EuroVA 2019

EuroVis Workshop on Visual Analytics

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Applications of Visual Analytics

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Keynote

Probabilistic Modelling With the Experts

Samuel Kaski

Abstract

I will discuss multiple-data-source prediction and modelling problems arising in a number of fields, for instance in omics-based precision medicine. What is less common is that some of the data sources are experts, whose time is costly, changing the problem to active learning for prediction. We have addressed this setup as a probabilistic modelling problem, where different types of sources need different modelling assumptions, expert user models ultimately drawing from cognitive science. This brings links to other lines of work on interactive intent modelling and likelihood-free inference to infer the user models.

Short Biography

Samuel Kaski is an Academy Professor at Aalto University, Finland, and the Director of the Finnish Center for Artificial Intelligence FCAI. His research focuses on probabilistic machine learning, meaning probabilistic modelling and Bayesian inference, applied to difficult problems that are interesting and societally important. His work includes the interrelated topics of analysis of multiple data sources, human-in-the-loop machine learning, simulator-based inference (likelihood-free inference with ABC), and privacy-preserving learning.

EuroVA Panel: The Past, the Present and the Future of Visual Analytics

Panel Scope

To celebrate and reflect on the 10th anniversary of EuroVA, this panel aims to get the visual analytics community to discuss the successes and failures of visual analytics research, and discuss future challenges, opportunities and a roadmap for an impactful, growing research community in the fast moving research landscape of data-intensive fields such as data science, machine learning and AI. The panel members will build on a few questions to initiate the discussions: what are some notable successes and failures of Visual Analytics research so far, what are some key challenges that Visual Analytics research needs to tackle, and how do we increase our impact as a research community both academically and societally?

Panelists will present their opinions and vision on the past, the present, and the future of visual analytics research and the audience will then be invited to discuss these topics with the panelists in an interactive setting.

Panelists:

Silvia Miksch, Vienna University of Technology, Austria
Giuseppe Santucci, Sapienza, University of Rome, Italy
Jörn Kohlhammer, Fraunhofer IGD, Germany
Samuel Kaski, Aalto University, Finland