

Guest Editorial

Special Issue on the International Symposium on Integrated Circuits and Systems—ISICAS 2022

THIS Special Issue of the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—I: REGULAR PAPERS (TCAS-I) includes papers presented at the International Symposium on Integrated Circuits and Systems (ISICAS) 2022, held on October 20–21, 2022, at Bordeaux, France. This is the fifth edition of this journal track symposium as part of the initiative of the IEEE Circuits and Systems Society (CASS), started in 2018. The Symposium welcomes high-quality original research papers in the areas of integrated circuits and systems, including but not limited to analog, digital, power, energy, biomedical, sensor interfaces, and communication systems. A reader will notice that all the papers presented in this Special Issue and at the conference describe integrated circuit and implementations in CMOS, hybrid, SiP or SoC forms with experimental results—this is a mandatory requirement of the Symposium.

In contrast to conventional symposia and conferences, ISICAS is a Journal Track Symposium which does not produce proceedings. Instead, the papers presented at the conference are published in four journals as special issues. One of them is the issue that you are holding, and the other three are Special Issues of the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—II: EXPRESS BRIEFS (TCAS-II), the IEEE TRANSACTIONS ON BIOMEDICAL CIRCUITS AND SYSTEMS (TBioCAS), and the IEEE OPEN JOURNAL OF CIRCUITS AND SYSTEMS (OJCAS). The technical program of the conference consists of the papers that have been accepted for publication in these special issues of TCAS-I, TCAS-II, TBioCAS, and OJCAS. The TCAS-I Special Issue contains 22 accepted papers. These papers cover a wide spectrum of topics in analog and mixed mode circuits and systems, digital circuits and systems and VLSI, signal processing, nonlinear circuits and systems, and circuits and systems for communications. We hope our readers find this Special Issue interesting.

The process followed to select the papers is based on the standard review procedure of the journals. On the TCAS-I side, it has been conducted by a Guest Editorial team formed by the following editors (in alphabetical order): Reza Azarderakhsh,

Harijot Singh Bindra, Xiang Chen, Ayman Fayed, Subhanshu Gupta, Alex James, Joo-Young Kim, Seok-Bum Ko, Nagendra Krishnapura, Shubin Liu, Weiqiang Liu, Jaswinder Lota, Filippo Neri, Alberto Oliveri, Onabajo, Marvin, Pieter Rombouts, Teresa Serrano-Gotarredona, Linxiao Shen, Chao Wang, Wujie Wen, Hui Zhang, Xuan Zhang, and Shuang Zhu. All of them are leading experts in different research areas associated with analog, mixed-signal, and digital electronics.

We would like to express our sincere gratitude to all the authors contributing to this Special Issue for their excellent papers and effort in addressing their revisions in a tight and sometimes stressful time window which was required to have both the technical program of ISICAS 2022 and this journal issue ready on time. We are also most grateful to hundreds of reviewers involved in different review rounds, who provided their constructive feedback and recommendations to further increase the readability and quality of the papers included in this Special Issue.

The preparation of this Special Issue has been carried out in close collaboration with the ISICAS 2022 General Co-Chairs Nathalie Deltimple and Francois Rivet, and the Technical Program Co-Chairs Yajun Ha, Alison Burdett, and Kea-Tiong Tang, and Technical Program Coordination Thierry Taris, who have provided a significant input in the arrangement of the review process, selection of the papers, and arrangement of the technical program. We sincerely thank the Editor-in-Chief of TCAS-I, Prof. Weisheng Zhao, and our excellent Guest Editorial team for their enormous dedication and professionalism to make ISICAS 2022 and this Special Issue a great success.

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