

The 15th Anniversary of the *IEEE Transactions on Visualization and Computer Graphics*: Celebrating a Success Story

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As the first three Editors-in-Chief of the *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, it is our great pleasure to congratulate *TVCG* on its 15th anniversary.

TVCG was launched in 1995 to fill in a vacuum where no archival level journal existed at that time that covered all the areas related to visualization and computer graphics techniques, systems, software, hardware, and user interface issues, with a high impact and a reasonable turn-around time. *TVCG* very quickly positioned itself as the leading archival journal for these areas. *TVCG* was slated to publish state-of-the-art seminal research papers as well as comprehensive surveys and reviews of archival value. In effect, only a few papers were surveys and reviews, while the vast majority of the papers were research papers.

Editorial leadership to *TVCG* has been provided by Arie E. Kaufman (1995-1999), Hans Hagen (1999-2003), David S. Ebert (2003-2007), and currently by Thomas Ertl (2007-current). Arie E. Kaufman was the inaugural Editor-in-Chief and the cofounder of *TVCG*, along with Greg Nielson who served as the Associate Editor-in-Chief. The inaugural Editorial Board of *TVCG* included outstanding active leaders of the visualization and graphics community.

The quality of papers has been central to the mission of *TVCG* from day one. The inaugural Editor-in-Chief and the board were fully committed to providing a high-grade and timely publication, supplemented by electronic forms. They were determined to enforce a very short time delay between submission and publication. Even the inaugural issue, which was very complicated to bootstrap, had an average time delay of only 131 days. It was indeed an immense undertaking to launch this new journal and to publish it in such a timely manner.

To ensure the timeliness of publication and improve service to the community, *TVCG* moved from originally publishing four regular issues to six regular issues per year, to including invited special issues and invited special

sections within issues, and finally to immediate publication within the digital library once a paper is accepted as a ready print. Also, in response to the needs of the visualization communities and requests from the IEEE Visualization and Graphics Technical Committee (VGTC) in late 2005, we decided to devote one issue per year to publish journal quality papers as the Proceedings of the IEEE Visualization Conference and IEEE Symposium on Information Visualization. We worked with the conference steering committees to develop a rapid, thorough two-stage review for papers to appear in this issue and increase the quality of the publications from these events through the feedback and improvement process of two-stage peer review. This has been extremely successful over the past three years and has been a benefit to our readers, the conference attendees, and the community at large.

Throughout its history, *TVCG* has been responsive to the growth of the fields and areas of research within computer graphics and visualization. The scope of the journal has increased substantially to include many new areas that are vital areas of our field. Some examples include visual analysis and visual analytics; graphics aspects of computer games and edutainment; general purpose computing on graphics processing units (GPGPU); high-dynamic range imaging and display, 3D display technology, multispectral displays; and computational photography. *TVCG* has not only had a strong impact within the fields of computer graphics and visualization, the research published within *TVCG* has impacted many fields of science, engineering, medicine, business, and social sciences. Some examples of the research topics of the most highly cited papers from *TVCG*'s first 15 years include graph visualization (used in, e.g., cyber security and social network analysis), geometry mesh compression (used in, e.g., medical diagnostic images, computer aided design, and games), display of high-dynamic range images (used in, e.g., air traffic control, archeology, and interior design), and improved animation (e.g., entertainment, Web applications, interactive games).

TVCG is a high-impact, efficient, and influential publication venue for the fields of computer graphics, visualization, virtual reality, and haptics. The continued growth of the journal is the culmination of work by many individuals and groups. First of all, the success of the journal relies on the authors and readers of *TVCG* for their high-quality submissions and subscriptions. The Associate Editors and reviewers over the past 15 years have succeeded in providing efficient, high-quality review

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and assistance in creating excellent archival papers. The top 10 cited papers of TVCG over the first 15 years which, according to Harzing Publish and Perish, received between 550 and 250 citations up to now from all sources, are as follows: Herman and Marshall [1], Alexa et al. [2], Klosowski et al. [3], Rossignac [4], Keim [5], Max [6], Hubbard [7], Lee et al. [8], Larson et al. [9], and Perlin [10]. Naturally, most of these papers are older than the average and some are survey type papers. The topic distribution among the top 10 papers is broad, including graph drawing, information visualization, collision detection, interpolation, meshes, points, volume rendering, visibility, and animation. TVCG currently has an overall h-index of 76 (76 papers have more than 76 citations).

We look forward to supporting the continued success of TVCG as it evolves and grows to serve our expanding community as the top archival publication venue for computer graphics and visualization. On behalf of the entire visualization and graphics community, we thank all the authors (more than 2,100), reviewers (more than 7,000 reviews), associate editors (more than 100), and Editors-in-Chief (4), who contributed to the great success of TVCG over the past 15 years.

Arie E. Kaufman
Hans Hagen
David S. Ebert
Emeritus Editors-in-Chief

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