

Outgoing Editorial

Dear TCAS-I Readers,

As you read these words, my term as the Editor-in-Chief of IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—I: REGULAR PAPERS (TCAS-I) is coming to an end. To me, assuming the role of Editor-in-Chief is not only a privilege but also a commitment to ensure this journal keeps pace with the rapid changes in the field of circuits and systems while maximizing its efficiency and impact. I would like to report to you a brief status of the journal and extend my profound gratitude to the people who helped TCAS-I maintain its position as a top-class journal in circuits and systems.

Over the past four years, TCAS-I has experienced tremendous growth. Its 2022 Impact Factor has increased to 5.1 from 3.9 in 2019, re-entering the JCR Q1 section. Meanwhile, the number of published articles reached 453, higher than 408 in 2019. This will pave the way for achieving the long-term goal of putting the journal in the list of “The Top 30 Journals in Electrical & Electronic Engineering.” New submissions have broken new ground with a record of 2218 papers (and still counting) at the time of writing this editorial (mid-November 2023). Considering only the number of new submissions, the figures are 1318 articles in 2019, 1740 articles in 2020, 1997 articles in 2021, and 2119 articles in 2022. IEEE Xplore usage reaches 1035112 in 2022, up 15.5% compared with that in 2021. Thus, TCAS-I remains the leading archival journal, serving as the primary platform for university researchers and industry practitioners in the expansive fields of circuits and systems to publish their research.

TCAS-I continues to be highly selective. The overall acceptance rate of TCAS-I is 20%, ensuring the high standards of the published articles. To provide authors with high-quality and thorough reviews, TCAS-I maintains a fast review cycle. The average time from submission to the first decision is within 1.4 months from submission.

We have minimized the publication backlog. The publication backlog in terms of accepted articles appearing in printed issues stands at approximately three months. The significant increase of the page budget to 5600 pages in 2023 from 5000 pages in 2019, has played a crucial role in reducing this backlog. The existing publication backlog duration is optimal for the efficient functioning of the journal. In practice, due to the posting of issues on IEEE Xplore one month in advance, the time from original submission to ePublication (appearing on IEEE Xplore) is around 22 weeks on average.

These above-mentioned achievements are intricately tied to the diligence, professionalism, and unwavering dedication of our Editorial Board Members to make swift and fair decisions on each manuscript. I am very fortunate to have two Deputy

Editor-in-Chiefs Prof. Domenico Zito in charge of the digital media and Prof. Helen Li responsible for handling Special Issue papers. They are very reliable and responsive. I want to extend my heartfelt gratitude to them.

My special thanks go to our present Associate Editors who have adeptly managed a substantial volume of articles, demonstrated exceptional commitment to maintaining an expedited review cycle, and exhibited particular expertise in navigating challenging situations. More specifically, I wish to acknowledge with particular gratitude the support of Drs. Mohammed Abdullah Abdulaziz, Bertan Bakkaloglu, Choon Ki Ahn, Alon Ascoli, Peter A. Beerel, Alberto Bernardini, Har-ijot Singh Bindra, Adriana Sanabria Borbon, Giulia Di Capua, Chip Hong Chang, Meng-Fan Chang, Sudipto Chakraborty, Vanessa Chen, Jia Di, Huseyin Dinc, Tyrone Fernando, Robin Garg, Patrick Girard, Yuan Gao, Subhanshu Gupta, Mona Hella, Rajiv Joshi, Jérôme Juillard, Takayuki Kawahara, Nima Karimian, Selcuk Koze, Peng Li, Zhen Li, Chencheng Liu, Xiaoxiao Liu, Shubin Liu, Weiqiang Liu, Xiaoxiao Liu, Francesco Lo Iudice, Matteo Lodi, Kambiz Moez, Fakhrul Zaman Rokhani, Ulf Schlichtmann, Linxiao Shen, Peng Shi, Aatmesh Shrivastava, Teerachot Siriburanon, Haralampos Stratigopoulos, Yang Tang, Shobha Vasudevan, Jeffrey Walling, Chao Wang, Rabia Yazicigil, Jun Yin, Shouyi Yin, Hui Zhang, Xuan Zhang, Yue Zhang, Bo Zhao, Dixian Zhao, Jian Zhao, Wei Xing Zheng, Xinyu Zhou, and Shuang Zhu. I owe my deepest gratitude to some Associate Editors who retired. They are Drs. Ahmed Ali, Reza Azarderakhsh, Robert Rieger, Ayman Adel Fayed, Alex James, Gordana Jovanovic Dolecek, Joo-Young Kim, Nagendra Krishnapura, Jaswinder Lota, Esteban Tlelo-Cuautle, Marvin Onabajo, Pramod Kumar Meher, Henrik Sjöland, Apisak Worapishet, Pietro De Lellis, Mehran Mozaffari Kermani, Maurizio Martina, Alberto Oliveri, Peng Shi, Filippo Neri, Eugenio Cantatore, Luis Hernández Corporales, Pascal Nouet, Seok-Bum Ko, Pieter Rombouts, Izzet Kale, Jacques Olivier Klein, Ahmed Elwakil, Nishant Kumar, Le Ye, Takahiro Hanyu, and Yuan Gao.

I am equally indebted to our diligent and discerning reviewers, whose invaluable insights and constructive critiques have upheld the rigorous standards of academic excellence of TCAS-I. Your unwavering commitment to quality has played a pivotal role in maintaining the journal's integrity and credibility. To our authors, whose contributions have shaped the very fabric of this journal, I extend my heartfelt gratitude. Your dedication and passion for your respective fields have been nothing short of inspiring.

To enhance the global visibility of the TCAS-I and increase its readership in the field of circuits and systems, we launched social media platforms. By working with the Digital Communication Manager, we have diversified and customized the content on different digital media platforms and posted

selected Highlights from each issue meanwhile making them open access for three months and designing new digital media profile images and platform banners. We have nearly 6,000 followers on LinkedIn and WeChat; the Super authors introduction got around 16,029 views on LinkedIn.

Over the past four years, TCAS-I has introduced Special Issues for multiple global and regional flagship conferences of the IEEE Circuits and Systems Society (CASS). These Special Issues have featured a selection of top-rated papers from conferences like IEEE ISCAS, APCCAS, LASCAS, MWSCAS, and NEWCAS, as well as CASS Premier Conference like ISICAS. Currently, there are calls for papers on emerging topics, including “Special Issue For 50th Birthday of Memristor: Theory and Application of Neuromorphic Computing Based on Memristor” (Guest Editors: Tingwen Huang, Yiran Chen, Zhigang Zeng, and Leon O. Chua), “Circuits and Systems for Emerging Computing Paradigms and Enhanced Systems” (Guest Editors: Shanshan Liu, Bi Wu, Ke Chen, Weiqiang Liu, Maire O’Neill, and Fabrizio Lombardi), “Circuits for Network 2030 Beyond 5G” (Guest Editors: Jaswinder Lota and Hui Zhang), and “Special Issue on Learning, Optimization, and Implementation for Circuits and Systems driven by Artificial Intelligence” (Guest Editors: Yang Tang, Jian Zhao, Tingwen Huang, Jürgen Kurths, Guanrong Chen, and Ljupco Kocarev).

In addition to these Special Issues, TCAS-I has also published numerous invited review papers authored by highly influential authors in the field. These authors include Profs. Leon O. Chua, Behzad Razavi, Anantha P. Chandrakasan, Georges Gielen, Rui P. Martins, Mengfan Chang, Ru Huang, Ruonan Han, Tadahiro Kuroda, Pui-In Mak, Kaushik Roy, Shanthi Pavan, Gabor C. Temes, Zhichao Tan, Yangyuan Wang, Nan Sun, Shimeng Yu, and Hoi-Jun Yoo.

Let us welcome the incoming Editor-in-Chief Prof. José M. de la Rosa (2024–2025) from the University of Seville, Spain. Prof. de la Rosa served as the Editor-in-Chief for IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—II: EXPRESS BRIEFS (TCAS-II) from 2020 to 2021. He also served as an Associate Editor for TCAS-I, where he received the (2012–2013) Best Associate Editor Award in 2013. He will bring a wealth of experience and fresh perspectives that will undoubtedly guide the journal through its next chapter toward continued success.

As I step down from this role, I am filled with optimism for the future of the journal. I want to take this opportunity to thank the present CASS VP-publication Prof. Gabriele Manganaro and past VP-publication Prof. Mohamad Sawan for their advice and support. I also wish to cordially thank TCAS-I’s Peer Review Support Specialist, Heather Malloy and Shivam Kumar Sony, for their excellent administrative assistance, and the staff at the IEEE Publishing Operations for their assistance with the production aspects of the articles.

As I take my leave from this role, I do so with a heart full of cherished memories and a spirit eager to explore new horizons. I look forward to witnessing the continued growth and impact of TCAS-I in the capable hands of the incoming leadership.

Thank you all for being a part of this remarkable journey. On behalf of the entire Editorial Board, I wish you a Happy New Year in advance!

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Weisheng Zhao (Fellow, IEEE) received the Ph.D. degree in physics from the University of Paris Sud in 2007. He was a Research Associate with the CEA’s Embedded Computing Laboratory from 2007 to 2009 and with the French National Research Center (CNRS), as a tenured Scientist from 2009 to 2014, where he led the Spintronics Integration Group. He is currently the Vice President of Beihang University and the Director of the Fert Beijing Institute, MIIT Key Laboratory of Spintronics, School of Integrated Circuit Science and Engineering, Beihang University. His research focused on spintronic memories and logics from devices, circuits to systems. He has authored or coauthored more than 300 scientific papers, in journals, such as *Nature Electronics*, *Nature Communications*, and *PROCEEDINGS OF THE IEEE*. He has served as a TPC Member for multiple IEEE leading conferences on circuits and systems, such as NANOARCH 2014–2017 (General Chair in 2016), GLSVLSI 2018–2020 (General Chair in 2020), and the General Co-Chair for ISICAS 2025. Since 2019, he was elected as an IEEE Fellow for contributions to spintronic integrated circuits design. In 2017, he received

the Guillemin-Cauer Best Paper Award from the IEEE CAS Society. He is the Editor-in-Chief of IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—I: REGULAR PAPERS from 2020 to 2023.



Hai (Helen) Li (Fellow, IEEE) received the B.S. and M.S. degrees from Tsinghua University and the Ph.D. degree from Purdue University in 2004. She is currently the Clare Boothe Luce Professor and the Department Chair of the Electrical and Computer Engineering Department, Duke University. Her research interests include neuromorphic circuits and systems for brain-inspired computing, machine learning acceleration and trustworthy AI, conventional and emerging memory design and architecture, and software and hardware co-design. She is a fellow of ACM. She was a recipient of the NSF Career Award, the DARPA Young Faculty Award, the TUM-IAS Hans Fischer Fellowship from Germany, the ELATE Fellowship, nine best paper awards, and another nine best paper nominations. She was the general chair or the technical program chair of numerous IEEE/ACM conferences and the technical program committee member of over 30 international conference series. She served/serves as an associate editor for multiple IEEE and ACM journals. She was a Distinguished Lecturer of the IEEE CAS Society from 2018 to 2019 and a Distinguished Speaker of ACM from 2017 to 2020.



Domenico Zito (Senior Member, IEEE) received the M.Sc. degree in electronic engineering and the Ph.D. degree in information engineering from the University of Pisa, Pisa, Italy, in 2000 and 2004, respectively. He is currently a Professor with the AGH University of Science and Technology, Krakow, Poland. He has authored over 150 papers in peer-reviewed international journals and conference proceedings, nine books, and book chapters. He holds three patents. His current research interests include the design of microwave and mm-wave devices, circuits, and systems for emerging wireless communication, sensing, imaging, and quantum computing applications. He has served as a TPC Member for the European Solid-State Circuits Conference. He received the Mario Boella (VP URSI) Prize for Research and Innovation in Wireless Technology in Europe in 2005. He was a recipient of the Start-Up Laboratory of the Year at the Irish Laboratory Awards in 2014, the IEEE Education Society Award for his Distinguished Contributions and Leadership in Engineering Education in 2015, and three best paper awards at the IEEE conferences. He has served as the TPC Chair for the IEEE International Conference on

Electronics, Circuits and Systems 2016 and the Guest Editor and an Associate Editor for IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—I: REGULAR PAPERS.