

# 2023 VGTC Visualization Lifetime Achievement Award

John Stasko, Georgia Institute of Technology

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The 2023 VGTC Visualization Lifetime Achievement Award goes to John Stasko for his seminal contributions to the value of interaction in information and visual analytics research and to the design and evaluation of software and information visualization. Stasko is a Regents Professor in the School of Interactive Computing at the Georgia Institute of Technology (GT). He earned his Ph.D. in Computer Science from Brown University in 1989 and joined the GT faculty later that year.

Stasko's first major research emphasis was on software for Algorithm Animation. His several software tools – Tango, Polka, and Samba – were used extensively in courses and provided the framework for others' tools. Stasko became one of the best-known researchers in the area of software visualization and was the lead editor and author of multiple chapters in the MIT Press book *Software Visualization*.

Subsequently, Stasko's research turned to the broader area of Information Visualization, and it has spanned a variety of areas within the field including the design of new visualization techniques such as the Information Mural, InfoCanvas, and Dust 'n Magnet. Likely the best known is the SunBurst technique, a versatile radial alternative to treemaps. His techniques have extended to applications in other domains as well. For example, his work on the Tarantula visualization technique/system for debugging opened up a new line of research in the software engineering community and led to the ACM SIGSOFT Impact Paper Award in 2015.

Stasko is also recognized for his fundamental conceptual/theoretical research in Information Visualization on topics such as user tasks, the importance of interaction, and cognitive support models of visualization. His papers on user tasks and interaction have become foundational works for the field, establishing vocabularies for system developers to articulate the capabilities of their systems.

In the relatively new field of Visual Analytics, Stasko's research spawned the software tool Jigsaw - a system to help analysts better assess, analyze, and make sense of document collections. Together with his postdoc Carsten Görg, he made the system available to the public and had many testimonials of its practical value. Multiple Jigsaw papers were published, covering its architecture, UI evaluation, and real-world applications in intelligence analysis. The original paper about the system received the VAST 2017 Test of Time award.

His recent research has focused on new interaction methods for information visualization, running on small hand-held devices to large wall displays, while providing touch-sensitive and natural-language interfaces and toolkits, such as DataBreeze and NL4DV.

One theme that is pervasive in his research is evaluation - he not only creates visualizations, he also evaluates them with carefully-applied quantitative and qualitative methods. His paper on the effectiveness of animation in trend visualization, done with collaborators at MSR while on sabbatical, received the InfoVis 2018 Test of Time Award. More recently, recognizing the weakness in traditional evaluation approaches, he developed a more holistic, value-driven evaluation approach – a heuristic methodology known as ICE-T.

Stasko has (co-)authored more than 200 publications on these topics and others. He is a member of both the IEEE VIS Academy and the ACM CHI Academy. In 2012, he received the IEEE VGTC Technical Achievement Award for his work on the Jigsaw visual analytics system. He was named an IEEE Fellow in 2014 and an ACM Fellow in 2022.

Beyond his research work, Stasko routinely contributes his time to the global visualization community as well. He has twice served on the Editorial Board of IEEE TVCG journal. He was Papers Co-Chair for IEEE InfoVis in 2005 and 2006, for IEEE VAST in 2009 and 2016, and for IEEE VIS in 2023. In 2013 he served as General Chair and local host for IEEE VIS when it was held in Atlanta. He also was a Co-Chair and Organizer of three early Dagstuhl seminars on Software and Information Visualization. Stasko is a dedicated teacher as well, having won the GT College of Computing Teaching Award in both 2005 and 2020. His graduate Information Visualization course was one of the first of its kind worldwide. The course's web presence made the syllabus, course slides, and assignments widely available, and they were used and adapted by many others.

John's research has benefited immeasurably by the contributions of colleagues, collaborators, and especially his many students, who themselves have gone on to successful careers in academia and industry. He is deeply grateful to them all, as well as to his GT mentors Jim Foley and Peter Freeman.