Special issue on IEEE-NEWCAS 2010–2011

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This special issue of Analog Integrated Circuit and signal processing (ALOG) consists of expanded versions of selected papers originally presented during the two IEEE International NEWCAS conference editions held in Montreal, Canada in 2010 (June 20–23, NEWCAS2010) and Bordeaux, France in 2011 (June 26–29, NEWCAS2011). The NEWCAS conference reflects continuing trends toward higher levels of circuits and systems techniques covering a wide variety of subjects within the analog and radiofrequency integrated circuits, signal processing, sensors, digital integrated circuits domains, ranging from basic analog and digital building blocks to system applications in several related domains such as telecommunication, safety systems, and biomedical.

The areas of circuits and systems covered during NEWCAS in 2010 and 2011 drew 487 submissions from more than 42 countries (193 submissions in 2010 and 294 submissions in 2011); 235 contributions were accepted for presentations (102 during NEWCAS2010 and 133 during NEWCAS2011). Among the published contributions in the NEWCAS2010 and NEWCAS2011 proceedings, a pre-selection of 31 papers was completed (14 papers from NEWCAS2010 and 17 from NEWCAS2011). The corresponding authors were invited for

contributions to this special issue and we received 25 full manuscripts as a result. Following the review process, 16 of them have been accepted for publication in this special issue of AICSP. All the pre-selected papers for which one of the Guest Editors was in conflict of interest were handled by Springer directly. Selecting only 16 papers among 235 is a challenging task and we are aware that we probably missed excellent contributions, but we do know that we did our best to put together a special issue as complete as possible. The presented contributions in this special issue deal with: low-power voltage and current references, system clock generation, amplifiers, radiofrequency circuits and systems, sensors, biomedical lab-on-chip, data conversions and radiofrequency voltage controlled oscillators.

We are grateful to Professor Mohamed Ismail for giving us the opportunity to lead this special issue. We also wish to express our personal gratitude to the Springer personnel for all the competent and efficient support we received; this special issue was made possible only with their professional help. Finally, we would like to thank the authors for their efforts into submit manuscripts and all the reviewers for their constructive evaluations.

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Hervé Barthélemy received the Ph.D. degree in Electronics from the University of Paris XI Orsay in 1996. From 1996 to 2000 he was an Assistant Professor at the Institut Supérieur d'Electronique de la Méditerranée (ISEM) in Toulon, France. In 2000 he joined the University of Provence where he became Full Professor in 2005. In September 2007, Professor H. Barthélemy joined the University of Sud-Toulon-Var, France.

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Mounir Boukadoum is full Professor of Microelectronics Engineering at the Department of Computer Science, Université du Québec à Montréal (UQAM), Canada. He studied physics at the University of Algiers (Algeria) before moving to the USA in 1976. He then switched to electrical engineering and received the Master's degree from The Stevens Institute of Technology in 1978 and the Ph.D. degree from The University of Houston in 1983.

He joined UQAM in 1984 and has been living in Canada ever since. He was Director of Microelectronics Programs at UQAM for three

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Eric Kerhervé received the Ph.D. degree in Electrical Engineering from University of Bordeaux, France in 1994. He joined ENSEIRB-MATMECA and the IMS Laboratory in 1996, where he is currently Professor in Microelectronics and Microwave applications. His main areas of research are RF, microwave, and millimeter-wave circuits (power amplifiers and filters) in silicon, GaAs, and GaN technologies. He is or was involved in several European

projects (Medea + UPPERMOST, Medea + QSTREAM, Catrene PANAMA, FP6 MOBILIS, ENIAC MIRANDELA), to develop silicon RF/mmW power amplifiers and BAW duplexer. He has authored or co-authored more than 190 technical papers in this field, and was awarded 22 patents. He has organized seven RFIC and EuMC workshops on advanced silicon technologies for radiofrequency and millimeter-wave applications. He is involved in the technical program committees of various international conferences (ICECS, IMOC, NEWCAS, EuMIC, SBCCI, LASCAS) and he was the general co-chair of the international IEEE ICECS' 2006 and IEEE NEWCAS' 2011 conferences. He is co-editor of Special Issues for IEEE-ICECS' 2006, IEEE-ICECS' 2007, IEEE-LASCAS 2010. He was 2-years associate editor of IEEE Transactions on Circuits and Systems II (TCAS II). He is IEEE senior member and member of the IEEE-CAS, IEEE-MTT, and IEEE SSCS societies.