Introduction to the special issue on ICECS 2014

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This Special Issue consists of the expanded version of selected contributions originally presented at the 21st IEEE International Conference on Electronics, Circuits, and Systems, IEEE ICECS 2014, held in Marseille, France in December 2014. In order to promote the research carried out by young professionals, M.Sc. and Ph.D. students, “IEEE ICECS 2014 has organized a Women in CAS/Young Professionals/M.Sc./Ph.D. students Forum. The two first papers presented in this special issue have been selected from the Forum.

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All the papers presented in this special issue¹ were selected after a thorough process of peer-review which involved the assessment by at least two expert reviewers per paper. Compiling this Issue has been a challenging task and we are aware that we probably missed other excellent contributions.

The papers collected in this Special Issue cover a wide variety of subjects within the analog, digital and mixed integrated circuit and signal processing fields. Most of the papers present innovative solutions for specific applications, validated by experimental results on actual integrated prototypes.

The guest editors are grateful to Professor Mohammed Ismail for the opportunity to present this Special Issue, and wish to thank all of the reviewers and contributing authors for their assistance, as well the Springer personnel for the competent and efficient support provided while compiling this Special Issue.

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¹ The paper entitled “*Bandwidth-Efficient Calibration for Nonlinear Errors in M-Channel Time-Interleaved Analog-to-Digital Converters*”, is actually intended for this special issue. But, unfortunately it was published as a regular paper in the February 2016 issue, Volume 86, Issue 2 (pp 275–288).

Elena Blokhina received the M.Sc. (with honours) and Ph.D. degrees in physics from Saratov State University, Russia, in 2002 and 2005, respectively. From 2005 to 2007 she was a research scientist at Saratov State University, where she worked on the analysis and modelling of microwave devices. Since 2007, she has been with the University College Dublin, Ireland, and is currently the research manager of the Circuits and Systems Research

Group, the scientific coordinator of the IoE2 lab and a lecturer at the School of Electrical and Electronic Engineering. Dr. Blokhina joined the IEEE in 2005 as a student member and is currently a senior member. She is a member of the IEEE Technical Committee on Nonlinear Circuits and Systems (currently—one of the officers of the committee). She has been elected to serve in the Board of Governors of the IEEE Circuits and Systems society for the term 2013–2015 and re-elected for the term 2016–2017. She has served as a reviewer, review/programme committee member and a session chair at a large number of conferences on circuits and systems, electronics and nonlinear dynamics: IEEE International Symposium on Circuits and Systems (ISCAS), IEEE Latin American Symposium on Circuits and Systems (LASCAS), IEEE Asia-Pacific Conference on Circuits and Systems (APCAS), International Symposium on Nonlinear Theory and Its Applications (NOLTA) and others. She served as a track chair/co-chair (Nonlinear circuits and systems, neural networks) at the IEEE International Conference on Electronics, Circuits and Systems (ICECS) 2013 in Abu-Dhabi, IEEE ICECS 2014 in Marseille, France and IEEE ISCAS 2015 in Lisbon, Portugal. Her research interests include computational and applied physics, nonlinear dynamics of oscillations and waves and their application to the analysis and control of microelectromechanical systems and energy harvesters.

Nathalie Deltimple received the Ph.D. degree in Electrical Engineering from University of Bordeaux, France in 2005. She joined Bordeaux INP/ENSEIRB-MATMECA and the IMS Laboratory in 2006, where she is currently an Associate Professor in Electronics Department. Her main areas of research are the design of RF and millimeter-wave Power Amplifiers in CMOS and BiCMOS technologies for wireless communications, the develop-

ment of integrated efficiency enhancement and linearization techniques. She is involved in the technical program committees of international conferences (IWS, RWS, NEWCAS), TPC Co-chair of IEEE MTT IWS 2016 and serve as a reviewer for various journal (IEEE JSSC, TCAS-II, MTT, CSSP, MCWL and AICSP) and conference (IWS, RWS, EUMW, ICECS, NEWCAS, LASCAS, etc.) She is in charge of AMS&RF thematic in GDR SoC-SiP (CNRS) and Secretary of IEEE-CAS french chapter.

Maria Trocan received her M.Eng. in Electrical Engineering and Computer Science from Politehnica University of Bucharest in 2004, the Ph.D. in Signal and Image Processing from Telecom ParisTech in 2007 and the Habilitation to Lead Researches (HDR) from Pierre & Marie Curie University (Paris 6) in 2014. She joined Joost—Netherlands in 2007, where she worked as research engineer involved in the design and development of video

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Yann Deval received his Ph.D. from the University of Bordeaux, France, in 1994. He joined this university in 1993 as an Assistant Professor, starting his research activities on the design of analog ICs, RFICs, high speed mixed-signal ICs and high reliability electronics. In 1999 Dr. Deval became an Associate Professor and created and headed the IC Design Team at IMS, the microelectronics research laboratory of the University of Bordeaux in which some 400 peoples are

pursuing research. In 2004 he became a Full Professor at ENSEIRB-MATMECA, the EE's department of the University of Bordeaux. From 2004 to 2014 Dr. Deval is the Director of ST IMS collaborative joint research laboratory, and from 2010 to 2012 Dr. Deval was the Director of ALBATROS, the advanced research alliance between THALES and the University of Bordeaux for aeronautics and space applications. Since January 2016 Dr. Deval is the director of IMS Lab. Dr. Deval received the Best Paper Award of the 2002 IEEE Asia-Pacific Microwave Conference held in Kyoto, Japan, in 2008 the Best Paper Award of the Software Defined Radio (SDR) Forum held in Washington D.C., USA and in 2014 the Best Paper Award of the International NEW Circuits And Systems (NEWCAS) held in Trois Rivières, Canada. He was the General Chair of the 2010 RFIC Symposium in Anaheim, CA, and the General Chair of the 2012 ESSCIRC-ESSDERC conferences in Bordeaux, France. Dr. Deval published more than 190 papers in international conferences and journals, and holds 49 patents.

Ricardo Reis received the EE degree from the Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil, in 1978, and the Ph.D. degree in informatics, option microelectronics from the Institut National Polytechnique de Grenoble, France, in 1983. He is a Full Professor with UFRGS since 1981. He has published over 450 papers in journals and conference proceedings and authored or co-authored several books. His research interests

include physical design, physical design automation, design methodologies, EDA, circuits tolerant to radiation, and microelectronics education. He is the Chair of IFIP TC10. He has also organized several international conferences. He was a member of the CASS DL Program 2014/2015.

Hervé Barthélemy has received the M.Sc. degree in Electrical Engineering in 1992 and the Ph.D. degree in Electronics from the University of Paris XI Orsay, France in 1996. In 2002 he received the “habilitation à diriger les recherches” (HDR) degree from the University of Provence, Aix-Marseille I, France. From 1996 to 2000 he was an Assistant Professor at the Institut supérieur d’électronique et du numérique (ISEN’Toulon),

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