the future of data and design ... in visualization research



@mattbrehmer May 19 2015

InfoVis Group UBC Computer Science

MEMBERS



Tamara Munzner



Michelle Borkin



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Johanna Fulda

RECENT NEWS

5/02/2015 [PAPER]:

Detangler: Visual Analytics for Multiplex Networks

by Benjamin Renoust (National Institute of Informatics, Tokyo, Japan), Guy Melançon (Université de Bordeaux), and Tamara Munzner was accepted to *EuroVis 2015*, May 25-29 in Cagliari, Italy.

Benjamin will present this paper in the Graphs session on Thursday, May 28 at 11am.

[pre-print pdf]

2/23/2015 [SOFTWARE]:

TimeLineCurator

We released a browser-based visualization tool for curating timelines generated from freeform text. Try it out and let us know what you think!

[web application]

2/19-20/2015 [TALK]:

Book tour talks: Tableau, Microsoft Research, giCentre

Tamara Munzner spoke on Visualization Analysis and Design at Tableau Software 2/20, and Microsoft Research 2/19. Her seminar at City University London's giCentre was on Feb 3.

[slides]

12/22/2014 [PODCAST]: Data Stories #44: w/ Tamara Munzner

Enrico Bertini and Moritz Stefaner interview Tamara Munzner in their biweekly podcast on data visualization.

[episode]











research papers talk slides demo videos open source software vis design resources

what is visualization research?

technique-driven <-> problem-driven



what is visualization research?

technique-driven <-> problem-driven



technique-driven

developing techniques & algorithms

example: visualizing large document collections

category

Dimensionality reduction for documents with nearest neighbor queries. Ingram & Munzner. In J. Neurocomputing (2014)





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technique-driven

perceptual studies

example: graph readability metrics







A search-set model of path tracing in graphs. Dawson, McGrenere, & Munzner. In J. Information Visualization (in press)

what is visualization research?

technique-driven <-> problem-driven



problem-driven

external collaborations

real data, real use cases

example: energy portfolios analysis

Portfolio Visualization Sandbox

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Matches, mismatches & methods: Multiple-view workflows for energy portfolio analysis. Brehmer, Ng, Tate, & Munzner. (in review)



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current trends & the future of visualization research

lowering the bar





tableau.com









RAW

The missing link between spreadsheets and vector graphics.

raw.densitydesign.org



shiny.rstudio.com



Mirador by Fathom fathom.info/mirador

Lyra by U. Washington IDL idl.cs.washington.edu/projects/lyra



iVisDesigner by Ren, Hollerer, & Yuan donghaoren.org/ivisdesigner

DATA PIPELINES		
Gas –	4,000	6,000
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Lyra by Arvind Satyanarayan & Jeff Heer (2014) idl.cs.washington.edu/projects/lyra see also Jeff's talk at openvisconf.com

● ● ● TimeLineCurator v0.2 ×					
TimeLineCurator v0.3					
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			Deer		
List View Docu Sort list by: All dates chronologically ≑ ▼ + Denmark					
•	19/2	Stuomenn	The same move is d		
Ø	1975	Abba wins Eurovision	singer/songwriter S		
Ø	1975	Charlotte Rordam Larsen	from folk at the star		
	1975	Hijomar becomes Loni Blu Bojs	electric rock/new w		
	1975 - 1990	Moving from folk to electro	Also in his entourag		
Ø	1977	Punk arrived	as female vocalist.		
	1977	Tuomari Nurmio	1978 with politic		
Ø	1978	Punk hits Denmark	like Malurt (with sin		
	1979	Bubbi Morthens recorded his first	going solo a decade		
	1979	Bubbi Morthens and the Outsiders	The definite breakt Linnet comes when wave in the eighties Linnet Band and Ma		
	1980 - 1990	Though Finnish bands tend to			
M	1980 - 1990	A-ha and Fra Lippo Lippi - band of the 80s			
	1980 - 1990	Dingo & Yö – artists of the 80s			
	1980 - 1990	Where neighbouring country Sweden spends	becomes one of the		
Events: 92	2. vague expressions	: 10	17 temporal expressions in th		

TimeLineCurator by Johanna Fulda, Matt Brehmer, & Tamara Munzner (2015) cs.ubc.ca/group/infovis/software/TimeLineCurator



visualization beyond the desktop

visualization beyond the desktop



"On Broadway" (2015) Goddemeyer et al on-broadway.nyc

Also see: "Death of the Desktop Workshop" at IEEE VIS 2014: beyond.wallviz.dk



Jansen et al (CHI '12) aviz.fr/trc



visualization literacy & data journalism

visualization literacy & data journalism



visuals team



FiveThirtyEight

The New York Times **The Upshot**







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