

IEEE Transactions on Circuits and Systems II: Express Briefs

CALL FOR PAPERS

Special issue on

Biomedical and Bioelectronic Circuits for Enhanced Diagnosis and Therapy

The application of innovative circuits and systems to healthcare applications is experiencing remarkable growth worldwide. Examples include electronics for smart biosensors to detect or monitor the progress of various diseases, implantable neural prostheses to replace lost function due to neural damage, wireless brain-machine interfaces for neuroscience research and control of prosthetic devices, and new generation cardiovascular technology with real time monitoring capability. Advances in medical device technology have been shown to greatly improve the quality of life for people with conditions such as Parkinson's disease, diabetes, hearing loss, blindness and heart failure, to name a few. The purpose of this special issue is to report the cutting-edge development of circuits and systems which have the potential to enhance diagnosis and therapy.

Authors are invited to submit Brief papers following the IEEE Transactions on Circuits and Systems II (TCAS II) guidelines, within the remit of this Special Issue call. Topics include (but are not limited to):

- Implantable integrated circuits including brain inspired cognitive chips and VLSI circuits for neuromorphic engineering applications in healthcare
- Bioelectronic and Bio-MEMS integrated systems; integration of heterogeneous technologies such as RF, MEMS and digital signal processing on silicon
- Biomedical imagers
- Lab-on-chip and biosensor circuits
- Innovative circuits for medical instrumentation
- Ultra-low power/sub-threshold, self-powered circuits, wireless communication and power transfer through human body; energy harvesting for wearable body sensors
- Circuits for multimodality sensing platforms
- Biomedical signal processing systems
- Body sensor networks; wearable health monitoring

Submission Guidelines: All submitted manuscripts must (i) conform to TCAS II's normal formatting requirements and page-count limits (at no more than 5 pages); (ii) incorporate no less than 60% of new (previously unpublished) material; (iii) validate principal claims with experimental results and all secondary, difficult-to-test claims with simulations; and (iv) be submitted on line at <http://tcas2.polito.it/Forms/Authors/index.html>. Please note that you need to select "Special Issue *Biomedical and Bioelectronic Circuits for Enhanced Diagnosis and Therapy*" when you submit a paper to this Special Issue.

Deadlines

Paper Submission:	June 30, 2014
Completion of First Review:	August 15, 2014
Completion of Final Review:	October 15, 2014
Target Publication:	February 2015

Guest Editors

Professor Robert Rieger
National Sun Yat-sen University
Taiwan, R.O.C.
rrieger@mail.nsysu.edu.tw

Dr Jaswinder Lota
University of East London
London, U.K.
j.lota@uel.ac.uk

Dr Xiao Liu
University College London
London, U.K.
xiao@ucl.ac.uk