Bioimage Analysis, Visualisation and Beyond **Keynote lecture**

How to not lie with charts better data visualisations for life sciences

Thursday October 3, 2024 at 13-14 (coffee at 12.45) Putous Auditorium, Joki Visitor and Innovation Center



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Helena has a PhD in molecular biology and a life long passion for art and design. After completing a PhD at EMBL, she worked with multi-dimensional datasets, images and genome-scale data at the Max-Planck Dresden, before becoming a scientist in biomedical data visualisation, most recently at the University Hospital Dresden. Since 2024 Helena is an associate professor for data visualisation in Chur/Switzerland and trains and consults in life science data visualisation.

Data visualisation is an indispensable tool in modern biological research, aiding scientists in the analysis and interpretation of extensive datasets and facilitating the communication of complex scientific findings. Data visualisations serve three main purposes: analysis and exploration, presentation of research results, and communication to the public. Firstly, data visualization is crucial for analyzing and exploring large research datasets, such as those in genomics, high-throughput experiments, but also results from image analysis. These datasets are too vast for manual analysis, and purely statistical summaries often fail to capture underlying

patterns. Secondly, visualizations are essential for presenting research findings. Figures are widely used in scientific articles and conference posters, as they allow readers to effectively grasp complex data. And, data visualisation is vital for communicating scientific results to the public, as we all witnessed in the challenges of the COVID-19 pandemic. I will highlight examples from my research and education to illustrate why it serves biology well to "take a sad plot and make it better".











TURKU BIOIMAGING



