

## Abstract:

This talk will overview interactive data visualization research performed by the ISOVIS research group at Linnaeus University with a focus on textual, network, and multidimensional data. The field of Information Visualization (InfoVis) uses interactive visualization techniques to help people understand and analyze data. It centers on abstract data without spatial correspondences; that is, usually it is not possible to map this information directly to the physical world. This data is typically inherently discrete. Examples of such abstract data are symbolic, tabular, networked, hierarchical, or textual information sources (for example, genealogies, demographic data of a population, or trends in time-dependent data). The related field of Visual Analytics (VA) focuses on the analytical reasoning of typically large and complex (often heterogeneous) data sets and combines techniques from interactive visualizations with computational analysis methods. I will show how these two fields belong together and highlight their potential to efficiently analyze large and complex data sets with the help of a selection of visualization showcases recently developed by my research group. These visualization and visual analytics examples range from investigating stance and sentiment in online social media such as Reddit or Twitter, exploratory analyses of multivariate and heterogeneous networks, to ideas of making the black boxes of complex dimensionality reduction techniques more transparent in order to increase the trust into their results. Finally, important research trends in those areas are briefly presented.