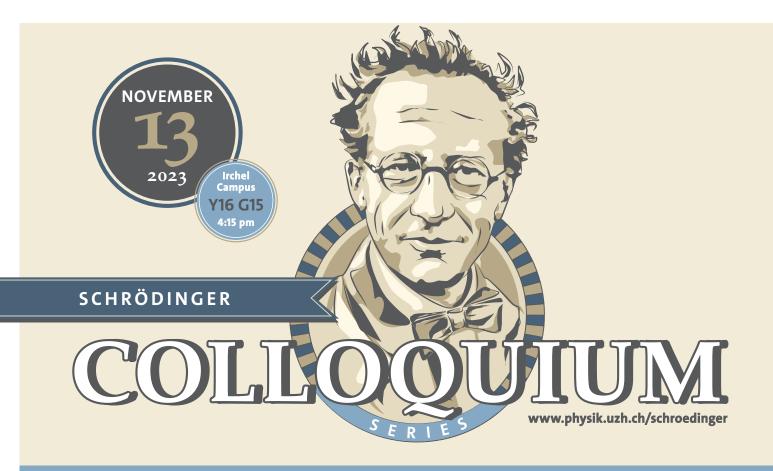


## **Faculty of Science**



## PROF. ARZU ÇÖLTEKIN UAS Northwestern Switzerland FHNW Visualization of science and a science of visualization

For scientific discovery, as well as science communication, visualizations play an important role. They can be a key element in seeing patterns, anomalies, or making sense of large data sets that are otherwise difficult or impossible to interpret. On the other hand, because human perception is fallible (e.g., think about optical illusions, for example) and cognitive bias can affect what we see, visualizations can mislead us. In this talk, we

briefly walk through how science is visualized, and share some empirical observations on human visuospatial information processing across various visualization types and designs. We exemplify experiments where we study 2D vs. 3D, more realistic vs. less realistic, interactive vs. static, stereo vs. mono, as well as how various color designs or shading can affect how well people can see what they need to see.

