



2025 VGTC Visualization Lifetime Achievement Award

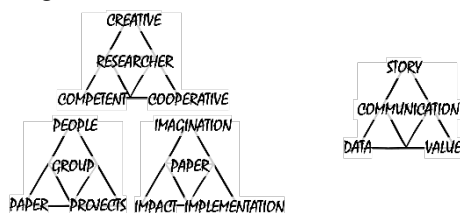
Eduard Gröller, TU Wien



The 2025 VGTC Visualization Lifetime Achievement Award goes to Eduard Gröller. He is recognized for a distinguished career marked by novel contributions to the field of visualization and the development of innovative, impactful applications. His leadership within the community and dedication to mentoring emerging researchers have been instrumental in advancing the discipline.

Eduard Gröller is full professor of visualization at TU Wien where he is head of the Computer Graphics research unit. Raised in Neustift bei Güssing in Southern Burgenland he graduated from the business high school in Stegersbach. He then studied computer science at TU Wien where he finished his PhD in 1993 with highest distinction. His research interests include computer graphics, visualization, and visual computing. He is a scientific proponent and key researcher of the VRVis research center. The center performs applied research in visualization, rendering, and visual analysis. Eduard is adjunct professor of computer science at the University of Bergen, Norway (since 2005).

He studied at Kansas University for two semesters, financed by a Fulbright Scholarship. Missing the mountains of his native country in the flat Kansas landscape, he recreated them using fractal geometry in a graphics course. This led him to dynamical systems and subsequently to flow visualization. Afterwards he turned his attention to volume visualization with applications for example in the medical domain and material sciences. Parameter space analyses, ensemble and uncertainty visualization works followed from there. In this direction are also visual decision support systems from diverse application domains like flood simulation, material defects, urban planning. More recently he is also interested in topics like onboarding, guidance, and storytelling in uncertain contexts.



Early in the 1990s with his first generation of PhD students he initiated the visualization group at TU Wien. He became a fellow of the Eurographics Association in 2009 for building up one of the strongest visualization research groups in Europe. The guiding principle has been

to foster a tight professional and social cooperation within the group to provide a stimulating creative environment. This prepared the members to successfully compete in the international scientific community. With computer graphics as his background, he recognized the triangle as a key building block. This led him to develop a triangular world view. A successful research group must cover the three corners of the p-triangle (people – papers – projects). He always considered people to be the most important aspect of it. Papers as major outcome need to follow the i-triangle (imagination/originality – impact/relevance – implementation/technical soundness). Most importantly a researcher should be strong in the c-triangle (creative – competent – cooperative). Relevant and promising open problems in visualization he sees in:

- Going from static to dynamic data to data fluids where the availability, trustworthiness, and scope of data streams will constantly shift. Still persistent reasoning with uncertainty management will be necessary.
- The digital world is not finite in space and time. Applying biomimicry principles to the digital world will give a fresh perspective. Data is born, raised/curated, and can die. One might also combine currently separate steps of Produce und Use into an integrated ProdUse. Mechanisms to determine if data is still alive need to be developed (maybe based on some sort of block chain technology).
- Scientific communication will considerably change in the future according to the communication triangle (data – story – value). There will be a unity of research and communication. Researchers will work on their knowledge graph where written reports for all kinds of addressees will be automatically generated on demand and just in time. We will move from a portable document format (pdf) to a portable knowledge format (pkf).

Eduard Gröller co-authored about 400 scientific publications, holds 7 patents, and has given more than 160 scientific talks. He (co-)supervised more than 150 Master students and graduated more than 50 PhD students, where a sizable number of his former PhD students have already established successful research groups in the area of visualization on their own. He is the recipient of the Eurographics 2015 Outstanding Technical Contributions Award and of the IEEE VGTC 2019 Technical Achievement Award. Eduard Gröller is one of the general chairs of the IEEE Visualization 2025 conference.

