

Incoming Editorial

DEAR Readers,
It is with my great honor and privilege to start my two-year term of duty as Editor-in-Chief (EIC) of IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART II: EXPRESS BRIEFS (TCAS-II). I am very thankful to the IEEE Circuits and Systems Society (CASS) for giving me this opportunity. During the last two years, I have been very fortunate to work as Associate Editor-in-Chief (AEIC) of TCAS-II together with Professor José M. de la Rosa, who has set the bar very high for me! I would like to begin this first issue of TCAS-II in 2022 by expressing my most sincere and warm gratitude to Professor José M. de la Rosa for his great job, dedication, and guidance during all this time working together. I learned a lot from him!

Thanks to the excellent diligence and intense dedication of my predecessors and the past Editorial Boards (EBs), the performance of TCAS-II has significantly improved in the last few years. The huge reputation of TCAS-II can be quantitatively measured by its high impact factor, its good balance between industry and academic works, theoretical analyses versus practical applications, as well as innovative papers written by well recognized experts in diverse research topics of circuits and systems. In the last years, the scope of the journal has been extended not only from CASS areas, but others such as complex networks, advanced control, and signal processing, among others.

Apart from its good performance metrics, there is no doubt that TCAS-II is one of the flagship journals of IEEE Circuits and Systems Society (CASS), aiming to provide the rapid publication of state-of-the-art progresses in the research of general circuits and systems related areas. Its unique feature of fast turnaround time yet with highly selective acceptance makes it a quite special journal among all CASS publications. As a result, to be the Editor-in-Chief of such a journal is not only of honor, but also of great responsibility.

With this in mind, I would like to state my vision of further enhancing the quality and general visibility of TCAS-II over its established level of quality, especially in the following aspects.

A. Optimize the Time From Submission to Acceptance

The foremost value and feature of TCAS-II is the rapid publication of novel works in the field of circuits and systems related areas, which differs it from all other IEEE CASS Transactions. The current average time from the submission to the first and final decision are 33 and 37 days, respectively.

Although TCAS-II has performed very well so far, we still hope to find ways to further optimize the time from submission to acceptance. Ideally we should optimize the time from acceptance to publication as well. Luckily, with the help of online publication with Digital Object Identifier, almost all accepted TCAS-II papers can be posted online almost immediately after their acceptance and also be cited. As such, mainly the time from submission to acceptance lies in the critical path.

I plan to further optimize this critical path by taking several new initiatives for both the editorial board and reviewers, with the help from CASS, if needed.

First, we plan to set up a Web site to register the interests and expertise of volunteers to be editorial board members. The Web site may involve technical committees within CAS to develop and promote together. This enlarges the pool of Associate Editor (AE) candidates for me to choose from, especially for AEs in selected emerging areas. This initiative aims to improve the structure, quality and self-motivation of AEs. Second, we also plan to set up a Web site to register the interests and expertise of volunteers to be reviewers. This helps Associate Editors to find energetic and self-motivated reviewers. Third, we plan to establish a list of backup reviewer volunteers for different EDICs. This list serves as the function to backup emergency cases when a particular reviewer cannot submit her/his review on time or an AE needs an extra feedback of a manuscript. Again, we can establish this list of backup reviewer volunteers through Web site registration, with the involvement of technical committees of CAS. Fourth, we plan to evaluate and reward the reviewers accordingly to further motivate them. For this, we plan to implement an automated system to evaluate and tier the reviewers into several grades with defined metrics. For reviewers reaching different grades, we will reward them with different awards or opportunities such as thank-you certificate, IEEE renewal discount, priority recommendation for Transaction AEs and so on. Through these measures, I hope to motivate the acceptance rate of reviewers and help AEs to optimize the reviewer assignment time.

B. Further Improve the Impact Factor

TCAS-II has significantly improved its impact factor over the last several years. Currently it has an impact factor of 3.292 in 2020. To further improve the impact factor of TCAS-II, it is essential to facilitate the wide publicity of the good works that have been published in TCAS-II.

We plan to take the following initiatives to further improve the TCAS-II impact factors. First, we plan to further strengthen the role of Associate Editor-in-Chief Digital Communications. Since the 2019 term, CASS has added a role of Associate

Editor-in-Chief Digital Communications. The position aims to help publicize the CASS journal related information and research results. Next, we plan to support the Associate Editor-in-Chief Digital Communications to organize a Digital Communication Committee within the TCAS-II journal, which includes a group of young members who are distributed in the different locations of the world. This committee aims to further strengthen the already effective digital communication functions. Second, we plan to add a short video (2-3 minutes) introduction of a TCAS-II paper to its link in the IEEE Xplore website. This helps readers to understand their research work easier and deeper, especially to capture readers from industry. TCAS-II has started this effort from early 2021, but only linked the video in the TCAS-II LinkedIn page. We plan to add the videos to IEEE Xplore that will further improve the publicity. Third, we plan to build a TCAS-II community platform to help improve the publicity of TCAS-II papers. To help further improve the impact factors of TCAS-II papers, we need to facilitate researchers to receive the new TCAS-II research results timely. Building a TCAS-II community will help achieve this goal.

C. Addressing the Relevant Emerging Technologies

We live in an age full of emerging technologies. This brings both challenges and opportunities for TCAS-II. On the one hand, if TCAS-II stays quietly and does nothing, we may lose the room for sustainable growth and a drop of impact. On the other hand, if TCAS-II actively embraces the opportunities brought by multi-disciplinary and emerging technologies, we may attract more quality and timely manuscripts and increase the social and technical impacts.

I believe the emerging technologies coming from two directions. One is bottom up from the emerging semiconductor technologies. The other is top down from the emerging applications/algorithms. We need some holistic initiatives to address the relevant emerging technologies to which the publication is not currently strongly focused.

First, we plan to work with the various technical committees of CAS to update the EDICS especially on the emerging technologies. One of the major difficulties for emerging technology related manuscripts is that both authors and editors sometimes are not quite sure if the topic is within the scope of the journal or not. A comprehensive exercise should be executed in all CAS TCs to update the EDICS for emerging technologies. This will pass a clear message to potential authors working on emerging/interdisciplinary works and reduce the load of AEs. Second, we plan to invite review or tutorial papers for TCAS-II on specific topics of emerging technologies. This is to introduce the emerging technologies to the TCAS-II community by the recognized pioneers in each field to enlighten the community and raise their awareness of new research directions. Such effort should be in line with the IEEE Circuits and Systems Magazine. While the magazine focuses more on

breath, a TCAS-II tutorial on a specific topic should focus more on depth. Third, we plan to organize a special section in the regular issues of TCAS-II to foster works in emerging technologies. Fourth, we plan to organize special issues for several topics in emerging technologies, especially for topics on robots, smart vehicles, brain-inspired computing, energy-efficient signal processing techniques for big data, invisible sensing for IoT, embedded AI, and some more. This initiative can be part of other new initiatives of CAS fast publication, such as the special issues of ISCAS and ISICAS conferences. Through the launch of special issues, we will definitely increase the recognition, prestige, and impact of CAS society. It will also help to grow our membership base.

D. Editorial Board and Associate Editors in Chief

Addressing the aforementioned initiatives, as well as other ones, which may come out, constitute a great challenge and responsibility for me. Fortunately, I will count on the help of a great team led by my Associate Editors in Chief (AEiC) Professor Edoardo Bonizzoni and Professor Sebastian Hoyos, as well as our AEs and reviewers. The incoming EB has been selected to achieve a good balance between experienced and fresh AEs, all of them with recognized expertise in the diverse research areas of circuits and systems, in both academia and industry.

The AEiCs have also several important roles to play, like handling the special issues mentioned above, clarifying the scope of the Transactions and dealing with issues like plagiarism, prepublication, etc. These duties will be mainly carried out by Professor Bonizzoni, with the help of Professor Hoyos, who will be mainly in charge on the new duties required to promote our Transactions in the digital media and networks.

To conclude this editorial, I would like to express again my deepest gratitude to Professor José M. de la Rosa, for his excellent service, enormous dedication, professionalism and huge efforts during his term of duty as EiC of TCAS-II in the last two years. Without his help and guidance, some of the initiatives already running at TCAS-II would have been impossible and many of the projects mentioned here would be very difficult even to imagine. On top of all the initiatives mentioned in this editorial, the contributions of all our authors and the feedback from our readers will be fundamental to maintain and improve the quality of our journal.

On behalf of the entire Editorial Board of TCAS-II, I wish all of you a wonderful year ahead and I look forward to your excellent contributions!

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Yajun Ha (Senior Member, IEEE) received the B.S. degree in electrical engineering from Zhejiang University, Hangzhou, China, in 1996, the M.Eng. degree in electrical engineering from the National University of Singapore, Singapore, in 1999, and the Ph.D. degree in electrical engineering from Katholieke Universiteit Leuven, Leuven, Belgium, in 2004.

He is currently a Professor with ShanghaiTech University, China. Before this, he was a Director of the I2R-BYD Joint Lab, Institute for Infocomm Research, Singapore, and an Adjunct Associate Professor with the Department of Electrical and Computer Engineering, National University of Singapore. Prior to this, he was an Assistant Professor with the National University of Singapore. His research interests are focused on energy-efficient circuits and systems, including reconfigurable computing, ultra-low-power digital circuits and systems, embedded system architecture, and design tools for applications in robots, smart vehicles, and intelligent systems. He has published more than 130 internationally peer-reviewed journal/conference papers on these topics.

He is the recipient of several IEEE/ACM best paper awards. He has served a number of positions in the professional communities. He serves as the Editor-in-Chief for the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART II: EXPRESS BRIEFS from 2022 to 2023, an Associate Editor-in-Chief for the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART II: EXPRESS BRIEFS from 2020 to 2021, and the Associate Editor for the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART I: REGULAR PAPERS from 2016 to 2019, the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART II: EXPRESS BRIEFS from 2011 to 2013, the IEEE TRANSACTIONS ON VERY LARGE-SCALE INTEGRATION (VLSI) SYSTEMS from 2013 to 2014, and the *Journal of Low Power Electronics* since 2009. He has served as the TPC Co-Chair of ISICAS 2020; the General Co-Chair of ASP-DAC 2014; the Program Co-Chair for FPT 2010 and FPT 2013; the Chair of the Singapore Chapter of the IEEE Circuits and Systems (CAS) Society in 2011 and 2012; and a member of ASP-DAC Steering Committee and IEEE CAS VLSI and Applications Technical Committee. He has been the Program Committee Member for a number of well-known conferences in the fields of FPGAs and design tools, such as DAC, DATE, ASP-DAC, FPGA, FPL, and FPT.