# Introducing the IEEE Virtual Reality 2021 Special Issue

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Welcome to the 10th *IEEE Transactions on Visualization and Computer Graphics (TVCG)* special issue on IEEE Virtual Reality and 3D User Interfaces. This volume contains a total of 25 full papers selected for and presented at the IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR 2021), held fully virtual from March 27 to April 3, 2021.

Founded in 1993, IEEE VR has a long tradition as the premier venue where new research results in the field of Virtual Reality (VR) are presented. With the emergence of VR as a major technology in a diverse set of fields, such as entertainment, education, data analytics, artificial intelligence, medicine, construction, training, and many others, the papers presented at IEEE VR and published in the *IEEE TVCG* VR special issue mark a major highlight of the year.

*TVCG* and VR have enjoyed a fruitful cooperation for ten years now. This collaboration is a cornerstone in *TVCG*'s mission to combine computer graphics and data visualization with virtual (VR), mixed (MR), and augmented reality (AR) – XR for short. The special issue format combines speed of publication with all the established advantages of an archival journal. All papers published here have undergone a rigorous and competitive two-round review process to ensure the highest quality possible.

In fact, the benefits of the collaboration between *TVCG* and IEEE VR go both ways. Not only are VR papers published in the *TVCG* VR special issue, but also authors of VR-themed *TVCG* regular papers can accept our call to give an oral presentation of their work at IEEE VR. This year there were 10 such papers presented at the conference. This provides a unique opportunity for both the authors of these papers as well as for the conference audience. *TVCG* authors get to highlight their important work to their peers, and the conference audience gets to see more exciting VR research, and also learns about the high-quality VR research featured in *TVCG*.

We would like to sincerely thank the many colleagues who have committed their time and effort to the creation of this *TVCG* issue. In particular, we thank the guest editors of this special issue, the IEEE VR 2021 journal paper program chairs, Maud Marchal, Tabitha Peck, Stephan Lukosch, Xubo Yang, and Anthony Steed, for organizing the two-round review process, leading the program committee, and ensuring that academic quality was maintained at the highest level. We would also like to recognize the outstanding efforts that went into the timely production of this issue by the IEEE and IEEE Computer Society staff, especially Erin Espriu, Pilar Etuk, Katelyn Seyffart, and Kimberly Sperka, as well as the IEEE VR publication chairs, Mohammed Safayet Arefin and Christos Mousas. Thanks are also due to Christine Shaughnessy and Alison Larkin for *TVCG* peer review support, and the VR 2021 conference chairs Joaquim Jorge, Kyle Johnsen, J. Edward Swan II, and Pedro Campos for their valuable help. Finally, we would also like to acknowledge the support from behind the scenes by the IEEE VR Steering Committees, the IEEE VGTC Executive Committee, and the IEEE Computer Society Publications Board.

*TVCG* welcomes submissions from all fields of visual computing, ranging from graphics and visualization all the way to augmented and virtual reality. Accepted papers can be orally presented at our partner conferences[1]. *TVCG* is well known for its fast reviewing cycles and for the early availability of preprints in the IEEE Computer Society Digital Library and in IEEE Xplore. *TVCG* offers a great opportunity for the presentation of high-profile research results and survey papers on important new topics.

Last, but not least, we would also like to emphasize the TVCG Replicability Stamp, which *TVCG* offers in collaboration with the Graphics Replicability Stamp Initiative (GRSI). The purpose of this stamp is to promote reproducibility of research results and to allow scientists and practitioners to immediately benefit from state-of-the-art research results, without spending months re-implementing the proposed algorithms and trying to find the right parameter values. It will indirectly foster scientific progress, since it will allow researchers to reliably compare with and to build upon existing techniques, knowing that they are using exactly the same implementation. Having the stamp will increase visibility of your work and possibly increase citation rate. Please refer to the replicability website[2] for more information. Papers that are awarded the TVCG Replicability Stamp will receive additional exposure by being listed as "replicable papers" in the IEEE Computer Society Digital Library and on the GRSI website. We sincerely hope you will participate in this important initiative.

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[1]https://www.computer.org/digital-library/journals/tvcg/tvcg-partners-with-conferences

[2]http://www.replicabilitystamp.org