

# **The 6th International Conference for Electronic Design (ICED 2022)**



**Monday, 29 August 2022 - Tuesday, 30 August 2022**

**Perlis, Malaysia**

## **Conference Tracks**

## 1. Artificial Intelligent

• AI and Creativity • Ambient Intelligence • Bayesian Networks • Case-Based Reasoning • Cognitive Systems • Constraint Satisfaction • Data Mining • Data Science • Deep Learning • e-Discovery • Evolutionary Computing • Explainable Artificial Intelligence • Fuzzy Systems • Machine Learning • Model-Based Reasoning • Natural Language Processing • Neural Networks • Ontologies

## 2. Signal & Image processing

• Applied Digital Signal Processing • Coding and Transmission • Signal Processing in Communications • Statistics and Statistical Signal Processing • Emerging Technologies in Digital Signal Processing • Image & Signal Processing Applications • Image Acquisition and Display • Image and Video Processing & Analysis • Image Formation • Image Scanning, Display and Printing • Storage and Retrieval • Biomedical signal and image analysis • Real-time signal and image processing algorithms and architectures.

## 3. Internet of Things

• Software-defined networks for IoTs • Architecture, models, and tools for IoTs • Routing protocol, data dissemination, and offloading algorithms design for IoTs • Security, privacy, and trust for IoTs • Big data mining and analytics for IoTs • Application of cloud computing and fog computing in IoTs • Machine learning models and methods for IoTs • IoTs applications and technologies for smart worlds and smart cities • Green computing and sustainable computing for IoTs • New applications on IoTs • IoT on eHealth and Ambient Assisted Living • IoT on energy management • IoT in industry.

## 4. Embedded System & SoC

• Novel Architectures for Accelerators in High Performance Embedded Systems • Application-specific and Domain specific Embedded Heterogeneous • Multicore Systems • Embedded Reconfigurable Processors • Software tools, Compilation techniques and optimizations, and Code generation for Reconfigurable Architectures • Architecture synthesis from Functional Languages Descriptions • Virtualization and Energy-aware Secure, Reliable, and High • Availability Multi-core Architectures • Embedded Parallel Systems and Multiprocessor Systems-On-Chip • Application-level Resource Management of Multi-core Architectures; • Memory Systems and Management for big data.

## 5. Antenna & Microwave

• Antenna systems and architectures • Antenna theory • Design and technology for array antennas • Analysis of array antennas • Antenna interactions and couplings • Mm-wave antennas • Sub mm-wave, THz and nano-optical antennas • Multiband and multifunctional antennas • Wideband and UWB antennas • Electrically Small Antennas • Wearable and implantable antennas • Lens antennas • Reflector, feed systems, and components.

## 6. Micro/ nanoelectronic

• Design and test of high complexity systems integration • SoC, MPSoC, NoC, SIP, and NIP design and test • Process technologies, CMOS, BJT, BiCMOS, GaAs • 3-D integration design and analysis • Emerging device technologies and circuits, • Microelectronics processing and materials • Semiconductor processing • Modern electronics materials • Solid-state electronics • Quantum electronics • Thin solid films • Nanoprocessing, nanotechnology and nanofabrication.

## 7. Optic & Photonics

• Laser Systems • Optics & Lasers in Medicine • Optoelectronics • Optical Communications & Networking • Advancements in Photonics • Nano-Photonics & Bio-Photonics • Quantum Science & Technology • Technologies in Lasers, Optics & Photonics • Applications & Trends in Optics & Photonics • Fiber Laser Technology • Optical Physics • Optical Fiber • Surface Enhanced Spectroscopy • Medical & Bio-Optics.

## 8. Green Electronics

• Green Circuits & Systems • Advances in Green Electronics • Green Electronics Design & Manufacturing • Energy Harvesting • Solar Cell • Piezo Energy • Thermoelectric Generator • Low Power Systems • Embedded Audio & Video Processing • E-Health, Sensors & Homecare Services • Smart Grid • Smart Home Power Management • Intelligent Transport Systems • User Centric Networks • Flexible and Reconfigurable Systems.

## 9. Analog & Digital Design

• VLSI Circuit Design • Electronic Testing & Reliability • Optoelectronic • Integrated Circuit Design • Switched Capacitor and Current Mode Circuits • Time-to-Digital Converters (TDC) • VLSI Arithmetic Circuits • Voltage-to-Frequency Converters (VFC) • Analog, digital, mixed-signal, power and RF • Application-specific integrated circuit (ASIC) • Fault Tolerant Circuits • Frequency-to-Digital Converters (FDC) • IC Sensors • Low-Power Low-Voltage IC • Microprocessors, Microcontrollers and DSPs • Circuit & system theory and application • Optical connectivity • Electronic connectivity • ADC, DAC • Nonlinear Circuits.

## 10. Communication & big data

• Models and algorithms of Big Data • Architecture of Big Data • Big Data Management • Big Data Analysis and Processing • Security and Privacy of Big Data • Big Data in Smart Cities • Search, Mining and Visualization of Big Data • Technologies, Services and Application of Big Data • Edge Computing • Models, Simulations, Designs, and Paradigms of Cloud Computing • Technologies, services and Applications of Cloud Computing • Cooperative Communications, Distributed MIMO and Relaying • Wireless / Radio Access Technologies • Mobile Network Applications and Services • Ad-hoc, Mesh, Machine-to-Machine and Sensor Networks • Green Communications and Networks.