

Scales and Methods of Engagement

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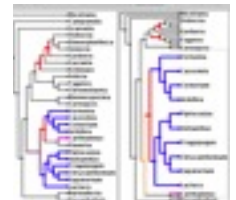
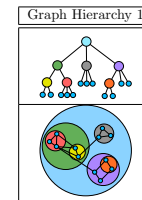
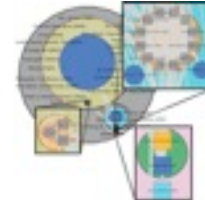
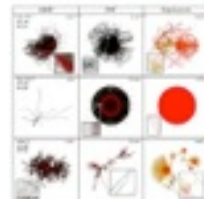
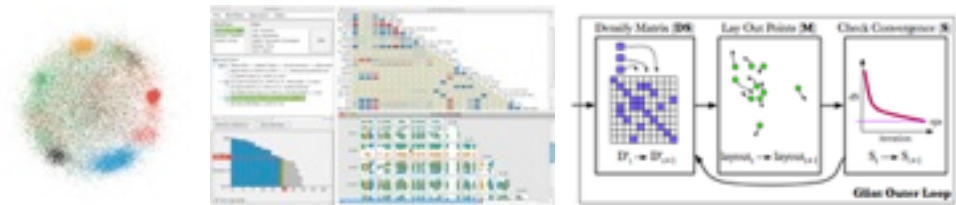
*VA Tool Users and Universities Panel, CANVAS 2014 Workshop
1 August 2014, Vancouver*

<http://www.cs.ubc.ca/~tmm/talks.html#canvas14>

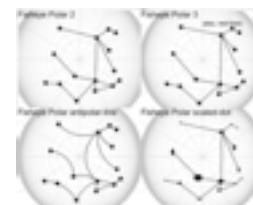
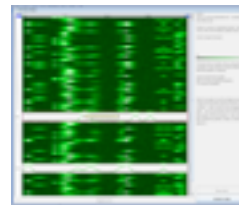
Mentoring individuals

- grad students and postdocs in my group
 - prepare HQP for professor, high-level industry/lab jobs
 - produce research papers

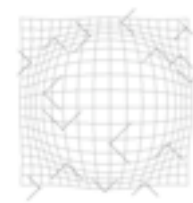
- techniques, systems
 - dimensionality reduction
 - graph drawing
 - focus+context



- evaluation



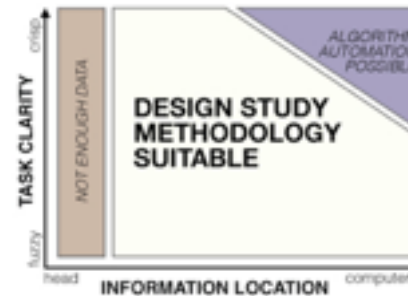
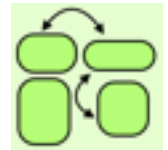
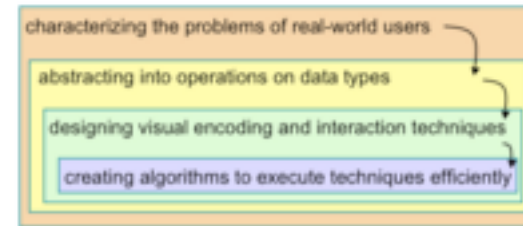
- models/taxonomies



Researcher guidance: “meta” / how to papers

- papers process and pitfalls
- nested model for vis design and validation
 - revisited: blocks and guidelines
- design study methodology

- Type Pitfalls
 - Design in Technician's Clothing
 - Application Bingo versus Design Study
 - All That Coding Means I Deserve A Systems Paper
 - Neither Fish Nor Food
- Visual Encoding Pitfalls
 - Unjustified Visual Encoding
 - Hammer In Search Of Nail
 - 2D Good, 3D Better
 - Color Cacophony
- Results Pitfalls
 - Undone By Time
 - Fear and Loathing of Complexity
 - Straw Man Comparison
 - Tiny Toy Datasets
 - But My Friends Liked It
 - Unjustified Tasks
- Writing Style Pitfalls
 - Deadly Detail Dump

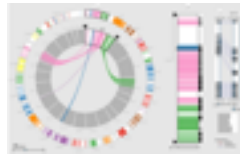


Design study methodology

- lessons learned from 21 total (12 here), across many domains
- problem-driven work: what to do, what to avoid



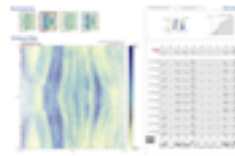
Cerebral
genomics



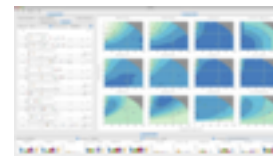
MizBee
genomics



Pathline
genomics



MulteeSum
genomics



Vismon
fisheries management sustainability



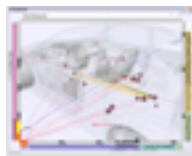
QuestVis
sustainability



WiKeVis
in-car networks



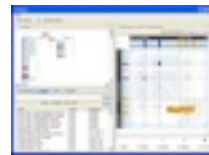
MostVis
in-car networks



Car-X-Ray
in-car networks



ProgSpy2010
in-car networks



RelEx
in-car networks



Cardiogram
in-car networks



AutobahnVis
in-car networks



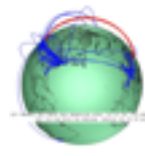
VisTra
in-car networks



Constellation
linguistics



LibVis
cultural heritage



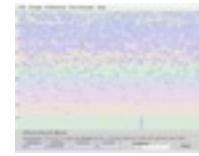
Caidants
multicast



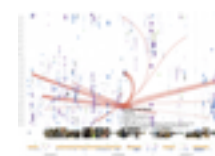
SessionViewer
web log analysis



LiveRAC
server hosting



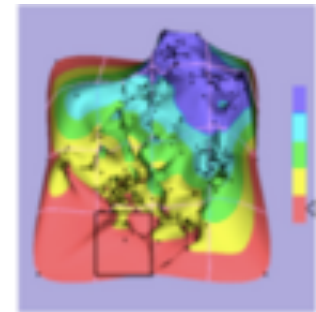
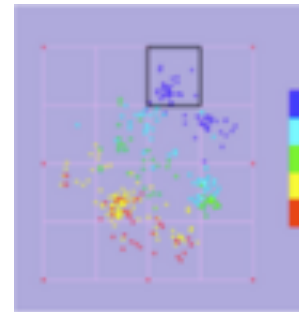
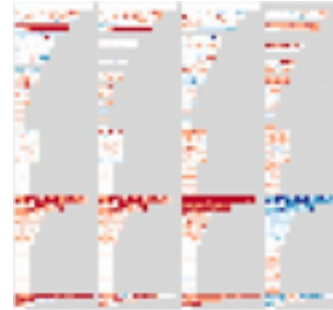
PowerSetViewer
data mining



LastHistory
music listening

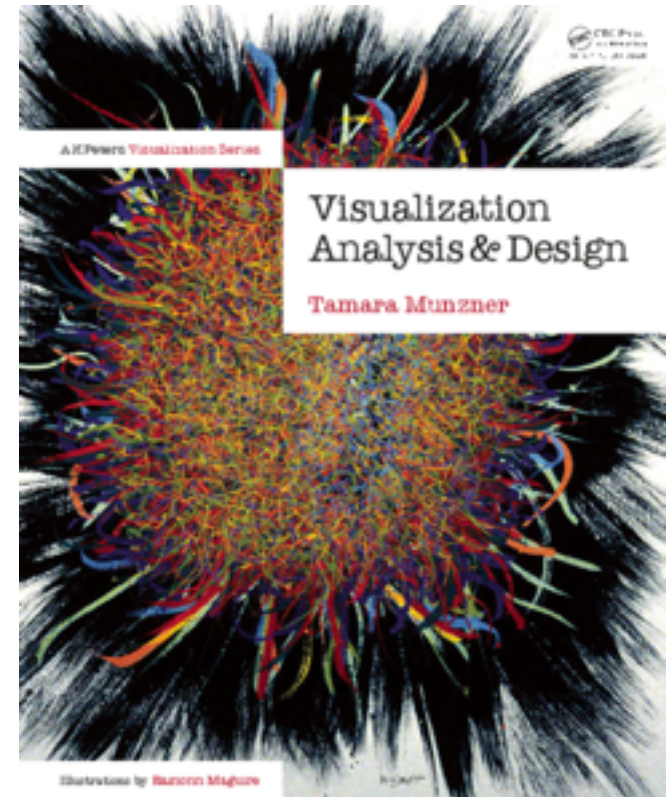
Practitioner guidance: “stop it” / how not to papers

- guidance on scatterplot, dimensionality reduction choices
 - avoid 3D scatterplots for DR data
- 2D points vs 3D landscapes
 - avoid 3D landscapes
- empirical studies



Growing the field: synthesis textbook

- analysis and design framework
 - teaching my own grad class
 - resource for others
 - support teaching by wider set
 - accelerate growth of field
 - 1998: very few courses
 - 2002: several
 - 2014: dozens
 - 2020: hundreds? thousands?...



Visualization Analysis and Design.

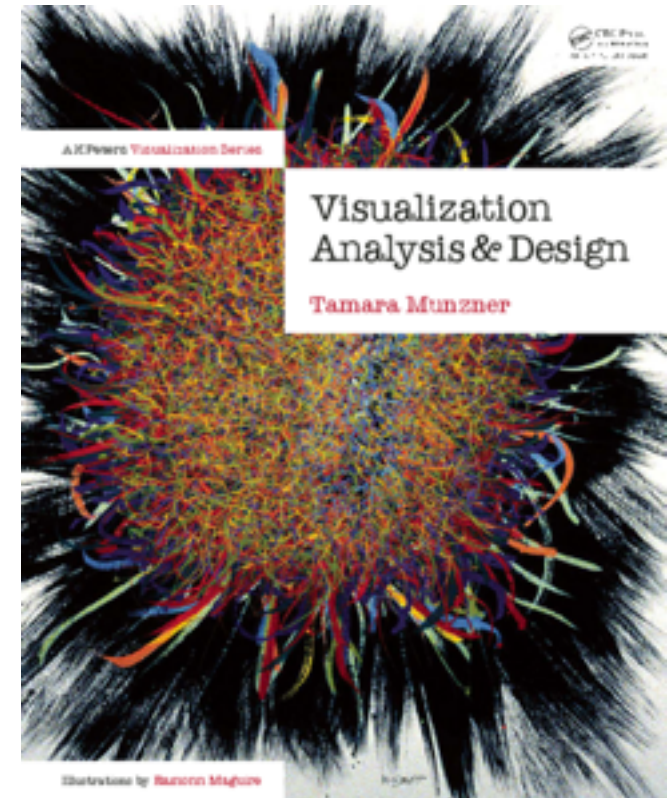
*Munzner. AK Peters Visualization Series,
Taylor and Francis / CRC Press, to appear Oct 2014.*

Past and Future

- scales of engagement
 - individuals
 - students in my course
 - research community
 - practitioner community
 - students worldwide
- methods of engagement with industry
 - direct collaboration with individuals at companies
 - Agilent, AT&T, Google, small startups
- my past: very research/academic centric
- my future: other/broader channels?...

More Information

- these slides
<http://www.cs.ubc.ca/~tmm/talks.html#canvas14>
- papers, videos, software, talks, courses, mini-courses
<http://www.cs.ubc.ca/group/infovis>
<http://www.cs.ubc.ca/~tmm>
- book (to appear Oct 2014)
<http://www.cs.ubc.ca/~tmm/vadbook>



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