

## From Spatial Frequencies to ISOTYPE

**Steve Haroz (Université Pierre-et-Marie-Curie)**

Visualization is ultimately a translation of binary data to awareness and action using an image as a medium. While the process has many individual components, the true determinant of visualization utility lies in the success of the overall process. Much – arguably most – research in visualization seeks to advance and optimize the computational and rendering techniques necessary to make data into an image. The aim of my research, however, is to improve our understanding of what happens once the information leaves the monitor and enters the eye. In this talk, I'll briefly survey a collection of my research covering low level topics like spatial frequency coding to higher level scene-wide outlier detection to more complex cognitive topics like working memory limits of ISOTYPE icons. These projects collectively provide both a novel understanding of visual cognition as well as a new guidelines and limitations for creating more effective visualizations.