



International Japan-Africa Conference on Electronics, Communications, and Computations

JAC-ECC 2024

16 – 18 December 2024

JAC-ECC is a venue for extending collaboration between prominent international researchers from academia and industry in the fields of electronics, communications, and computer engineering. The conference will be held at Alexandria, Egypt, from 16-18 December, 2024. The conference will include keynote speeches, technical and special sessions, and tutorials on the state-of-the-art topics. Research papers are solicited in one of the following tracks, where all submissions will be peer-reviewed. The topics in each track are mentioned below but are not limited to the following areas:

Selected Topics in Computer Hardware and Embedded/Smart Systems

- Parallel Computer Architectures • Multi-Core and Multiprocessor Architectures • Impact of Technology on Architecture
- Embedded/Reconfigurable Architectures • GPU/PU Heterogeneous Systems – Architectures for Cloud-Based HPC and Data Centers • Impact of Compilers and System SW on Architecture • Performance Modeling, Scalability, and Evaluation • Architecture for Novel Application Workloads

Selected Topics in Communications

- PHY layer, signal transmission and reception • Spectrum sharing, spectrum management, and cognitive radio • 5G and Next Generation Communication Systems • M2M, D2D, and Ad-hoc Networks • VANET and MANET Networks • UAV and 3D Wireless Networks and its applications. • Energy Harvesting and Green Communications • Wireless network security • Underwater communications • Wireless body area networks • Wireless Sensor Networks • Optical communications and Photonics

Selected Topics in Signal, Image, and Video Processing

- Image and Video Processing • Analog and Digital Signal Processing • Biomedical Signal Processing • Multimedia Systems and Applications • Visual Communications Systems

Selected Topics in Internet of Things (IoT)

- Systems on chip for IoTs • IoT system architecture • IoT enabling technologies • IoT communication and networking protocols • IoT services and applications • Security and privacy in embedded IoT scenarios • Experiences in building smart wearable IoT platforms • Power consumption and optimization in embedded IoT • Fault-tolerance and reliability in embedded IoT applications • Middleware and platforms for embedded IoT applications • The social implications of IoT • Wireless Energy Harvesting for IoT

Selected Topics in Biomedical Engineering and Applications

- Biomedical Devices for Computer Interaction • Brain-Computer Interfaces and Brain Imaging • Telemedicine and Health Monitoring Systems • Wearable Sensors and Systems • Video and Image Analysis for Physiological Signals • Biomedical Embedded and Mobile Systems

Selected Topics in Electrical Energy

- Renewable Energy Systems • Smart Grid • Electric mobility • IoT Application in Electrical System • Power electronics and applications • Machine Learning Applications in Energy Systems

Selected Topics in Artificial Intelligence

- Deep Learning / Machine Learning • Computational Intelligence • Pattern Recognition • Image Processing / Computer Vision • Data Mining • Natural Language Processing • Sentiment Analysis • Agents and Multi-Agent Systems • Biometrics • Autonomous Robots • Intelligent Transportation

Selected Topics In Big Data, Data Science, And Applications

- Data Science Foundations and Theories. • Big Data Platforms and Technologies. • Machine/Deep/Statistical Learning-Based Algorithms for Big Data. • Advanced Analytics and Knowledge Discovery Methods. • Large-Scale Databases, Big-Data Processing, And Distributed Processing. • Social Network Analysis. Semantic-Based Data Mining and Data Pre-Processing Big Data Visualization. Big Data Security and Privacy.

Selected Topics in Circuits and Systems

- Computer Aided Network Design • VLSI Systems and Applications • Neuromorphic Systems. • Analog and Mixed Signal Integrated Circuits. • Digital Integrated Circuits, SOC, and NOC. • Linear and Non-linear Circuits and Systems. • Embedded Electronics. • RFICs and Microwave Systems. • Power Management and Energy Harvesting. • Hardware/Software Co-design. • Biomedical Circuits and Systems. • Sensory Circuits and Systems. • Embedded systems for Vehicular applications.

Selected Topics in Microwave and Antennas

- Multiple Antenna Systems, Coding and Cooperative Communications • RF and mmWave • Electromagnetic Fields and waves • Antenna Design and Applications • Scattering and propagation, • Millimeter-wave/THz • Broadband and multi-band antennas, • MIMO antennas, • Active adaptive and smart antennas, • Antenna measurements, reconfigurable antennas, and others. • Wireless power transfer • Electromagnetics in biology and medicine

Selected Topics in Advances and new trends in Cybersecurity

- Emerging Threats and Attack Vectors • Cybersecurity in the Age of AI and Machine Learning • Cloud Security • Internet of Things (IoT) Security • Blockchain and Cryptography • Cyber Defense Strategies and Incident Response • Privacy and Data Protection • Human Factors in Cybersecurity • Cybersecurity in Critical Infrastructure • Future Directions and Innovations in Cybersecurity

Paper Submission

Prospective authors are invited to submit full-length, 4 page papers in IEEE two-column formats including diagrams and references. The title page should include author(s) name(s), affiliation, mailing address, telephone, fax, and e-mail address. The author should indicate one or two of the above categories that best describe the topic of the paper. More information for authors is available on the conference website.

Conference Organizing

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- Ahmed Hassan Yousef, EUI, Egypt

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- Hiroko Kinoshita, Kyushu University, Japan
- Farhad Mehdipour, Otago Polytechnic, Auckland, New Zealand

Important Dates

- Paper Submission Deadline: October 12, 2024
- Notification of Acceptance: November 12, 2024
- Camera Ready Version Due: November 19, 2024

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