

65th IEEE International Midwest Symposium on Circuits and Systems

August 7-10, 2022 - Fukuoka, Japan Virtual

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CALL FOR PAPERS

The 65th IEEE International Midwest Symposium on Circuits and Systems will be held in Fukuoka, Japan, August 7 - 10, 2022, **as a virtual conference**. Fukuoka is the capital city of Fukuoka Prefecture, situated on the northern shore of the Japanese island of Kyushu. Fukuoka is currently Japan's sixth largest city and is well connected to the world through the Fukuoka Airport which is the fourth busiest passenger airport in Japan and the fourth busiest single runway airport in the world.

The MWSCAS 2022 conference theme is **Circuits and Systems Challenges and Opportunities in a post-Pandemic World**. MWSCAS 2022 will include oral and poster sessions, special sessions, tutorials given by experts in circuits and systems topics, student paper contest, and design contest.

Prospective authors are invited to submit a full paper (4 pages) describing original work. Only electronic submissions will be accepted. Papers should include title, abstract, and topic category from the list above in standard IEEE two-column format. ~~for consideration as lecture or poster. Both formats have the same value, and presentation method will be chosen for suitability.~~ All submissions should be made electronically through the MWSCAS 2022 web site (www.mwscas2022.org). Students are encouraged to participate in the best student paper award contest. Accepted papers will be published in the conference proceedings and submitted to IEEE Xplore, subject to advance registration of at least one of the authors.

Key dates:

Paper Submission:	February 5, 2022 MARCH 5, 2022
Paper Acceptance Notification:	April 5, 2022 MAY 13, 2022
Paper submission (registration):	April 25, 2022 JUNE 3, 2022

Topics include but are not limited to:

Track 1. Analog Circuits and Systems

- 1.1 Analog Circuits and Systems
- 1.2 Linear and Non-linear Analog Systems
- 1.3 Biomedical Electronics
- 1.4 Bioengineering Systems and Bio Chips
- 1.5 System Architectures
- 1.6 Neuromorphic Systems
- 1.7 Other Analog Circuits and systems

Track 2. Digital Circuits and Systems

- 2.1 Digital Integrated Circuits
- 2.2 System on Chip (SOC) & Network on Chip (NOC)
- 2.3 Digital Filters
- 2.4 Hardware-Software Co-Design
- 2.5 Other Digital Circuits and Systems

Track 3. Communications Circuits and Systems

- 3.1 Communications Circuits, Computers and Applications
- 3.2 Communications Systems and Control
- 3.3 Information Theory, Coding and Security
- 3.4 Communications Theory
- 3.5 Other Communications Circuits and Systems

Track 4. RF and Wireless Circuits and Systems

- 4.1 RF Front-End Circuits
- 4.2 Mixed-Signal RF and Analog and Baseline Circuits
- 4.3 Wireless Mobile Circuits and Systems and Connectivity
- 4.4 VCOs and Frequency Multipliers, PLLs and Synthesizers
- 4.5 Other RF and Wireless Circuits and Systems

Track 5. Sensor Circuits and Systems

- 5.1 Technologies for Smart Sensors
- 5.2 Sensor Fusion
- 5.3 Control Systems
- 5.4 Mechatronics and Robotics
- 5.5 Other Sensor Circuits and Systems

Track 6. Converter Circuits and Systems

- 6.1 Analog to Digital Converters (ADC)
- 6.2 Digital to Analog Converters (DAC)
- 6.3 DC-DC Converters
- 6.4 Other Converter Circuits and Systems

Track 7. Signal and Image Processing

- 7.1 Analog and Mixed-Signal Processing
- 7.2 Digital Signal Processing (DSP)
- 7.3 Signal Processing Theory and Methods
- 7.4 Image, Video and Multi-Dimensional Signal Processing
- 7.5 Other Signal and Image Processing

Track 8. Hardware Design

- 8.1 Processor and Memory Design
- 8.2 MEMS/NEMS
- 8.3 Nano-Electronics and Technology
- 8.4 Optics and Photonics
- 8.5 Power Management and Power Electronics
- 8.6 Photovoltaic Devices/Panels and Power Harvesting
- 8.7 Other Hardware Design

Track 9. Artificial Intelligence (AI) and Internet of Things (IoT)

- 9.1 AI digital, Analog Cores and Deep Learning
- 9.2 Sensors, Connectivity and Systems
- 9.3 Embedded Processors and Controllers
- 9.4 Quantum Computing
- 9.5 Neural Networks and Fuzzy Logic
- 9.6 Energy Harvesting and Low Power
- 9.7 Other AI and IoT

Track 10. Hardware Security

- 10.1 Hardware and System Authentication
- 10.2 Physically Unclonable Functions (PUFs)
- 10.3 Watermarking
- 10.4 Obfuscation and Logic-Locking
- 10.5 Trojan Detection/Mitigation
- 10.6 Side Channel Leakage/Resistance
- 10.7 Embedded Cyber Physical Security
- 10.8 Other Security-Hardware/Software

Track 11. Smart Power

- 11.1 Smart Power Management for High-Performance Cloud and AI Data Centers
- 11.2 Low Power Design techniques for IoT applications
- 11.3 Fully Integrated Voltage Regulators
- 11.4 Renewable Energy Systems and Wireless Charging
- 11.5 Smart Grid for Cloud Computing
- 11.6 Other Smart Powers

