Call for Papers

AUT Journal of Electrical Engineering

Special Issue on Low-Voltage Low-Power Integrated Circuits and Systems

Design of low-voltage integrated circuits and systems has continued over several decades owing to the system power constraints and advanced nano-meter CMOS technologies. Nowadays, a trend towards extremely low voltage and ultra-low power circuits is emerging. It is motivated by the increased interest in implantable or wearable devices for biomedical monitoring, sensor and internet of things networks and several other similar applications. These systems are often supplied with non-traditional energy sources such as energy harvesting from different sources which can provide a limited power at a very low voltage level. The increasing demands for both low supply voltage and low power consumption often have detrimental effects in analog and mixed-signal circuits, which must operate with reduced voltage headroom and power dissipation. Therefore, the most challenging task for analog designers is to maintain the circuit performance by developing novel circuit and system architectures capable to operate with low supply voltage.

The main focus of this special issue is on the research challenges relating to the theory, design, and applications of low-voltage and low-power integrated circuits and systems. The topics to be covered are, but are not limited to, as follows:

♦ Theory, design, and new applications of low-voltage and low-power integrated circuits and systems
♦ Low-voltage low-power analog and digital integrated circuits
♦ Low-power analog-to-digital and digital-to-analog converters
♦ Low-power radio frequency integrated circuits and systems
♦ Design and implementation of low-voltage CMOS building blocks
♦ Implantable and wearable devices for biomedical monitoring applications
♦ Low-voltage circuits for internet of things (IoT) applications
♦ Energy harvesting and low-power on-chip voltage regulators
♦ Low-voltage low-power sensor interfaces

Authors should follow the normal procedures of the AUT Journal of Electrical Engineering for their submission (https://eej.aut.ac.ir/journal/authors.note). Besides, in the cover letter, it should be noted that the manuscript is submitted for this special issue. The manuscripts will undergo the standard review process of the journal.

Prospective authors should submit an electronic copy of their complete manuscript and track its status according to the following timetable:

Manuscript submission due: March 01, 2019
First round of reviews: April 20, 2019
Revised manuscripts due: May 15, 2019
Second round of reviews: June 10, 2019
Final manuscripts due: June 30, 2019
Tentative publication date: July 2019

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