



(15th – 17th June, 2023)

ICEPE 2023 Special Session on

Hardware/Software Co-design for enabling Green IoT technologies

Aims and scope of the session

Technological advances in recent past have led to an increase in the carbon footprint. Energy efficiency in the Internet of Things (IoT) has been attracting a lot of attention from researchers and designers over the last couple of years, paving way for an emerging area called green IoT. There are various aspects (such as key enablers, communications, services, and applications) of IoT, where efficient utilization of energy is needed to enable a green IoT environment. This special session explores and tries to set a benchmark on how the various enabling technologies (such as the smart sensors, automation, 3D printing, VLSI, Cloud Computing, etc.) can be efficiently deployed to achieve a green IoT. Furthermore, expanding the horizon of IoT applications through horizontal and vertical integrations of existing hardware/software could be a gamechanger for a sustainable society.

Topics of interest

This special session invites research papers from the following topics (but not limited)

1. Smart Agriculture
2. Semiconductor IC layouts and Fabless ecosystem
3. Wireless Ad-hoc Networks
4. Low Power devices for IoT
5. Cyber Physical Systems
6. Industry 4.0
7. Sensors for Healthcare
8. Cyber security and Hardware security
9. Near Field Communications

Special session organizers

1. Dr. Ramana Murthy G

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Dr. G. Ramana Murthy teaches various subjects at undergraduate and postgraduate levels related to the field of Electronics and Communication Engineering. His area of expertise is in VLSI and Embedded Systems. Dr. Murthy holds a Doctorate of Philosophy from Multimedia University, Malaysia on “Design of low power multiplexer based adders for Digital IIR Filter”.

Dr. Murthy has collaborated with various companies including Infineon Technologies, Intel, and MIMOS in Malaysia. He has over two decades of overseas academic and administrative experience with institutions such as University of Northumbria Newcastle from UK, Multimedia University, Malaysia. He is involved as Project Leader for various projects funded by the University, Ministry of Science, Technology, and Innovation (Ministry of Higher Education and Telekom Malaysia). He is a reviewer and an editorial board member for internationally recognized journals. He served as reviewer for external research granted projects under MOSTI and MOHE.

His research interests include VLSI, embedded systems, device modeling, Memory optimization, low power design, FPGA, and evolutionary algorithms.



2. Dr. Srikanth Itapu

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Dr. Srikanth Itapu graduated with Ph.D. in Electrical Engineering from the University of Toledo, Toledo, Ohio, USA and has worked as a post-doctoral researcher at the University of Toledo before returning to India. Prior to Ph.D., he graduated with an M.Tech. degree in Laser and Electro-optics and a B.Tech degree in Electronics and Communication Engineering.

His research interests include Nano-Electronic Device Fabrication and Characterization, RF & Microwave, Computational first principle studies on novel complex oxides and perovskites, Novel supercapacitor materials for EVs, etc.



3. Dr. Jakir Hossen

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Jakir Hossen is graduated in Mechanical Engineering from the Dhaka University of Engineering and Technology (Former Name is BIT Dhaka,1997), Higher Diploma in Computer Science and Engineering (1999), master's in communication and Network Engineering from Universiti Putra Malaysia (2003) and PhD in Smart Technology and Robotic Engineering at Universiti Putra Malaysia (2012). He is currently a Senior Lecturer at the Faculty of Engineering and Technology, Multimedia University, Melaka, Malaysia. His research interests are in the area of Artificial intelligence, Data Analytics, Robotics and Control.

