IEEE **computer society** **The IEEE Computer Society Technical Committee on VLSI**

4th IEEE International Symposium on Smart Electronic Systems
(Formerly known as IEEE International Symposium on Nanoelectronic and Information Systems (iNIS))
(DEC 17-19, 2018 @ HYDERABAD, INDIA)
CALL FOR PAPERS
http://www.ieee-ises.org

IEEE iSES 2018

The primary objective of **IEEE-iSES (formerly IEEE-iNIS)** is to provide a platform for both hardware and software researchers to interact under one umbrella for further development of smart electronic systems. Smart electronic systems are a class of intelligent and miniaturized devices that are envisioned to be Energy-Smart, Security-Smart, and Response-Smart. Energy-Smart ensures that energy consumption of electronics is minimal for longer battery life. Security-Smart deals with the security/protection of electronics as well as that of the information/media that these systems capture, process, or store. Response-Smart refers to accurate sensing, intelligent processing, and fast actuation/response. Optimal combinations of hardware and software modules need to be explored for ESR-smartness of electronic systems. It is a fact that a typical electronic system is an analog/mixed-signal system on a chip (AMS-SoC) containing analog, communications, digital, RF, memory, sensors, energy-source components as well as firmware, system software, middleware, and application software. We are in era of smart environments such as smart cities, smart homes, smart healthcare, and smart transport systems which are combinations of Cyber Physical Systems (CPS), realized using Internet-of-Things (IoT) that work collectively to provide intelligence/smartness. Hence, there is a need for new hardware, firmware, middleware, and software research that interacts with each other for efficient realization of smart electronics, IoT, CPS, and smart environments. IEEE-iSES will provide a publication medium for articles on the hardware-software design, cybersecurity, and applications of smart electronics systems. IEEE-iSES has been initiated as a sponsored meeting of Technical Committee on VLSI, IEEE-CS (http://www.ieee-tcvlsi.org/) that endorses a league of successful meetings including ASAP, ISVLSI, and ARITH, as "Sister Conferences".

CONTRIBUTIONS ARE SOUGHT IN THE FOLLOWING AREAS :

1. **Nanoelectronic VLSI and Sensor Systems (NVS):** Circuits and systems based on spin-based computing, neuromorphic, adiabatic/reversible computing, synthetic biology for information processing and storage, advanced 3D IC technologies, microfluidics and biochips, quantum computing, electronic design automation (EDA), etc.
2. **VLSI Circuits, Systems and Power-Smart Electronics (VCP):** ASIC and FPGA based digital designs, analog and mixed signal circuits, etc. Power supply design, analog and digital control, signal sensing, implementation of wide-band-gap devices. Low-power systems, Network-on-Chip, MPSoCs, electronic design automation (EDA), etc.
3. **Hardware/Software Solutions for Cybersecurity (HSC):** Cryptography, watermarking, malware/trojan, side-channel attacks and resilience, PUFs, logic encryption, mobile security and bring your own device (BYOD), medical and consumer device security, etc.
4. **Hardware/Software Solutions for IoT and Smart Environments (ISE):** Sensors, communication protocols, computational tools, techniques, devices, processors, embedded systems, IoT applications in Smart Autonomous Environments (SAE) including smart healthcare, smart transport systems, smart cities, smart homes, and other smart systems, etc.
5. **Cyber Physical Systems, Social Networks, and Big Data (CSB):** Modeling of distributed real-time software for CPS, Mobile cyber-physical systems, design challenges of CPS, data portability and management, graphs, algorithms, disambiguation in semantic search, and special purpose architectural solution covering these areas. Big Data – regression, analysis, machine learning, and exploitation, application specific systems using big data, etc.

IEEE-iSES technical program will include both contributed papers and contributions from invited speakers. IEEE-iSES 2018 will have a **student research forum, special sessions, and panels**.

PAPER SUBMISSION DEADLINES:
Submission : July 20, 2018 **Acceptance :** September 15, 2018 **Final Version:** October 10, 2018
IEEE-iSES proceedings will be published by IEEE-CS conference publications services (CPS). Authors should submit their original unpublished work of maximum 6 pages using IEEE-CS double-column conference format-template. Manuscripts in PDF format with author information (optional) should be submitted using the link: https://easychair.org/conferences/?conf=ises2018. Selected papers from IEEE-iSES 2018 program will be invited for submission to **a special issue peer-reviewed journal**.

General Chairs:
M.B Srinivas, BML Munjal University, India
Sudeep Pasricha, Colorado State University, USA

Program Chairs:
Himanshu Thapliyal, University of Kentucky, USA
Marina Gavrilova, University of Calgary, Canada
P.V. Anand Mohan, India

Publication Chair:
Karthik Karthikeyan Lingasubramanian, University of Alabama at Birmingham, USA
Saurabh Kotiyal, Synopsys, Inc., USA
Vipul Mishra, Bennett University, India

Web Chair:
Dhruva Ghai, Oriental University, India

Publicity Chairs:
Neha Yadav, BML Munjal University, India
Kamalakanta Mahapatra, NIT Rourkela, India
Brij Gupta, NIT Kurukshetra, India
Alak Majumdar, NIT Arunachal Pradesh, India

Local Arrangement Chair:
Dibakar RoyChowdary, Mahindra Ecole, India

Special Session Chairs:
Saket Srivastava, University of Lincoln, UK
Anirban Sengupta, IIT Indore, India
K. Subbarangaiah, Veda IIT, India

Student Research Forum Chairs:
Binsu Kailath, IIITDM Kancheepuram, India
V S Kanchana Bhaaskaran, VIT University, India

Finance Chair:
Bhargav Rajaram, Mahindra Ecole, India

Registration Chair:
Dibakar RoyChowdary, Mahindra Ecole, India

Industry Liaison Chair:
Rajnish Bajpai, Synopsys, Inc., USA
Aditya Ramamurthy , Service Now, India
Himabindu, Wipro, India

Women in Engineering Chairs :
Apeksha Bhatt, Ryder System, Inc, USA
Soumya Joshi , BITS Pilani (Hyderabad), India

Steering Committee Chair:
Saraju P. Mohanty, University of North Texas, USA