



2021 IEEE International Conference on Integrated Circuits, Technologies and Applications

November 24-26, 2021
Zhuhai 珠海, Guangdong, China
2nd Call for Papers

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The 4th IEEE International Conference on Integrated Circuits, Technologies and Applications (ICTA 2021, conference code:53157), will be held on November, 2021 in Zhuhai, China. This new conference will be held in China to provide 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 "**Sensors, Integrated Circuits and Systems for Intelligent Society**". ICTA 2021 welcomes papers of new and innovative discoveries and designs on

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

- RFIC and MMIC:** 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.
- Analog and Mixed-Signal ICs:** power management and energy harvesting device and system, amplifier, comparator, filter, AGC, VGA, ADC, DAC, etc.
- Digital ICs and Memory:** SoC, processor, FPGA, AI and deep-learning processor, DSP, NoC, memory, etc.
- Wireline ICs:** high-speed data link, optical transceiver, SerDes, CDRs, equalizer, modulator, etc.
- Modeling, CAD 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, CAD, EM/TCAD simulation, co-simulation and verification technique, PDK validation, etc.
- Device and Process Technologies:** CMOS, FinFET, junctionless device, negative capacitance device, UT-SOI, LDMOS, HEMT, HBT, SiGe, GaAs, InP, GaN, 3rd generation materials, MEMS, device characterization, device FAR, 3D integration, TSV, etc. flash, OPT, MPT, SRAM, DRAM, 3D NAND, MRAM, RRAM, PCRAM, FeRAM, crossbar, DRAM+MCU, etc.
- Packaging and Hybrid Integration:** 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 packaging, etc.
- Sensors and Applications:** MEMS sensors, image sensors, physical sensors, chemical sensors, bio-sensors, smart and intelligent sensors, sensor interface, sensor technology and applications, etc.
- IC Based Applications:** IC based module and system integration, automotive electronics, automotive radar, 5G systems, AI systems, IoTs, healthcare and biomedical systems, etc.
- Emerging Technologies and Applications:** 2D materials, green and implantable materials, neuromorphic device, optoelectronic device, device characterization, etc.
- 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.

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 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 2021 with full registration.

Manuscript submission deadline: August 2, 2021
Notification of acceptance: September 6, 2021
Submission of final extended abstract: October 8, 2021
Website: <http://www.ieee-icta.cn> or <http://www.ieee-icta.net>

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About ICTA and What is New?

China is becoming a semiconductor hub for academia, industry and market. However, young Chinese researchers, in particular students, lack the opportunity to attend IEEE conferences. International counterparts also wish to experience firsthand the fast-growing semiconductor sector in China. To this end, ICTA was founded by a group of Chinese scholars and will be held annually in China. It will be a broad yet advanced forum for IC designs, technologies and applications worldwide.

The conference will feature both invited and contributed papers. Distinguished researchers will be invited to deliver keynote speeches on technology or circuit trends and significant advances. The best contributed papers will be selected for awards. All papers will be presented in parallel sessions, including invited talks and focused sessions. ICTA will start with **FREE** Distinguished Lectures and concluded with forums/workshops. Exhibition showcasing the latest engineering samples, tools and technology options will be facilitated as well. More information can be found at <http://www.ieee-icta.cn> or <http://www.ieee-icta.net>.

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

What is new? Authors are invited to submit an extend version of 5+ pages to the special issue of [Journal of Semiconductor \(JOS\)](#), thus possibly extending the conference abstract into a journal paper which will also appear in conference proceeding. The extended paper should reflect reviewers' opinions and audience feedbacks 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 is required and 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 and 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.
3. Submission deadline: August 2, 2021

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 the 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 Zhuhai 珠海

Zhuhai, a city in Guangdong Province, is one of the central cities in the Pearl River Delta, an important city in Guangdong-Hong Kong-Macao Bay area. It is one of the first four special economic zones in China. It is selected as one of the "Top 40 tourist attractions" and "The city of romance".

The research and industry of integrated circuit has grown strongly, and has become one of the top ten cities with the largest scale of IC design industry in China.

