State of the Journal

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As 2019 is coming to a close, it's time to reflect on my first year as Editor-in-Chief of the *IEEE Transactions on Visualization and Computer Graphics (TVCG)*. It sure has been very interesting for me to see how all the different gears work together harmoniously to accomplish this great and esteemed journal. I found the most important element is people. There are first of all the authors who choose *TVCG* as their venue of choice to publish their research products, which took a great amount of time, effort, and passion to produce. Then, there is the wonderful team of associate editors who volunteer a great deal of their time and expertise to guide the review of these articles, recruiting the best experts of the field as reviewers and mindfully summarizing their assessments. And last, but certainly not least, there are the many reviewers who diligently examine the articles, assessing their fit for *TVCG* and offering helpful advice to the authors no matter how well this fit comes out to be. Of course, to make all of this work efficiently, there is the production and editorial staff, senior staff and volunteers at various echelons of the IEEE, chairs and committees of affiliated conferences, and many more. I want to take this moment to collectively thank all of these people for donating their time, energy, and enthusiasm to make this journal work so fabulously well. It was a great experience and I look forward to 2020, knowing that it will be a similar or even better experience.

So, how good was 2019, really? It was actually excellent. The impact factor has risen from 3.078 to a whopping 3.78 which is an increase of about 23% and marks a new record! The number of submissions remains very strong. By the end of November 2019, the number of new submissions was 407 (not including those for the special issues) and the number of revised submissions was 251, for a total of 658. To manage this impressive load, we have continued to expand the *TVCG* editorial board with the appointment of 22 new associate editors in 2019, while retiring 19. Four of these associate editors serve in the role of Associate Editor-in-Chief, to assist in special tasks such as serving as points of contact to the many conferences we partner with at various levels of engagement. When recruiting associate editors, we strive to not only promote diversity in scientific expertise but also in terms of gender and geographic location.

We have slightly expanded our portfolio of special issues and special sections. The IEEE VIS special issue remains a major contributor of articles published in *TVCG*. In 2019, the January issue was fully dedicated to the 120 articles from VIS 2018, which is composed of the Proceedings of the IEEE Information Visualization, IEEE Scientific Visualization, and IEEE Visual Analytics Science and Technology 2018 Conferences. Other major contributors of *TVCG* articles are the IEEE Virtual Reality Conference (VR) and the IEEE International Symposium on Mixed and Augmented Reality (ISMAR). Specifically, in 2019, the VR 2019 and the ISMAR 2019 conference issues were published as the May and November 2019 *TVCG* issues, contributing 33 and 14 articles, respectively. Moreover, the five best articles from the IEEE Pacific Visualization Symposium (IEEE PacificVis 2019) were directly published as a special section in the June 2019 *TVCG* issue, and extended versions of the four best articles of the 2017 ACM Symposium on Interactive 3D Graphics and Games (I3D) were published in a special section of the February 2019 *TVCG* issue.

The total number of articles published in 2019 is 289, distributed among 12 issues, accounting for a total of 3,261 printed pages. The IEEE VIS special issue with 120 articles accounts for 42 percent of the journal content in 2019, while the IEEE VR and ISMAR special issues with a total of 47 articles account for 16%. The five articles in the PacificVis 2019 special section were the top rated articles from 24 accepted articles accepted out of 91 submissions. All submissions in the special issues, including the PacificVis special section, went through a rigorous two-round journal-quality review process directly overseen by *TVCG*.

TVCG continues to offer authors a remarkably efficient processing of submitted manuscripts: the average time from submission to first decision is about 63 days. Revisions are decided even faster—38 days on average. The overall average review time is 52 days. Although there are outliers, on average, these review times rival those encountered at the related conferences.

TVCG maintains partnerships with many prestigious conferences, including those for which *TVCG* publishes special issues, special sections, and invites extended versions of their best articles, but also several others. *TVCG* authors have increasingly taken advantage of these partnerships to orally present their articles to large conference audiences around the world. This has helped them to further expose their work and gather important feedback, and at the same time it also has significantly enriched the programs of these conferences. Both of these aspects have been very well received by conference attendees and *TVCG* authors alike. In 2019, 42 *TVCG* articles were presented at VIS, 11 at VR, and several more at various

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graphics conferences. Given these opportunities and *TVGS*'s competitive review times, the rolling deadline of a *TVCG* submission offers authors the ability to submit their work at any time, avoiding the mad rush as a looming conference submission deadline arrives.

We also continued our collaboration with ACM SIGGRAPH. In 2019, *TVCG* has been invited to organize two very well attended sessions, one in the area of visualization, and one in the area of augmented and virtual reality at SIGGRAPH 2019 in Los Angeles, California. We featured the best eight articles published in *TVCG* in those areas and in both sessions the presentations were very captivating and of high technical value. In 2019, we had our first reciprocal session in the scope of this partnership, where we hosted a special ACM SIGGRAPH session at IEEE VIS 2019. This session featured six high-quality ACM SIGGRAPH 2019 articles with themes of high appeal to the VIS audience. The presentations were all well attended and of excellent quality. Finally, some exemplary work of *TVCG* with more general appeal has also been featured in *IEEE Computer*.

TVCG continues to participate in the Code Ocean initiative, a commercial effort free to IEEE authors that allows authors to share the code related to their article on a publically accessible platform. Users can then run and modify this code, optionally with other input data, and so experiment and build on the author's research. All authors of articles that have been submitted to *TVCG* or have been recently accepted to *TVCG* are invited to use this free service by going to https://codeocean.com/ieee/signup.

A similar effort, albeit within the public domain, is the Graphics Replicability Stamp Initiative (http://www.replicabilitystamp.org). It is a volunteer-led initiative of the computer graphics community which is now being extended to the visualization and virtual reality communities served by *TVCG*. It enables the sharing of code and data as a community resource for non-commercial use, also with the aim of allowing users to experiment and extend the research. It has been shown that articles that share their code, or at least enable others to reproduce the research results featured in a paper and run the proposed algorithms with other input data, boosts their citation rate and the visibility of the research itself.

Finally, *TVCG* also participates in the IEEE DataPort initiative (see https://ieee-dataport.org), which is a IEEE data service available to all IEEE members and to the global technical community overall. All *TVCG* authors have direct access to IEEE DataPort and the opportunity to store their datasets up to 2TB in size, which can be loaded anytime during article submission or after acceptance, and can be referenced with a unique and persistent DOI (Digital Object Identifier).

Given these very positive outcomes of 2019, I expect 2020 to be just as exciting or even more. The benefit and reputation of *TVCG* can only thrive with the high quality and number of the submitted articles. I encourage all members of the visualization, computer graphics, and virtual and augmented reality communities to submit their best and latest research results to *TVCG*. We also very much welcome and encourage the submission of survey articles within all areas of *TVCG*'s scope. Survey articles are a key ingredient to make our research fields more popular, useful, and accessible. They are designed to be easily accessible to non-experts, providing a comprehensive, up-to-date, and comparative narration of the existing body of research in the survey's target domain. They are meant to cover the subject's theory as well as its practice, point out existing trends, and stimulate future research efforts, new applications, and possibly developments in the commercial arena.

I want to conclude this state of the journal report by thanking all subscribers and readers for their continued interest and support of *TVCG*. We do not aim to be just a journal where authors exchange their research results. Rather, we aim to serve the needs of a broader community to stimulate global scientific, social, and economic growth. It is both my hope and my ultimate goal that the work published at *TVCG* can help in achieving these kinds of growth and so make *TVCG* relevant in a greater sense and perspective. I invite both authors and readers to share with me any ideas on how *TVCG* can better serve their needs, how it can better serve the entire community, and how it can achieve these broader goals and missions.

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