

Keynote

In Varietate Concordia: How Software Visualization and Information Visualization Have Evolved From, Around, and Along Each Other

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Abstract

Software visualization (softvis) and information visualization (infovis) have a long, interconnected, and complex joint history. Originally appearing as a subdomain of infovis which focuses on solving problems coming from the software engineering domain, softvis has grown in the last two decades to become a self-standing field with distinct challenges, key results, events, and community. In the same time, the independent growth of the two fields has made the transfer of ideas, techniques, methods, application cases, and researchers between the two domains increasingly challenges. In this talk, I will present a history of this highly dynamic process and argue about the need for rapprochement of infovis and softvis. This need is supported by two key aspects identified and further discussed: (1) Complementarity of the two fields advocates for more interaction, as shown by success stories from softvis which led to entirely novel branches of development into the infovis field and, conversely, recent key developments in infovis which offer strong potential to be picked up to address existing key challenges in softvis. (2) Commonality, in terms of both fields essentially aiming to solve very similar visualization problems that address very similar data and using related visualization pipelines, advocates on an increasingly joint approach in their further development.

Bio

Alexandru C. Telea received his PhD (2000) in Computer Science from the Eindhoven University of Technology, the Netherlands. He was assistant professor in visualization and computer graphics at the same university (until 2007) and then full professor of visualization at the University of Groningen. Since 2019 he is full professor of visual data analytics at Utrecht University. He chaired several ACM SoftVis and IEEE VISSOFT events and also the steering committee of both conferences, which eventually led to their fusion and the appearance of the IEEE Working Conference on Software Visualization. His research interests include high-dimensional visualization, scalable software visualization, image-based information visualization, and visual analytics for explainable AI (XAI).