2026 IEEE International Conference on Integrated Circuits, Technologies and Applications

October 21-23 (Wed.-Fri.), 2026

Grand Copthorne Waterfront Hotel, Singapore

1st Call for Papers

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The 9th IEEE International Conference on Integrated Circuits, Technologies and Applications (ICTA 2026), will be held on October 21-23, 2026, in Singapore. This conference provides an international forum according to IEEE standard for the presentation and exchange of the latest technical achievements and cross-discipline fertilization of IC designs, technologies, and applications in our fast-changing society. This year's theme is "**Advancing IC with AI**". ICTA 2026 welcomes papers of new and innovative discoveries and designs on:

Topics include, but are not limited to, the following technical areas:

1. **RF Circuits and Wireless Systems:** Si-based RFIC building-block circuit, compound-semiconductor-based MMIC building-block circuit, LNA, PA, VCO, PLL, phase shifter, mixer, RF switch, balun, driver amplifier, transceiver, etc.
2. **Analog and Mixed-Signal ICs:** analog circuits including amplifiers, comparators, oscillators, filters, references, nonlinear analog circuits and digitally-assisted analog circuits; data converters including Nyquist-rate and oversampling ADC and DAC, etc.
3. **Power Management ICs:** Power management and control circuits; switched-mode power converter ICs using inductive, capacitive, and hybrid techniques; linear regulators; gate drivers; topologies for wide-bandgap devices; power and signal isolators; LED drivers, wireless power, and envelope supply modulators; energy harvesting circuits and systems.
4. **Digital ICs and Memory:** SoC, processor, FPGA, AI and deep-learning processor, DSP, NoC, memory, etc.
5. **Wireline ICs:** high-speed data link, optical transceiver, OEIC, SerDes, TIA, CDRs, equalizer, modulator, etc.
6. **Biomedical ICs and Systems:** Wearable, implantable, and point-of-care medical devices and systems, BioMEMS, medical internet of things, low-power biomedical circuits and systems.
7. **Sensor ICs and Applications:** MEMS sensors, image sensors, physical sensors, chemical sensors, bio-sensors, smart and intelligent sensors, sensor interface, sensor technology and applications, etc.
8. **EDA, Modeling, and Testing:** compact models and extraction techniques (silicon based), SPICE models and extraction techniques (non-silicon), modeling technique of GaN, SiC, ASM-HEMT, 2D-material-based devices, quantum devices, test structures design and model parameter extraction, RF calibration and reliable data acquisition, EDA, EM/TCAD simulation, co-simulation and verification technique, PDK validation, etc.
9. **Device and Process Technologies:** CMOS, FinFET, FD-SOI, BCD, SiGe, III-V, HEMT, HBT, GaN, SiC, GaO, junctionless device, MEMS, device characterization, device FAR, 3D integration, Chiplet, flash, OPT, MPT, SRAM, DRAM, 3D NAND, MRAM, RRAM, PCRAM, FeRAM, DRAM+MCU, etc.
10. **Packaging and Hybrid Integration:** Chiplet, active antenna, EM field, filters, Hybrid MIC, MCM, SiP, SoP, TSV, flip chip assembly, wire bonding, anisotropic conductive film, interconnection technologies, multi-physics and multiscale EM computation/simulation, 3D integration, etc.
11. **Emerging Technologies and Applications**: heterogeneous integration, III-V compounds, silicon photonics, optoelectronic device, 2D materials, green and implantable materials, neuromorphic device, device characterization, etc.
12. **Intelligent Robots:** robot kinematics/dynamics/control, system integration, AI in robotics, sensor/actuator, bio-inspired systems, robot perception, human robot interaction, and robot vision, etc.
13. **ICs for AI and AI for ICs:** Advanced ICs for machine learning (ML), deep learning, active learning, big and small data, natural language processing, small language models, data analytics, AI security and privacy, AI for ICs, tools and design methodologies for edge AI and TinyML, etc.

Paper submission and deadlines:

To encourage timely reporting of the latest results and to have better opportunities to expand papers for possible journal publications, prospective authors are invited to submit a **2-page** paper (both initial submission and final version, if accepted) in English and in IEEE Xplore PDF format. The paper should emphasize original contributions and key findings, including figures, diagrams and results from verified simulations with direct or indirect measurements. Up to 2 additional pages of figures supporting initial submission which will not in final publication are encouraged. References should be clearly cited and up-to-date. Invited review papers can extend up to 6 pages submission. By submitting the paper, the authors promise that, if accepted, at least one of them will attend ICTA 2026 with full registration.

Manuscript submission deadline: July 20, 2026
Notification of acceptance: August 23, 2026
Final submission: September 9, 2026
Website: http://www.ieee-icta.org

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About ICTA and What is New?

The conference will feature plenaries, keynotes, invited and contributed papers. Distinguished researchers will be invited to deliver plenary and keynote speeches on technology or circuit trends and significant advances. The best contributed papers will be selected for Best Paper Awards. All papers will be presented in parallel sessions, including invited talks and focused sessions. Exhibition showcasing the latest engineering samples, tools and technology options will be facilitated as well. More information can be found at https://www.ieee-icta.org.

Both invited and contributed papers that are accepted by ICTA will be published in conference proceedings.

Special Issues of Journal of Semiconductors, the Integrated Circuits and Systems (ICAS) journal, and Journal of Interdiscipline: Authors are invited to submit an extend version of 5+ pages to the special issues of Journal of Semiconductors (https://www.jos.ac.cn/), the Integrated Circuits and Systems (ICAS) journal (https://www.qk.sjtu.edu.cn/ics), and Journal of Interdiscipline (https://www.elspub.com/journals/interdiscipline/home/), thus possibly extending the conference abstract into a journal paper. The extended paper should reflect reviewers' opinions and feedback from ICTA.

Author registration and paper submission steps:

1. Author registration form: title, author(s) and affiliation(s), and statement of exclusivity. This form includes also a 30-50-word abstract (description of the subject, its importance, and how the work contributes to the field). This information must be submitted via the website.
2. Authors must use the template provided on the above website to format their paper. The submitted paper may not exceed 2 pages total. Additional pages will charge extra fees. The file size must be less than 2 MB. For PDF files, use Distiller and select "embed all fonts". Please note that we accept no *.doc files. Additional documents (figures, diagrams and results from verified simulations with direct or indirect measurements) are encouraged to be attached. Additional materials are not included in official publications and will not charge extra fees.
3. **Submission deadline: July 20, 2026**

Paper selection criteria:

All submissions must be in **English.**

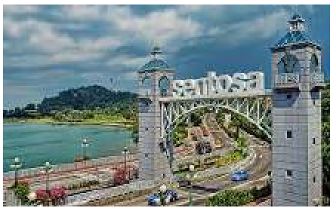
Papers will be selected based on the following factors:

- **Originality**: The paper must be unique, significant, and state-of-the-art. Are references to existing literature included?
- **Quantitative content**: The 2-page extended abstract should give an explicit description of the work with supporting data.
- **Quality:** Clarity of writing and figures. What is the context of the contribution to previous work?
- **Interest to ICTA attendees**: Why should this work be reported at this conference?

About Singapore

Singapore became an independent nation in 1965 and has since transformed into a global hub for finance and commerce. It is a prosperous, multicultural city-state in Southeast Asia known for its thriving economy, world-class infrastructure, and vibrant culture shaped by Chinese, Malay, Indian, and Eurasian communities. As a highly developed country, it has the highest PPP-adjusted GDP per capita in the world. It has a fast-growing economy with one of the world's busiest ports, first-class education, best airport in the world, and thriving manufacturing. Singapore invests heavily in research and development and prioritizes building a digitally capable workforce to maintain its economic competitiveness. The "Garden City" also boasts a rich cultural tapestry evident in its diverse and assessable food scene, languages, and traditions, offering a high quality of life with strong governance and a focus on research, innovation and enterprise.

More on Singapore: https://en.wikipedia.org/wiki/Singapore



Conference Location

Conference Venue and Contact

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https://www.millenniumhotels.com/en/singapore/grand-copthorne-waterfront/
Check-in: 3:00 pm - Checkout: 11:00 am
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