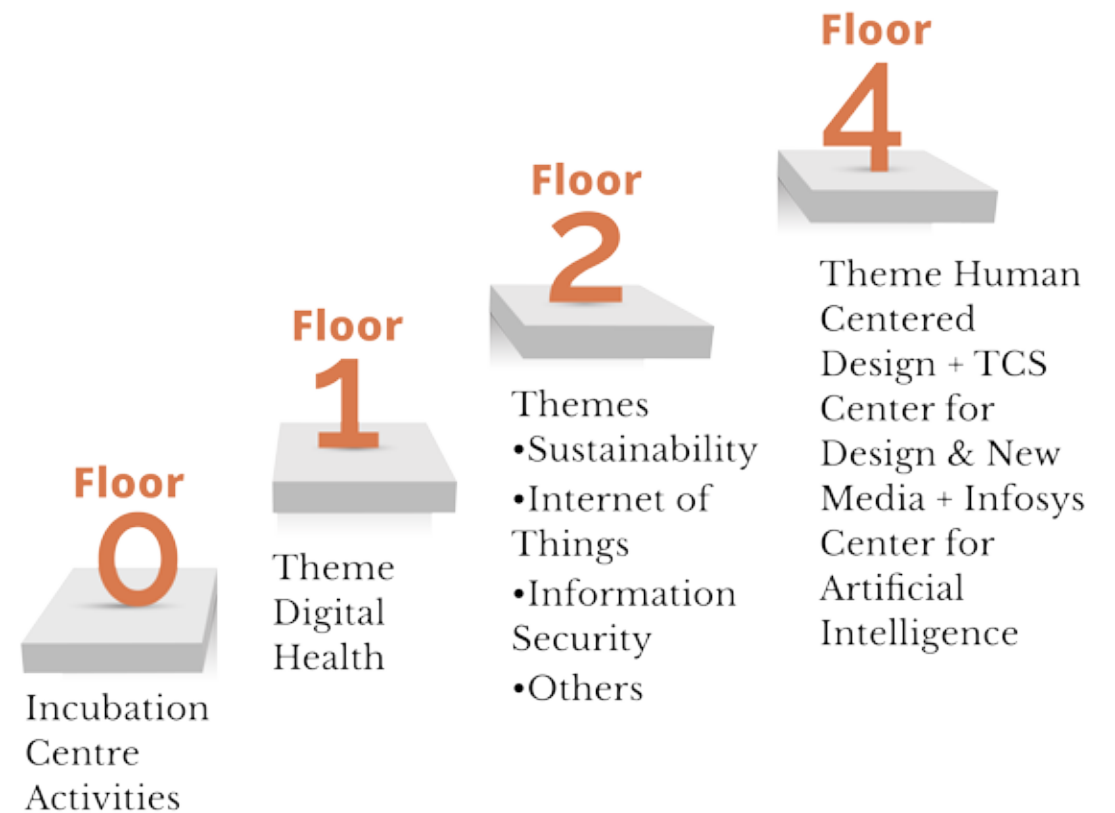**Venue:** C 12, Academic Block

Vivek Gilani
Ashoka Fellow; MD & Executive board member cBalance

Mandira Kalra Kalaan
Associate Director, Population Foundation of India

11:50 - 12:25 hrs
Title: *Population Stabilisation and Gender: Ensuring Women's Rights & Access to Family Planning*
Venue: C 12, Academic Block

12:15 - 13:00 hrs
Title: *Accounting for climate variability in societal outcomes*
Venue: C 12, Academic Block

Atreyee Bhattacharya
Researcher, INSTAAR & CAS - CU Boulder, Scripps Institution of Oceanography, La Jolla & IIHS, Bangalore

13:00 - 13:10 hrs
Title: *Sustainable Lifestyles Accelerator : An IIITD International Project*
Venue: C 12, Academic Block

Amrit Srinivasan
Professor, IIIT-Delhi

13:10 - 13:30 hrs
Concluding Theme Discussion: *All guest speakers, IIITD faculty, audience members: Technology and Sustainable Society*
Venue: C 12, Academic Block

13:30 - 14:30 hrs
Lunch

14:30 - 16:00 hrs
Student posters and presentations
Venue: 2nd Floor, R&D Block

POSTER SESSION

Floor 0
Incubation Centre Activities

Floor 1
Theme Digital Health

Floor 2
Themes
•Sustainability
•Internet of Things
•Information Security
•Others

Floor 4
Theme Human Centered Design + TCS Center for Design & New Media + Infosys Center for Artificial Intelligence

(2nd Half in R&D Block, IIIT-Delhi)

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Ankit Agarwal *(Web Manager)*

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Navin Kumar Gaur *(Junior Manager, Industry Outreach Program)*

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