2026 BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium (BCICTS)

2026 BCICTS CALL FOR PAPERS

October 11-14, 2026 • Boston Massachusetts, USA

SUBMISSION DEADLINE EXTENDED!

INTEGRATED CIRCUITS and DEVICES in Si, SiGe, GaN, InP, GaAs and other compound semiconductors and related technologies

SPONSORED BY: IEEE Electron Devices Society I CO-SPONSORED BY: The Solid-State Circuits Society, Microwave Theory & Technology Society

SUBMISSION DEADLINE: NOW EXTENDED TO FRIDAY, MAY 22, 2026

The IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium (BCICTS) technical sub-committees are organized to reflect the rapidly evolving developments in bipolar, BiCMOS and compound semiconductor circuits and devices. Submissions are encouraged in all areas of advanced circuits, devices, and modeling, with particular emphasis on:

- Bipolar/BiCMOS devices, circuits and technologies
- 5G/6G, satellite communication ICs
- GaN HPAs/LNAs, InP THz PAs
- High Performance RF Switch Technologies
- GaN HEMT and other wide bandgap power devices
- Analog, RF & Microwave ICs
- mmW & THz ICs
- Process & Device Technology
- Modeling/Simulation
- Optical CMOS/SiGe Transceivers
- High Speed Digital, Mixed Signal, and Electro-Optic ICs
- Cryogenic devices and circuits

Authors must submit a paper (4 pages or less, including figures and other supporting material) documenting results not previously published or not already accepted by another conference. Papers will be selected based on their technical quality.

The paper must concisely and clearly state:

a) The purpose of the work
b) What specific new results have been obtained
c) How it advances the state-of-the-art or the industry
d) References to prior state-of-the-art
e) Sub-committee preference:
  - Analog ICs
  - RF and Microwave ICs
  - mm-Wave and THz ICs
  - Silicon and related semiconductor alloy devices and technology
  - Silicon and related semiconductor alloy; modeling
  - High-Speed Digital, Mixed-Signal, and Optoelectronic ICs
  - Compound Semiconductor Modeling
  - Compound Advanced Devices and Technology

EXTENDED VERSIONS OF SELECTED PAPERS FROM THE SYMPOSIUM ARE INVITED FOR PUBLICATION IN THE SEPTEMBER 2027 ISSUE OF THE IEEE JOURNAL OF SOLID STATE CIRCUITS

Detailed descriptions of the topic areas within these subject groups can be found on the BCICTS website (www.bcicts.org) and are listed in the 2nd page of this call for paper.

Candidate papers must include title, author(s) name(s) and affiliation(s), corresponding authors' postal and e-mail addresses, and telephone numbers. The committee will try to honor the authors' committee preference but reserves the right to review the paper in other categories.

Company and governmental clearances must be obtained prior to submission of the paper.

Accepted work may be used for publicity purposes. Portions of the papers may be quoted in articles publicizing the Symposium. *Please note on the paper if this is not acceptable.*

Papers (PDF only) must be submitted electronically.

Authors will be informed of a decision by Friday, July 10, 2026

Authors of accepted papers are required to submit a **4-page camera-ready PDF.**

IMPORTANT DATES

Submission Deadline: Friday, May 22, 2026 | Notification Date: Friday, July 10, 2026 | Camera Ready Papers Due: Wednesday, Sep 9, 2026

Symposium information, including paper submission instructions and a link to the paper submission system is available on the BCICTS website at: www.bcicts.org

2026 BCICTS CALL FOR PAPERS

October 11-14, 2026 • Boston Massachusetts, USA

PAPERS IN THE FOLLOWING AREAS ARE REQUESTED:

Analog ICs

Innovative Analog Circuits - High Precision OpAmps, DC-DC converters, Charge pumps, LDOs, GaN drivers, Sensors, ADC/DACs

RF and Microwave ICs

RF circuits and systems - Radio and transceiver subsystems - LNAs - AGCs - Mixers - Voltage controlled oscillators - Frequency synthesizers - Power amplifiers - RF switches – Phase Shifters – Attenuators - Noise and distortion suppression - RF Packaging - Integrated RF passives – RF and microwave power conversion, High-voltage RF/microwave ICs – RF/microwave biomedical electronics - Energy harvesting ICs - Packaging of high performance ICs- Integrated filters – MMICs

mm-Wave and THz ICs

mm-Wave & THz circuits and systems - Phased arrays - Frequency generation and detection - Radars and power amplifiers

Silicon and Related Alloy Devices and Technology

New device physics phenomena and process advancements in Si, SiGe (and other SiSiC (and related alloys) based bipolar/ / BiCMOS processes and device structures demonstrating technologies. Device fundamentals including studies on doping, traps, interface states. Device design issues and scaling limits. Hot electron effects and reliability physics. Transport and high speed, field phenomena. Noise, Linearity/distortion, load-pull. Novel measurement techniques. Operation in extreme environments (low power, low noise, etc. -/high temperatures, radiation effects). ESD phenomena. Technology CAD and benchmarking. AI based device and benchmark designs. Manufacturing solutions related to bipolar/BiCMOS processes -, 3D integration and Si Photonics. Fabrication of high-performance passive components, sensors, and MEMS -. Process technology related to discrete and integrated bipolar/BiCMOS power devices (IGBT and RF power devices) - 3D integration - Silicon photonics -), 3DICs and Si Photonics. 3D integration including monolithic 3D integration, heterogenous chiplets, 2.5/3D integration, 3D/heterogeneous integration, thermal management, 3D reliability. Integration of compound semiconductor devices on Si.

Silicon and Related Alloy Semiconductor Device and Circuit Modeling

Improved silicon-based BJT and HBT models and physics-based modeling techniques - Parameter extraction methods and test structures - High-frequency measurement, calibration and de-embedding techniques - RF and thermal simulation techniques - Modeling of passives, interconnect and packages - Statistical modeling - Device, process and circuit simulation - CAD/modeling of power devices - Packaging of power devices, Schottky barrier FET (incl. Carbon nanotube) technology

High-Speed Digital, Mixed-Signal, and Optoelectronic ICs

Mixed analog/digital ICs - Digital ICs - High-speed DACs and ADCs - Networking ICs, MUX/DEMUX, Clock and data recovery, Decision circuits, equalizers - Optical data links, Laser and modulator drivers, optoelectronics and photonics ICs

Compound Semiconductor Device and Circuit Modeling and Simulation

- Improved III-V HBT and FET models and physics-based modeling techniques - Parameter extraction methods and test structures - High-frequency measurement, calibration and de-embedding techniques - RF and thermal simulation techniques - Modeling of passives, interconnect and packages - Statistical modeling - Device, process and circuit simulation - CAD/modeling of power devices - Packaging of power devices

Compound Advanced Devices and Technology

Device and IC manufacturing processes, testing and modeling methodologies, & reliability evaluations - High performance/high power devices such as GaN RF, SiC and power conversion devices - InP HEMTs & HBTs or other devices - Novel material based devices (using, for example, ultra-wide bandgap, diamond, chalcogenide or perovskite materials) - CNTFETs and other 1D, 2D or otherwise novel dimensionally constrained device structures - Transistor or other device structures engineered for enhanced intrinsic linearity - Optoelectronic and photonic devices such as optical modulators, lasers, photodetectors, and silicon photonics -Thermal management technologies, thermal simulation - Advanced packaging of high-power and/or high frequencies devices and ICs, including chip stacking or heterogeneous integration strategies

---

Further questions on paper submission may be addressed to:

Jack Pekarik, GlobalFoundries,
Symposium Chair
jack.pekarik@globalfoundries.com

Sadayuki Yoshitomi, MegaChips Corp,
Technical Program Committee Chair
sadayuki.yoshitomi@ieee.org

Patrick Fay, Notre Dame University,
Publications Chair
pfay@nd.edu

Symposium information, including paper submission instructions and a link to the paper submission system is available on the BCICTS website at: www.bcicts.org