



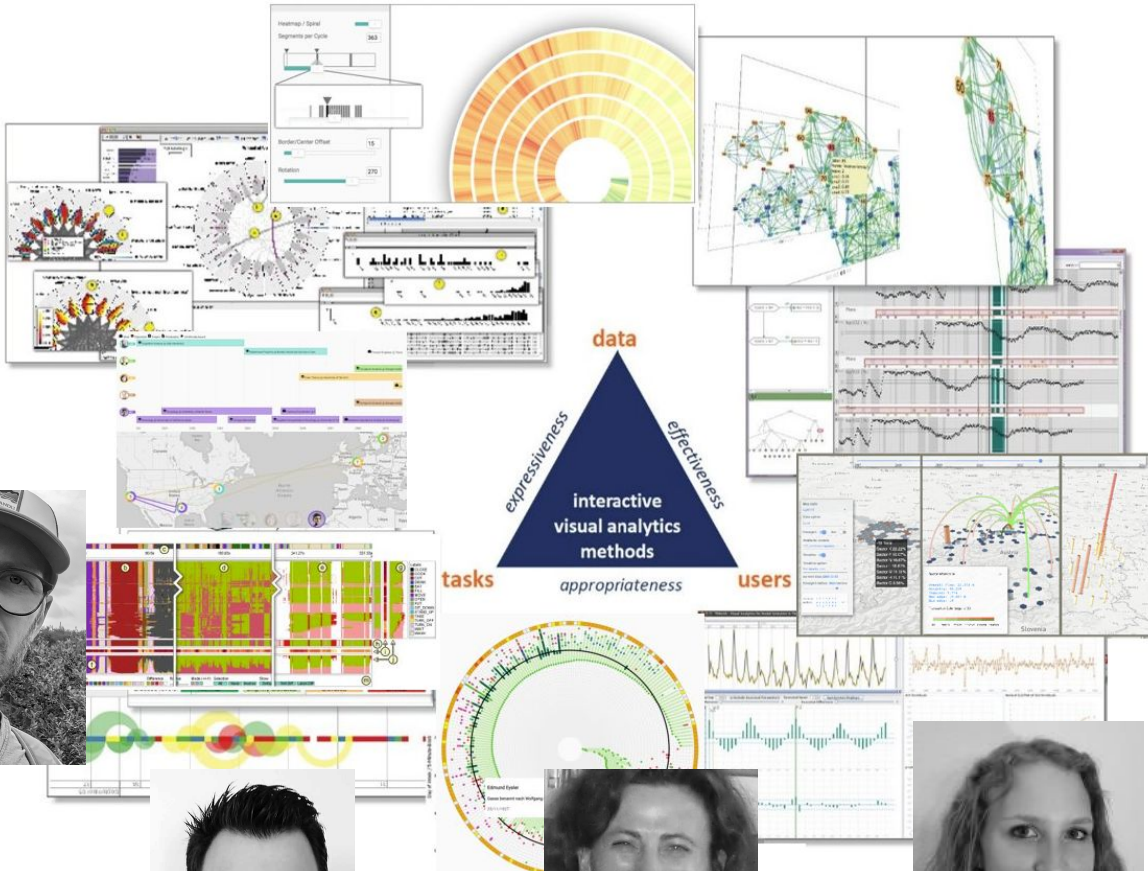
Laura Bassi Centre of Expertise
**Centre for Visual Analytics
Science & Technology**

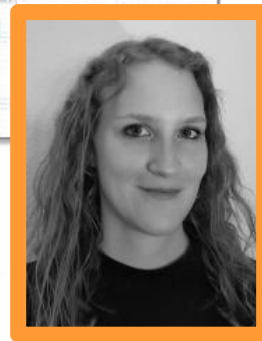
Visual Analytics E193-07

TU Wien, CVAST

Michaela Tuscher (+ Markus Bögl) / Wintergraph 2025

www.cvast.tuwien.ac.at





Research Foci

Visualization & Visual Analytics (VA)

Knowledge-Assisted VA, Guidance, Data & Uncertainty Analysis

Graph Drawing & Network Visualization

Dynamic & Large Network Visualization

Spatial & Time-oriented Visualization

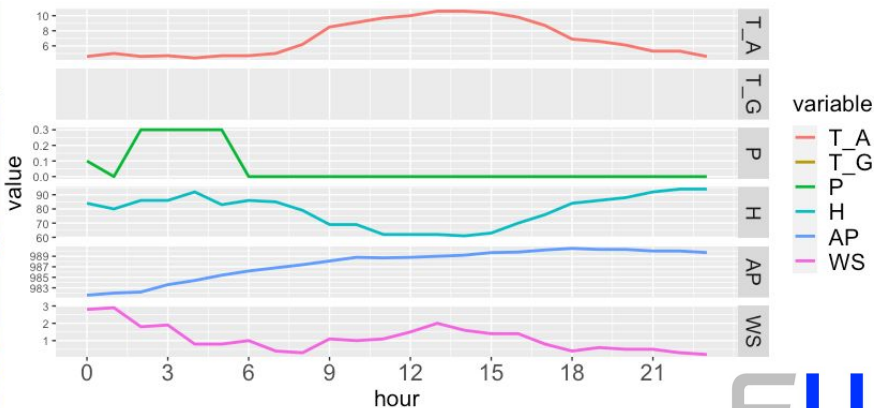
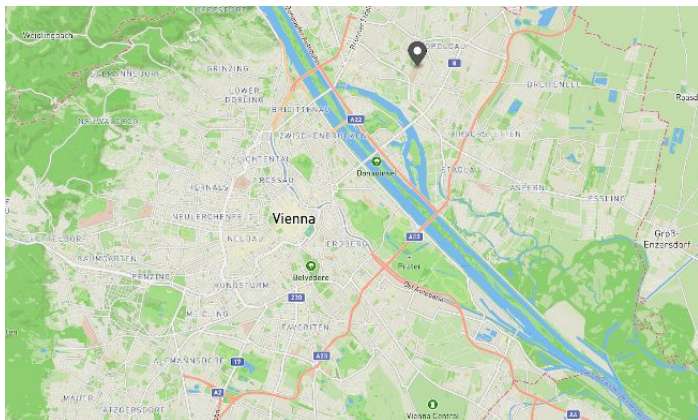
Segmentation, Dimension Reduction, Parameter Space Analysis

Set & Ensemble Visualization



we are hiring

Visual Interactive Space-Time Segmentation FWF Stand-Alone Project - expected start Q2/2025 (3 years)



FWF

Der Wissenschaftsfonds.



<https://www.cvast.tuwien.ac.at/projects/kavis>



Pre-Doc

Post-Doc



Bilateral AI ^{new}



Combining sub-symbolic AI (machine learning) and symbolic AI (knowledge representation and reasoning)

FWF Cluster of Excellence

Intersection of Visual Analytics with graph-based structures like Knowledge Graphs (KGs), causal representation learning, and causal reasoning



Investigate the utility of VA for (1) Collaborative exploration of KGs, (2) Quality assessment and curation of KGs, (3) Exploration and communication of causal relationships and reasoning



Der Wissenschaftsfonds.



<https://www.bilateral-ai.net/>



Pre-Doc



ArtVis Dynamic Network Perspectives on Digital Art History FWF

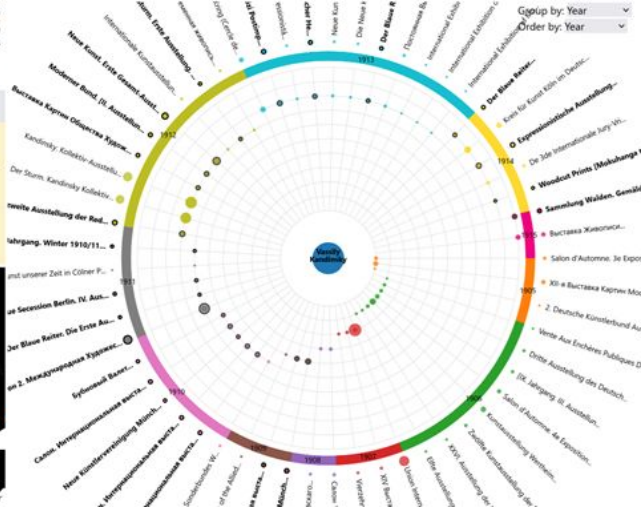
Vassily Kandinsky (RU)
1866 (Moscow) - 1944 (Neuilly-sur-Seine)
57 exhibitions | 588 artworks

23 common exhibitions

Gabriele Münter (DE)
1877 (Berlin) - 1962 (Murnau)
28 exhibitions | 303 artworks

Type	Date	City	Country	Title	Catalogue Entries	Base %Entries	Compare %Entries	Artists	Host	Hosttype
group	1909	Munich	DE	Neue Künstlervereinigung München E.V. Turmus 1909-1910	137	10%	10%	14	Moderne Galerie (Heinrich Thannhauser)	art galleries
				Salon. Интернациональная выставка картин.						

Total vs. artist's paintings in exhibitions



ArtVis
FWF

Der Wissenschaftsfonds.



universität
wien



<https://www.cvast.tuwien.ac.at/projects/artvis>



Visual Heritage

VA and Computer Vision Meet Cultural Heritage

FWF doc.funds.connect

Collaboration with FH St. Pölten

Interdisciplinary approach between computer science
and the humanities

Visual approaches for relationship analysis of cultural heritage
data



<https://www.cvast.tuwien.ac.at/projects/visual-heritage-vacovicu>



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SANE

SANE: VA for Event-based Diffusion on Networks FWF-WEAVE

Collaboration with University of Cologne & Newcastle University

VA for studying and communicating information
diffusion processes over networks

Tackling the dynamic and stochastic nature of
diffusion processes in real-world scenarios



<https://www.cvast.tuwien.ac.at/projects/sane>



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UNIVERSITY
OF COLOGNE

Newcastle
University

GuidedVA

GuidedVA: Guidance-Enriched VA for Temporal Data WWTF-ICT

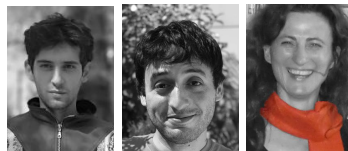
Incorporating guidance in VA processes to enhance analysts' decision-making

Improve reliability in data analysis, visualization,
and interpretation

A framework to assist with suitable VA methods for
unevenly spaced temporal data



<https://www.cvast.tuwien.ac.at/projects/guidedva>



Vienna Science
and Technology Fund



Thank you!

