

Call for Papers

----- Special Section on Analog Circuit Techniques and Related Topics -----

The IEICE Transactions on Fundamentals announces that it will publish a special section entitled " Special Section on Analog Circuit Techniques and Related Topics " in **May 2023**.

Today's development of Analog Circuit technology has brought drastic improvement in wireline & wireless network communication, and its scope is still expanding including living, medical, automotive and green technologies.

It is amazing that millimeter wave & terahertz circuits have been fabricated by CMOS technology. This fact is a result of development of device modeling and characterization, and its importance is still increasing more and more today. Furthermore, for the reliable analog circuit design, we have to find the method for utilization of the knowhow database.

In recent years, in order to realize a sustainable society, the importance of high efficiency power supply circuits, power device circuit design technology using emerging devices, and power management technology is drastically increasing.

Furthermore, requirements of AI-related technologies such as autonomous driving have exploded in recent years, and the importance of analog circuit technology in the computer field, such as neural network circuits and accelerators for specific applications, is being reaffirmed.

As described above, a wide range of topics are related to the analog circuit design. It is the aim of this Special Section to present and discuss the latest research results of analog/mixed signal circuit techniques and to study future directions for analog/mixed signal circuits.

1. Scope

This special section aims at timely dissemination of research in these areas. Possible topics include, but are not limited to:

- Low-voltage/low-power analog circuits, analog circuits for MEMS
- Analog-digital mixed systems, circuits, and LSI technologies, analog-digital co-operation systems, co-designed techniques.
- Noise analysis techniques
- MMW-band and RF-Band analog circuits, analog circuits for telecommunication, analog circuits for intelligent systems
- Analog signal processing circuits (op-amps, amplifiers, comparators, filter circuits, oscillators, multipliers)
- Reference voltage/current sources
- Sensor circuits, A-D converters, D-A converters, PLLs, $\Sigma\Delta$ modulators
- Analog circuits utilizing beyond CMOS devices
- Power management circuits, DC-DC converters, AC-DC converters, energy harvesting circuits, wireless power supply
- Power device circuit
- Analog circuit techniques in digital circuits (memories, micro-processors, DSPs, etc.)
- Nonlinear electronic circuits, chaotic circuits
- Neural network circuits, analog AI accelerator
- Device modeling and simulation techniques for analog circuits
- CAD for analog circuits design
- Analog layout CAD
- Behavior modeling and system-level simulation techniques
- Hardware security technologies
- Other related analog circuits techniques

2. Submission Instructions

The standard number of pages is 8 for a PAPER and 2 for a LETTER. The maximum number of pages for the initial submission of a LETTER is 4. The page charges are considerably higher for extra pages. Manuscripts should be prepared according to the guideline in the "Information for Authors". The latest version is available at the web site, https://www.ieice.org/eng/shiori/mokuji_ess.html. The term for revising the manuscript after acknowledgement of conditional acceptance for this special section could be shorter than that for regular issues (60 days) because of the tight review schedule.

This special section will accept only papers by electronic submission. Prospective authors are requested to follow carefully the submission process described below.

1. Submit a manuscript and electronic source files (TeX/Word files, figures, authors' photos and biography) via the IEICE Web site https://review.ieice.org/regist/regist_baseinfo_e.aspx by **May 25, 2022 (extended)**. Authors should choose the [Special-GC] Analog Circuit Techniques and Related Topics as a "Journal/Section" on the online screen. **Do not choose [Regular-EA]**.

2. Authors must agree to the " Copyright Transfer, Article Processing Charge Agreement, Notices from the IEICE, and Privacy Policy " via electronic submission. For additional guidelines on manuscript preparation, please visit: https://www.ieice.org/eng/shiori/mokuji_ess.html

Send the above documents to:

Hiroki Sato

Tokyo Institute of Technology, Department of Information and Communications Engineering

Tel: +81-3-5734-2850, Email: ea_may2023-sec@ml.ieice.org

3. Special Section Editorial Committee

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* Upon accepted for publication, all authors, including authors of invited papers, should pay the page charges covering partial cost of publication around Oct., 2022. If payment is not completed by Nov. 15, 2022 your manuscript will be handled as rejection.

* If there are non-members among the authors, we recommend that the authors take this opportunity to join the IEICE. For detailed information on the IEICE Membership Application, please visit the web-page, https://www.ieice.org/eng_r/join/individual_member.html. If all authors are non-members, the article processing charge for non-members will be applied, except for invited papers.

* All papers published in or after October 2022 issue are opened to all readers in the world through J-STAGE.