

Call for Papers

IEEE Circuits and Systems Society

IEEE Journal on Emerging and Selected Topics in Circuits and Systems, Special Issue on:

Emerging Circuits and Systems Techniques for Ultra Low-Power Body Sensor Networks

The IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS) seeks original contributions for a special issue on circuits and systems for ultra low power body sensor networks, scheduled to appear in March 2012.

Body sensor networks (BSNs) promise radical improvements for healthcare and medical treatment. For wide-scale adoption, they require miniature form factors and long lifetimes that push the limits of ultra low power circuit and system design. The goal of this special issue is to collect papers on approaches spanning circuits, architectures, algorithms, and system design that demonstrate promising solutions to emerging critical problems in BSN design.

Selected papers will present original works or review state-of-the-art approaches that pave the way from theoretical results to circuits/systems implementation. Original contributions are solicited from the following non-exhaustive list of topics:

- Technologies and circuits for biomedical sensing and signal acquisition
- Circuits, architectures, and algorithms for ultra low power and advanced physiological signal analysis and patient monitoring
- Low energy wireless transceiver circuits for BSNs
- Miniaturized quartz replacement and filter technologies
- BSN network protocols for energy efficiency and security
- Implantable and wearable systems
- Devices and technologies for advanced sensing, actuation, stimulation, and therapy
- Brain-machine and neural interfaces
- Devices for low-cost and portable healthcare
- Energy harvesting and power management in miniature medical devices

Prospective authors should submit PDF versions of their papers following the instructions provided on the JETCAS web-site: <http://jetcas.polito.it/general.html>. Submitted manuscripts should not have been previously published nor be currently under consideration for publication elsewhere. Manuscripts will undergo a peer review process according to standard IEEE regulations.

Manuscript submissions due:	October 7, 2011
First round of reviews completed:	December 5, 2011
Revised manuscripts due:	January 1, 2012
Second round of reviews completed:	January 20, 2012
Final manuscripts due:	February 6, 2012

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