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## **Keynote & Capstone**

## Keynote: Visual-Interactive Data Analysis – Obtaining Insight into Complex Data Using Interaction, Visualization, and Data Mining

Tobias Schreck, TU Graz, Austria

### Abstract

Advances in data acquisition and storage technology lead to the creation of increasingly large, complex data sets across application domains as diverse as science, engineering, business, social media, or team sports analysis. Important user tasks for leveraging large, complex data sets include finding relevant information, exploring for patterns and insights, and re-using of data for authoring purposes. Novel methods in visual-interactive data analysis allow to tightly integrate knowledge of domain analysts with automatic data analysis methods, offering solutions for complex analysis problems. We discuss visual-interactive data analysis techniques from our work that support search and analysis in a variety of different data types and novel application scenarios. These include approaches for example- and sketch-based search in multidimensional data sets, exploration of patterns in social media data, and visual analysis of soccer match data. We also touch on novel methods to support the analysis and restoration tasks in virtual archaeology. We conclude the talk by discussing research challenges in the area.

### Biographie

Tobias Schreck holds a Professor position with the Institute for Computer Graphics and Knowledge Visualization at Graz University of Technology, Austria. Between 2011 and 2015, he was an Assistant Professor with the Data Analysis and Visualization Group at University of Konstanz, Germany. Between 2007 and 2011 he was a Postdoc researcher and head of a junior research group on Visual Search and Analysis with Technische Universität Darmstadt, Germany. Tobias Schreck obtained a PhD in Computer Science in 2006, and a Master of Science degree in Information Engineering in 2002, both from the University of Konstanz. He works in the areas of Visual Analytics, 3D Object Retrieval, and Digital Libraries. His research interests include visual search and analysis in time-oriented, high-dimensional and 3D object data, with applications in data analysis, multimedia retrieval and cultural heritage. He has served as co-chair for Posters, Workshops and Panels for IEEE VIS, as well as a co-organizer for the EG Workshop on 3D Object Retrieval in the past.

## Capstone: How to bring people to new worlds?

Andreas Jakl, Tieto, Austria

### Abstract

Each tool modifies, extends or improves a tiny aspect of our daily life. That's the goal of every mobile app – Augmented Reality and Wearables are just the most recent hypes. However: what are the possibilities to inject actually useful information into the world of the user? The planning of remarkable apps that achieve exactly that does already start with the user experience and combines it in a novel way with other immersive technologies like location based services. We will take a look at the recipes for success and inspiring apps that managed to build this bridge!

### Biographie

Andreas Jakl is working with mobile apps since 2004. As Mobility Expert at Tieto, he brings the business partner's vision of mobile strategies to life. Together with the mobility.builders Community, he is organizing the Mobile Developer After-Work events, where expert developers share their knowledge. As Microsoft MVP (Most Valuable Professional) for Windows Development, he publishes open source libraries for immersive technologies like Bluetooth Beacons and NFC.