

Guest Editorial

Special Issue on the 2022 ISICAS: A CAS Journal Track Symposium

THIS special issue of the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART II: EXPRESS BRIEFS (TCAS-II) includes papers presented at the International Symposium on Integrated Circuits and Systems (ISICAS). This year, the conference is held in Bordeaux, France, on October 20th and 21st 2022. 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 is focused on original works reporting hybrid, System-in-Package (SiP) or System-on-Chip (SoC) implementations of circuits and systems with state-of-the-art experimental results.

The works presented in this edition have been published in four CASS journal special issues. One of them is the issue that you are holding and the other ones are special issues published at the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART I: REGULAR PAPERS (TCAS-I), IEEE TRANSACTIONS ON BIOMEDICAL CIRCUITS AND SYSTEMS (TBioCAS), and the IEEE OPEN JOURNAL OF CIRCUITS AND SYSTEMS (OJCAS). The technical program of the conference is therefore made up of those papers which have been accepted for publication in these four special issues.

The process followed to select the papers is based on the standard review procedure of TCAS-I/II, TBioCAS, and OJCAS. On the TCAS-II side, it has been conducted by a Guest Editorial team formed by the following editors (alphabetically sorted): Fengwei An, Yong Chen, Jian Cheng, Junmin Jiang, Shiva Kiran, Chi-Seng Lam, Elisabetta Moissello, Vassilis Paliouras, Nithin Shastri, Chung-An Shen, Nanjian Wu, Ningmei Yu, Amir Zavareh. All of them are leading experts in diverse research areas, including among others: analog, mixed-signal and digital circuits; hardware security; FPGA based systems; power and energy; biomedical circuits; sensor interfaces; communications; neural networks, and beyond CMOS devices and technologies.

The submission deadline was extended until April 4th, 2022, and 91 manuscripts were received. Preliminary decisions were taken in the first five-six weeks for the majority of submissions and those papers requiring some additional review followed a second review round, so that final decisions were taken on June 30th. Accepted manuscripts, and those subject to minor revision at the moment of creating the ISICAS

technical program, were invited to present their works at the symposium. Finally, those works selected for presentation at ISICAS were finally accepted for publication at TCAS-II, after being presented at the conference.

As a result of this process, 43 papers were finally included in this special issue. These papers cover a wide spectrum of topics: Analog circuits (including voltage references, regulators and DC-DC converters); $\Sigma \Delta$ analog-to-digital, time-to-digital converters and calibration techniques; temperature sensors and biomedical circuits; Radio-Frequency (RF) circuits, optical and RF receivers; wireline/optoelectronic communication systems; neural networks, digital circuits and VLSI systems, hardware security and so on.

We hope readers find this special issue interesting, and those who had the opportunity to attend ISICAS symposium, can find here more details and insight of the works presented at the conference.

To conclude this guest editorial, we would like to express our deepest gratitude to all authors contributing to this special issue, for their excellent research and hard work to write their papers and to address their revisions in a tight and sometimes stressful time window which was required to have both the technical program of ISICAS and this journal issue ready on time. We are also indebted to the hundreds of reviewers involved in the different review rounds, who contributed with their constructive feedback and recommendations to further increase the readability and quality of the papers included in this special issue.

Last, but not least, we wish to thank the Editor-in-Chief of TCAS-II, Prof. Yajun Ha, and our excellent Guest Editorial team for their enormous dedication, professionalism and huge efforts to make ISICAS and this special issue a great success!

EDOARDO BONIZZONI, *Associate Editor-in-Chief*
IEEE TCAS-II

Department of Electrical, Computer and
Biomedical Engineering
University of Pavia
27100 Pavia, Italy

SEBASTIAN HOYOS, *Associate Editor-in-Chief*
IEEE TCAS-II

Department of Electrical and Computer Engineering
Texas A&M University
College Station, TX 77843 USA