Introduction to the special issue on Signals and Systems: Tools and Emerging Technologies

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This special issue of the Journal of Analog Integrated Circuits and Signal Processing entitled “Signals and Systems: Tools and Emerging Technologies” consists of the expanded version of selected papers originally presented at the International Conference on Electrical Engineering, Electronics and Automatics, ICEEA’10, held in Bejaia (Algeria) in November 2010.

The papers presented here were selected after a thorough process of peer-review which involved the assessment by at least two expert reviewers per paper. Compiling this special issue has been a challenging task and we are aware that we probably missed other excellent contributions. There were more than 400 participants and 177 papers were presented during 2 days in 12 regular sessions and two poster sessions. The guest editors feel that the following ten papers selected all contain contributions that will be of interest to the readers.

The ten papers collected in this special issue cover a wide variety of topics in Analog Integrated Circuits and Signal Processing.

Five papers are in Signal Processing: Wavelets and Fractals in medical applications, Image Processing in encryption, segmentation and recognition.

The other five papers are oriented to the Modeling and Optimization of Energy Systems: Solar energy, wind energy, characterization of conductive plates by eddy currents, and power flow controller optimization.

New tools, emerging technologies and circuit solutions are proposed and in most cases validated through experimental results.

The guest editors are grateful to Prof. T. Rekioua for the opportunity to present this special issue, and wish to thank all the presenters at the conference from these sessions for having undertaken the extensions to the original conference paper. We would like to express our gratitude to the anonymous reviewers for their feedback comments, suggestions and help in ensuring that the papers met the required level of quality. We also wish to extend our appreciation to the main editor of ALOG, Prof. M. Ismail, for his guidance, and the Springer personnel for the competent and efficient support provided while compiling this special issue.

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