

Call for Papers: Special Section on Analog Circuit Techniques and Related Topics

The Institute of Electronics Information and Communication Engineers (IEICE) Transactions on Fundamentals announces a special section on "Analog Circuit Techniques and Related Topics" to be published in **March 2019**.

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. For more evolutionary advances, it is essential to combine digital and analog parts, where digital parts operate at high speed and efficiency, and analog parts realize high performance sensing and various communication functions with both compact area and low power consumption. The key factors of these technologies are to compensate analog mismatch with digital correction system or to control digital circuit performance with analog circuit techniques.

In addition, power management blocks are increasing its presence along with recent ground swell of ecological awareness. Sensing LSIs operating with nano-watt power dissipation make it much more important to control leakage current. System level optimization under various constraints such as power dissipation, operating speed and occupied area is also important with circuit level techniques.

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.

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. Topics of interest include but are not limited to:

- Low-voltage/low-power analog circuits, analog circuits for MEMS
- Mixed analog and digital systems, circuits, and LSI technologies, circuits compensation 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
- Analog circuit techniques in digital circuits (memories, micro-processors, DSPs, etc.)
- Nonlinear electronic circuits, chaotic circuits, neural network circuits
- Device modeling and simulation techniques for analog circuits
- CAD for analog circuits design
- Analog layout CAD
- Behavior modeling and system-level simulation techniques
- Other related analog circuits techniques

Note for Authors:

Manuscript should be prepared according to the style described in the Information for Authors (http://www.ieice.org/eng/shiori/mokuji_ess.html). It is recommended that the lengths of the paper and the letter for this special section are within 8 and 2 printed pages, respectively.

This special section strongly recommends electronic submission. Prospective authors are requested to follow carefully the submission process described below. If it is difficult to make an electronic version of a manuscript or to use our web paper submission system, please contact our secretary.

1. Submit a paper using the IEICE Web site https://review.ieice.org/regist_e.aspx. Authors should choose the [Special-EA] Analog Circuit Techniques and Related Topics as a "Type of Issue (Section)/ Transactions" on the online screen. Do not choose [Regular-EA].

2. Submit your "Copyright Transfer and Page Charge Agreement" via electronic submission by July 13, 2018 (JST). Please do not forget to submit "Copyright Transfer and Page Charge Agreement". We cannot start the review process without them, even if we receive the manuscript.

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*Note that some papers may appear in the following transactions, if the number of accepted papers exceeds the limit.