IEEE COINS 2022
IEEE International Conference on Omni-layer Intelligent Systems

Hybrid Event:
(On-site In-person Presentation & Virtual Presentation)

Call for Papers

Track: Internet of Things: From Device, to Edge, and Cloud

COINS is the premier conference devoted to omni-layer techniques for smart IoT systems, by identifying new perspectives and highlighting impending research issues and challenges. Topics of interest of IoT track include, but are not limited to, the following:

Smart Things
- Sensors and Sensor Systems
- Personal, wearable, and other embedded networked front-ends
- Embedded Computer and System
- Low Power devices
- Design Space Exploration Techniques for IoT Devices and Systems
- Interfaces
- Optimization of data traffic and latencies
- Machine-to-Machine Communications for Smart Environments
- Smart devices and tools signal processing
- Wearables, Body Sensor Networks, Smart Portable Devices

Communications and Connectivity
- Legacy Networks
- Network Design and Architecture
- 5G Networks and IoT
- Low Power Wide Area (LPWA) networks
- IoT communication protocols (LoWPAN, RPL, 6TISCH, LoRaWAN, etc.)
- IoT data protocols (MQTT-SN, CoAP, XMPP-IoT, AMQP, etc.)
- Networking and Communication Protocols and Standards
- D2D and M2M Communications
- Self-organization and self-healing of IoT networks
- Routing and Transport Protocols for IoT
- IoT short-range communications
- Network planning
- Traffic Theory, Modeling and Simulation
- Performance Evaluation and Modeling
- Edge Computing, Fog Computing and IoT
- Software Defined Networks

IoT Platforms, Applications and Services
- Cyber-physical systems
- Platforms and Framework
- Cyber-physical systems
- Service Experiences and Analysis
- IoT Experimental Results and Deployment Scenarios
- Cloud for IoT applications
- Cloud back-ends and resource management for IoT applications
- Data Ingestion, Processing, Storage, Analytics, and Visualization across Edge, Fog and Cloud
- Distributed Storage, Data Fusion
- Resource Management, Access Control
- Identity Management and Object Recognition
- Heterogeneous Networks, Web of Things, Web of Everything
- Sensors Data Management, IoT Mining and Analytics
- Collaborative Applications and Systems
- Horizontal application development for IoT
- Design principals and best practices for IoT application development

IoT Pilots, Testbeds, and Experimentation Results
- Large scale pilots on IoT
- IoT Testbeds and testing tools
- Closing the Gap between Research and Implementation
- Experimental prototypes, Test-Bed and Field Trial Experiences
- Multi-Objective IoT System Modeling and Analysis—Performance, Energy, Reliability, Robustness
- IoT Interconnections Analysis—QoS, Scalability, Performance, Interference
- Real case deployment scenarios and results
- IoT Deployment at Government and ISPs
- IoT Deployment on Agriculture, Retail, Smart Cities, etc.
- IoT Interconnections among ISPs Analysis—QoS, Scalability, Performance, Interference
- Gaps analysis for Real Deployment
- IoT and Future Internet Architectures
- Standardization and Regulation