Editor-in-Chief Message

TIME really flies! I can hardly believe that almost two years have passed since I assumed the Editor-in-Chief (EiC) position of the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY (TCSVT) on January 1, 2018. As planned, I will not pursue another term due to other commitments at work and to my family and will retire from the EiC position at the end of this year. The good news is that the TCSVT will be in the capable hands of the new EiC, Prof. Feng Wu, from the University of Science and Technology of China, and his new Editorial Board (EB). Prof. Wu is the current Deputy EiC of the TCSVT, and has many years of experience and leadership in the TCSVT community. I have the full confidence that he will take the Transactions to the next level!

It has been two exciting years for me! I think it is time to take a moment to recap some of the major developments of the Transactions and share some of my thoughts moving forward.

I would like to begin by thanking the outstanding TCSVT EB consisting of some of the world leaders and preeminent scholars in image and video technology. We had 35 new associate editors (AEs) in January 2018 and an additional 22 new AEs in January this year, joining the TCSVT EB. It is really a great pleasure to work with all these 80 talented and dedicated EB members. I rely on them for quick turnaround of review results and insightful expert views on the ever-increasing number of submitted manuscripts. Together, we solidified the TCSVT as the premier journal in the area of video technology and systems.

In the past two years, the TCSVT has made steady advance toward a new level. The JCR impact factor of the TCSVT has reached a record high of 4.046 for 2018 from 3.558 for the year before.

We have received, to date, a record volume of 1156 paper submissions this year, which is about a 20%+ increase from the same period last year and the year before.

We have significantly reduced the review turnaround time. We have reduced the average time from paper submission to final accept decision by 16.9 days; reduced the average time from paper submission to final reject decision by 18.5 days; reduced the average time from paper submission to online publication by 21.8 days; and reduced the average time from paper submission to print by 91.8 days. Thanks again to the outstanding contributions from the EB, we achieved this despite the significantly increased paper submissions.

When I first took over the EiC position in January 2018, I immediately faced quite a few challenges.

There was a scheduled PRAC (IEEE Periodicals Review and Advisory Committee) review only 1.5 months later. This PRAC review only occurs every five years. I had to prepare the PRAC review documentation summarizing activities and statistics of the Transactions for the last five years. To make things even more challenging, I found that since the TCSVT was switched from the Polito review system to the ScholarOne Manuscripts (S1M) system in 2016, there was a disconnect between the two databases. I had to author a tool to connect them together manually, so now we can run any statistics for the TCSVT manuscripts for any period of time easily.

Further into preparing the documentation for the PRAC review, I found that there is no official IEEE record on the approval of the TCSVT scope that we have been using in practice for over 20 years. The only record shows that the officially approved scope was still the same as that at the Transactions' inception in 1991. As technical fields have progressed dramatically since then, we need to rectify the scope to reflect the recent development in video technology and maintain legacy to the practically used scope while still making a clear distinction with sister journals, and have it approved by the IEEE Technical Activities Board (TAB). Consulting with many past EiCs and IEEE Circuits and System Society (CASS) management team, we finally had an updated and officially approved TCSVT scope in June 2018 that reads as follows.

"IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY (TCSVT) covers the circuits and systems aspects of all video technologies. General, theoretical, and application-oriented papers with a circuits and systems perspective are encouraged for publication in TCSVT on or related to image/video acquisition, representation, presentation and display; processing, filtering and transforms; analysis and synthesis; learning and understanding; compression, transmission, communication and networking; storage, retrieval, indexing and search; and/or hardware and software design and implementation."

With this officially approved scope, I represented the TCSVT to successfully complete the PRAC review in June 2019 and received some good feedbacks from the PRAC.

Manual approach to dealing with the large volume of submissions, managing the assignments for a team of 80 AEs, and yet reducing the review turnaround time further is no longer practical. I have developed a set of tools to significantly improve the efficiency of different EiC tasks, including paper review assignment tool, automated reminder tool for overdue tasks of AEs, AE performance reporting tool, timeliness and manuscript statistics reporting tool, and so on. These tools work well with the tools and databases in the S1M system. They make my job much more efficient and allow me to focus on those tasks that need more attention to complete. Hopefully, these tools will pass on to future EiCs to help them to make the TCSVT editorial jobs much easier.

One lasting issue for the TCSVT is its huge backlog due to a number of reasons. This causes delays in getting an accepted manuscript printed in paper form. Although the e-Pub (online published version, a.k.a Early Access) of an accepted manuscript is considered fully citable and published by the IEEE, it will not have the volume and issue numbers until it is assigned to a specific issue. It is still desirable to have

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it printed in paper form as soon as possible. In the last two years, a number of different ways have been tried to reduce the backlog, including requesting more page budget from the IEEE CASS, raising the bar of paper acceptance, asking authors to shorten their manuscripts for only essential contents, and so on. As a result, the average time from submission to print has been reduced by three months.

I would like to elaborate a bit on paper acceptance. As we have more submissions, we would naturally accept more papers if the acceptance ratio remains unchanged. However, we could not keep asking the IEEE CASS to increase the page budget indefinitely. The more sustainable way is to reduce the paper acceptance ratio by raising the quality bar. Starting from late last year, I have specifically asked our AEs and reviewers to carefully review the manuscripts submitted and pass only the manuscripts with significant innovation elements to the next rounds of reviews. "First to reject" is a requirement of our AEs and reviewers so that they will reject a manuscript sooner if they are not very impressed. In general, we need to keep the overall acceptance ratio below 20% to further reduce the backlog with the current page budget to its normal level in two–three years.

As I pointed out in my Editorial "Embracing the era of intelligent visual technology and systems" in the February 2018 issue, the TCSVT is transforming itself toward including more intelligent video areas. Correspondingly, we observed that the percentage of published papers in intelligent video areas has a clear increasing trend, namely, 32.5%, 29.5%, 42.9%, 48.3%, and 43.4% in 2015, 2016, 2017, 2018, and 2019, respectively. The TCSVT is progressing well along this direction.

In the past two years, the TCSVT has published one "Special issue on large scale and nonlinear similarity learning for intelligent video analysis" in October 2018, and one "Special section on deep learning for visual surveillance" in September 2019. These two issues aimed to focus on some pressing issues in the intelligent video areas. There are two additional special issues in the pipeline to be published in 2020. One is on "Large-scale visual sensor networks: architectures and applications," and the other one is on "Video compression with capability beyond HEVC." I would like to take this opportunity to thank our distinguished guest editors for their dedication in putting these issues together, despite their busy schedule.

Finally, I would like to share some of my thoughts and best practices with authors who wish to submit manuscripts to the TCSVT in the future. These are what I learned from my observations while working with the authors who have submitted manuscripts to the TCSVT.

Write a Cover Letter. Often, I see when authors submit a manuscript, there is no cover letter in any form associated with the manuscript. This is not a good practice. A cover letter is a place where you will clearly explain the background of your manuscript. The editors and reviewers need to find answers to the following questions: Is it an original submission? Is it a resubmission of a previous rejected manuscript (and by which journal)? Is it an extension of a previously published conference paper? What significant changes have been made if it is a revision or resubmission? Has it been uploaded to any public archive site, such as arXiv or TechRxiv? Are there any other particular issues that the editors or reviewers should be aware of? The cover letter should disclose all the aforementioned information and true information. If an editor finds information that authors failed to disclose through other channels, the manuscript will be most likely rejected without further review.

Use Proper EDICS. When authors submit a manuscript, they should carefully choose all the applicable EDICS categories according to the EDICS list (http://tcsvt.polito.it/edics.html). The review system heavily relies on the EDICS to find matching AEs and reviewers to review the manuscripts. Failure to do so will result in an administrative rejection of the manuscript without further review.

The Shorter the Better. Although we have significantly increased the annual page budget of the TCSVT, as the submissions increase, we still face a serious backlog issue that is not going to resolve soon if no action is taken. Please consider shortening your manuscript to be only essential to convey your main technical ideas and results. As you may know, Transactions Letters have a separate queue to print. Therefore, they normally go to print quickly after they are accepted. The TCSVT is also considering whether to put shorter Transactions Papers in a separate queue on a faster track to print to encourage authors to shorten their manuscripts. It is also a way to resolve the current backlog issue.

"You are Checked"—Similarity Check and Other Audits. The S1M review system employs a similarity check service to examine whether a submission is a possible duplicated submission or plagiarism. The TCSVT currently uses a 30% similarity threshold for original submission and a 50% similarity threshold for extended conference paper submission. These thresholds are not the only criteria to decide plagiarism cases, and they may be lowered in the future. Editors' subjective check is also performed when certain manuscripts raise a flag. Sometimes, the upload of a manuscript to a public archive site for preview might also cause a high similarity score. As a best practice, the authors may want to hold their upload until their manuscript is assigned to an AE. Moreover, S1M does have other data sources, for example, users' IP addresses, to constantly audit the whole lifecycle of a manuscript. Any abnormal behaviors will trigger an alert to be sent to the EiC.

I hope these tips can help the authors to have a better experience when working with the Transactions in the future.

I would like to conclude by expressing my deep gratitude again to the IEEE CASS management team, to my EB, to all the reviewers, and of course to all contributing authors. The success and reputation of the TCSVT reflect the outstanding work jointly by the EB, the reviewers, and the authors who are committed to the publication of only the best quality papers in the Transactions. Without your support, I would not be able to perform my duty as EiC, let alone to perform in it well. Thanks for the wonderful two years with you! I look forward to a more exciting future of the TCSVT led by the new EiC.

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