

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 **February 2009**. Almost all information obtained in the real world is in the form of analog signals. This is the reason why analog signal processing and analog circuit techniques have been so important. The development of LSI technology has made it possible to implement large-scale systems equipped with various functions as a system on a chip which operates at high speed and dissipates low power. These systems usually comprise integrated digital circuits, yet at speed comparable to device's performance limit, it should be considered as analog circuits. Furthermore, in a mixed analog/digital system with various built-in functions, sophisticated analog circuit design and partitioning between analog and digital functions are key issues. Moreover, in recent years, as wireless communication systems and broad-band network systems are expanding rapidly, high speed or radio frequency analog circuits are becoming more important. In analog circuits design, modeling and simulation are key technologies at the respective stages from device modeling and characterization to system-level simulation via behavior modeling. For the perspective of analog circuits design, we cannot neglect some viable or tentative approaches such as analog IP(Intellectual Property), FPAAs (Field Programmable Analog Arrays), and Floating-Gate MOSFET or multi-threshold circuit based technology. 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
- RF-Band Analog Circuits, Analog Circuits for Telecommunication, Analog Circuits for Intelligent Systems
- A-D Converters, D-A Converters, Amplifiers, Modems, PLLs, Filters, Oscillators, Sensor Circuits, FPAAs
- Nonlinear Electronic Circuits
- Built-In Self Test, Noise Analysis Techniques
- Circuit optimization and performance compensation techniques
- Analog Circuit Techniques in Digital Circuits (Memories, Micro-processors, DSPs, etc.)
- Behavior Modeling, System-Level Simulators
- Analog-Oriented Device Modeling, Characterization
- Applications of Analog-Oriented CAD
- Analog Layout CAD
- Simulation Techniques for Analog Circuits

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 to a 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. Send "Copyright Transfer and Page Charge Agreement" and "Confirmation Sheet of Manuscript Registration" to **Dr. Kazuyuki Wada** by postal mail (**NOT by FAX or E-mail**) until **May 30, 2008**. Please mark "Special Section on Analog Circuit Techniques and Related Topics" in red ink on the envelope. Please do not forget to send "Copyright Transfer and Page Charge Agreement" and "Confirmation Sheet of Manuscript Registration". We cannot start the review process without them, even if we receive the manuscript.

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