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State of the Art Reports

STARs Chairs
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S. Oeltze-Jafra, N. Smit, and B. Wang
(Guest Editors)

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STAR – State of The Art Report

Foreword

The State-of-the-Art Reports (STARs) for EuroVis are intended to provide up-to-date and comprehensive surveys on topics of interest to the visualization research community. Exposition, appreciation, criticism, and innovation are at the core of many STARs.

In 2020, EuroVis STAR track is in its seventh year since its introduction in 2014. We have encouraged the submission of STARs on topics that have not been covered by any recent STARs or other surveys. An ideal STAR should contain new taxonomies and novel organization of the visualization research. It also identifies the challenges and opportunities in research. Furthermore, it typically serves as an entry point into a particular research direction for an inexperienced researcher. We have organized an International Program Committee (IPC) for the STAR track that covers diverse research topics in visualization to guarantee quality and coverage.

This year, the STAR track received 31 STAR sketches, 17 of which resulted in full STAR submissions. After the review process described above, 8 STARs were accepted to be published in the Computer Graphics Forum journal and to be presented at EuroVis 2020. Additionally, 2 STARS have been selected for a fast track submission to Computer Graphics Forum.

The accepted STARS cover a wide variety of topics: maps, privacy, user differences, trust, provenance, and flow visualization. Under the topic of maps, Xu et al. provided an overview of the transit map generation process, primarily from the design, machine, and human perspectives. Hogräfer et al. gave an overview of the literature on map-like visualization and provided a hierarchical classification along two general perspectives: imitation and schematization of cartographic maps. Under the topics of privacy and user differences, Liu et al. studied individual differences in the use of data visualization systems and reviewed the research perspectives, personality traits and cognitive abilities, visualizations, tasks, and measures investigated in the existing literature. Bhattacharjee et al. provided a systematic analysis of the approaches used for handling data privacy in visualization. For trust and provenance, Xu et al. provided a comprehensive survey of work that focus on the analysis of user interaction and provenance data. Chatzimparmpas et al. provided a categorization of trust against different facets of interactive machine learning. For flow visualization, Sane et al. analyzed and classified seed placement and streamline selection techniques used by the scientific flow visualization community. Bujack et al. provided a taxonomy of approaches that generalize flow topology from time-independent to time-dependent settings and introduced a set of desirable mathematical properties to interpret physical meaningfulness for time-dependent flow visualization.

We are pleased with the high quality of all accepted reports, and feel that they reflect the growth and breadth of our area very well. We would like to encourage everybody to attend the STAR sessions virtually at EuroVis 2020.

We thank the authors of all submitted STARs for their interest in the EuroVis STAR track and for their excellent quality submissions. Moreover, we would like to give credit to all IPC members and reviewers, who have done an excellent job and have defined the quality of this track. We hope that interested readers find these reports enjoyable, educational, and inspiring.

Noeska Smit, Steffen Oeltze-Jafra, and Bei Wang
EuroVis 2020 STAR Co-Chairs

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