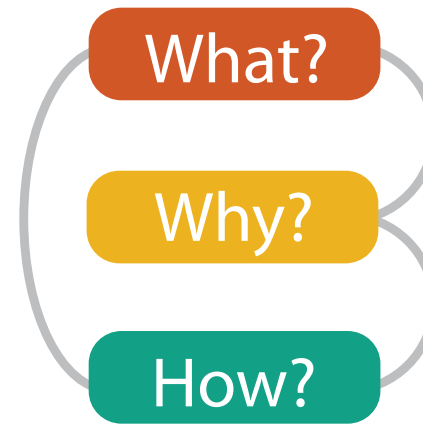
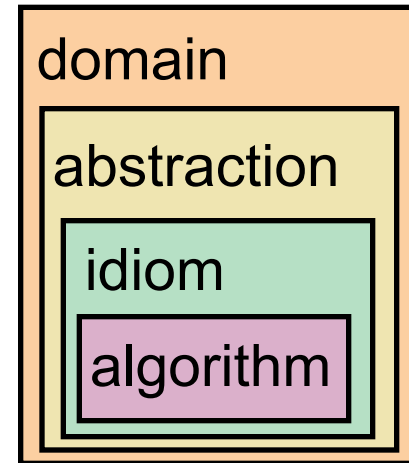
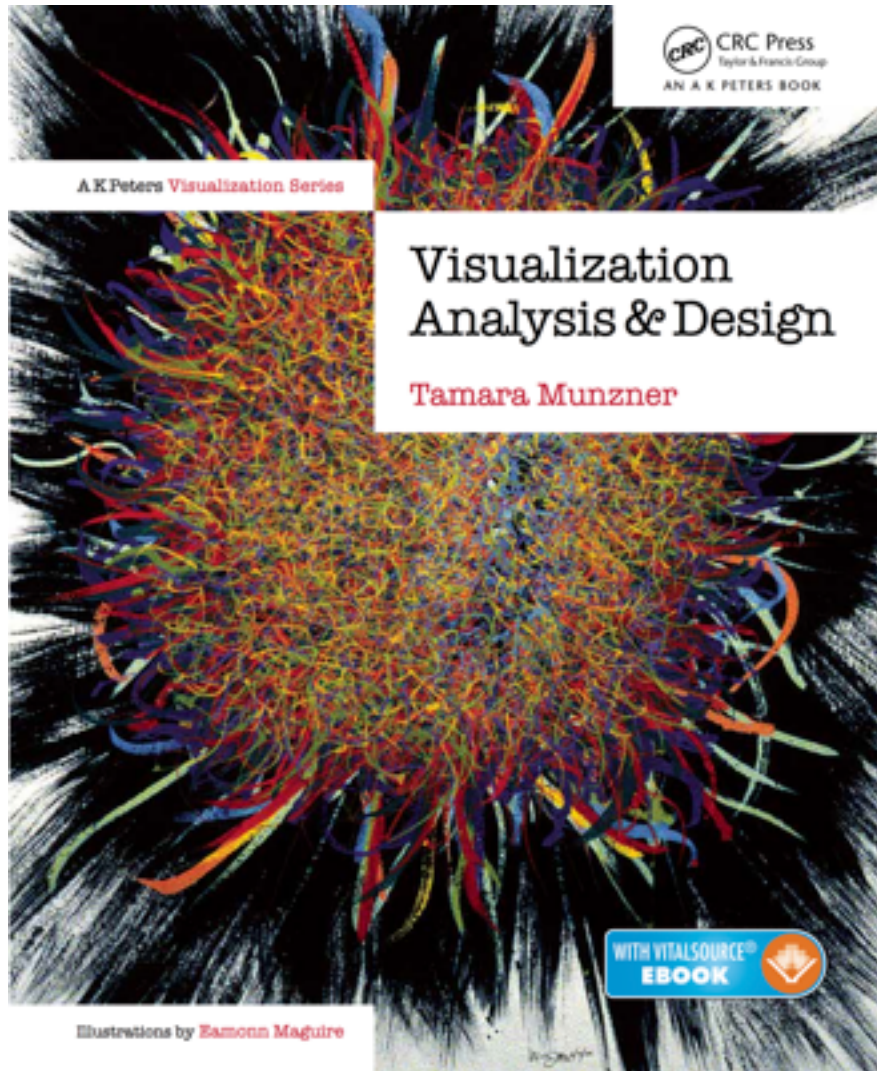


# Principles and design choices



**Visualization Analysis & Design**

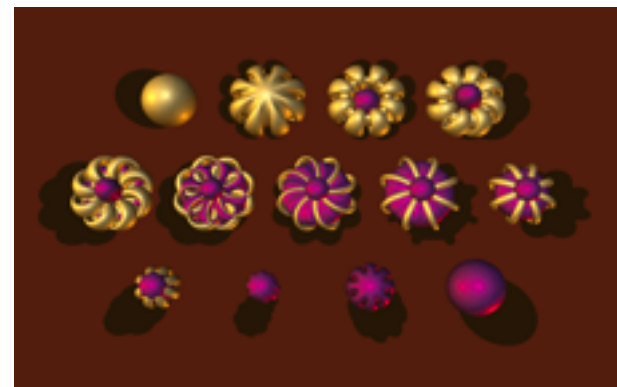
# Geometry Center 1990-1995



**Geomview**



**The Shape of Space**



**Outside In**

**Charlie Gunn**

**Stuart Levy**

**Mark Phillips**

**Delle Maxwell**



# Stanford 1995-2000

Pat Hanrahan



H3

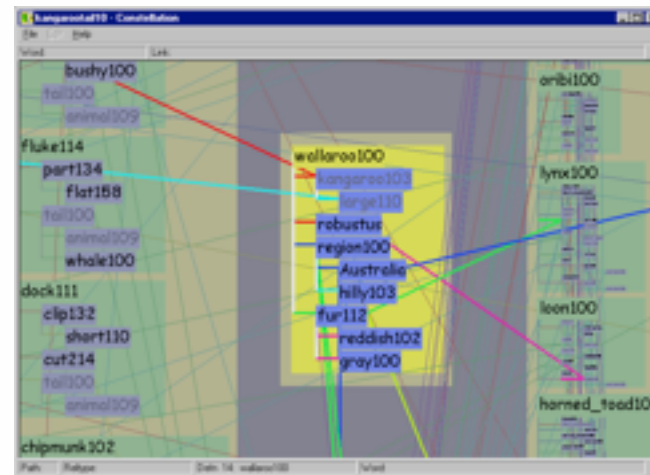
Diane Tang Chris Stolte Robert Bosch



Maneesh Agrawala

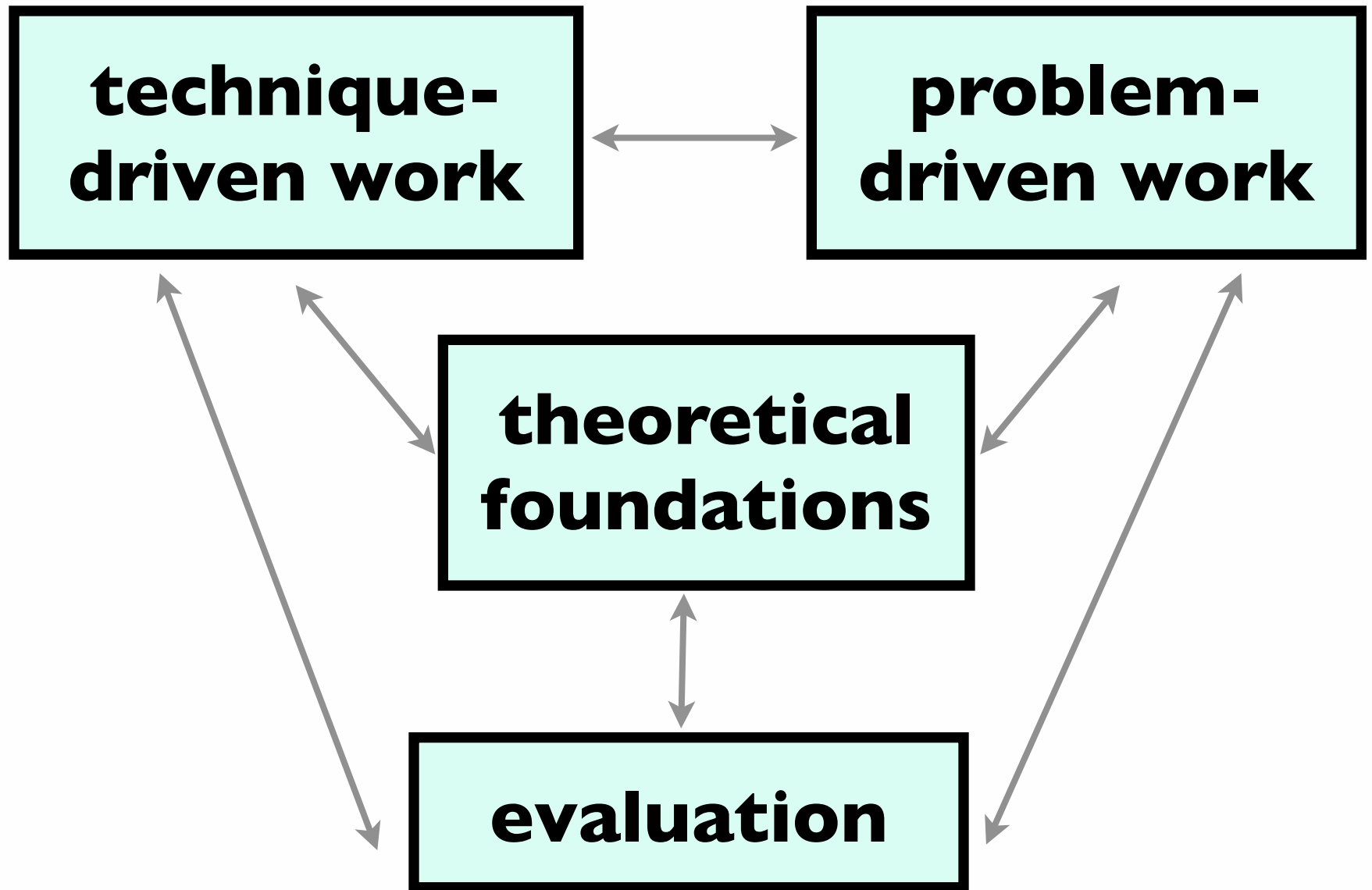


Francois Guimbretiere



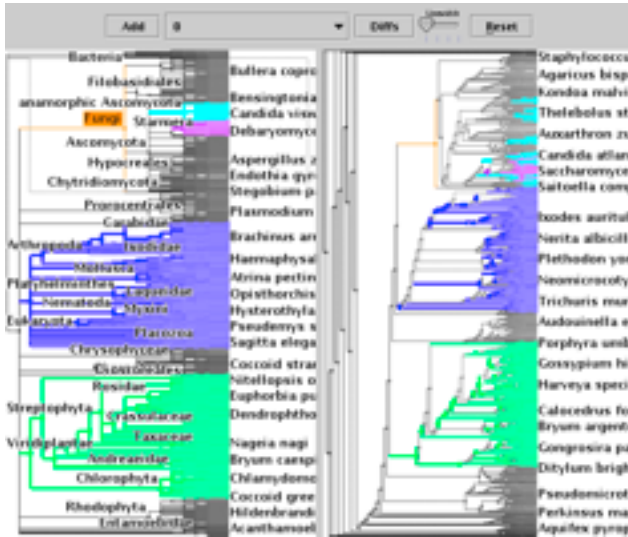
Constellation

# University of British Columbia 2002-



# Technique-driven: Graph drawing

T  
P  
F  
E



James Slack



Kristian Hildebrand

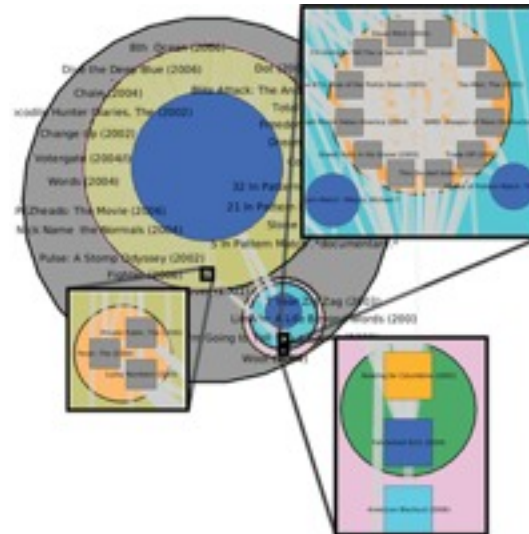


**TreeJuxtaposer**

Daniel Archambault



David Auber  
(Bordeaux)



**TopoLayout**  
**SPF**  
**Grouse**  
**GrouseFlocks**  
**TugGraph**

# Evaluation: Graph drawing

T  
F  
E  
P

Dmitry Nekrasovski Adam Bodnar



Joanna McGrenere  
(UBC)

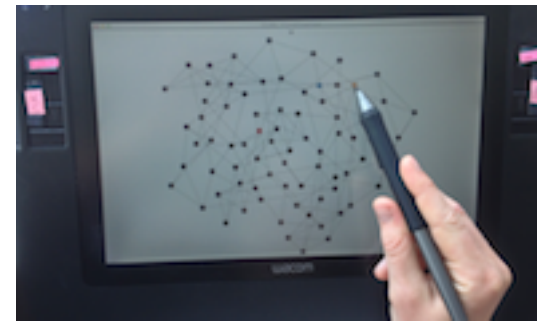


Stretch and squish navigation

Jessica Dawson



Joanna McGrenere  
(UBC)



Search set model of path tracing

# Technique-driven: Dimensionality reduction

T  
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F  
E

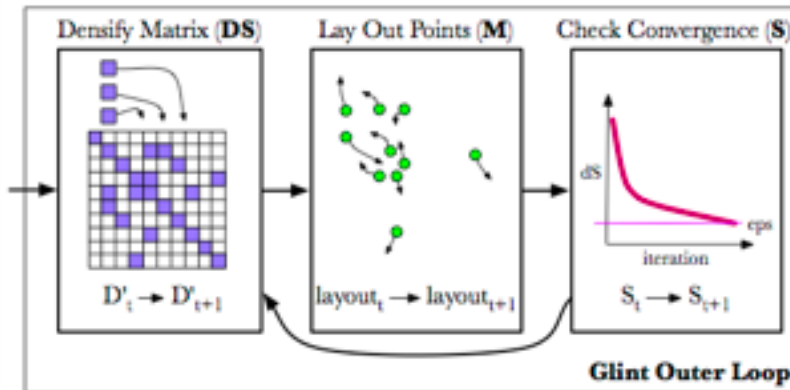
Stephen Ingram



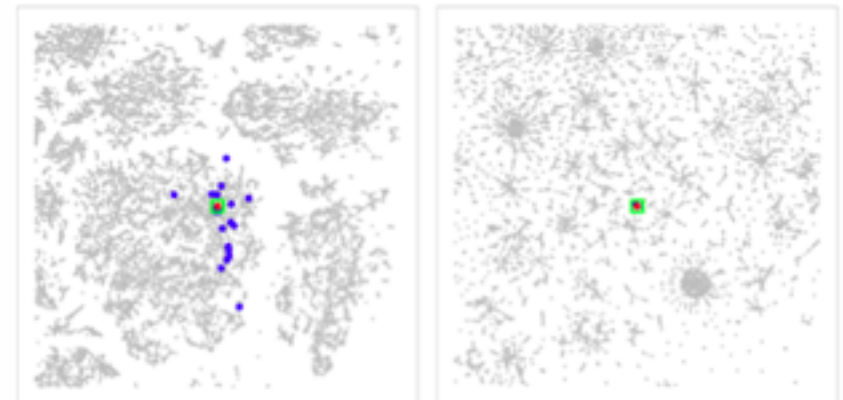
**Glimmer**



**DimStiller**



**Glint**

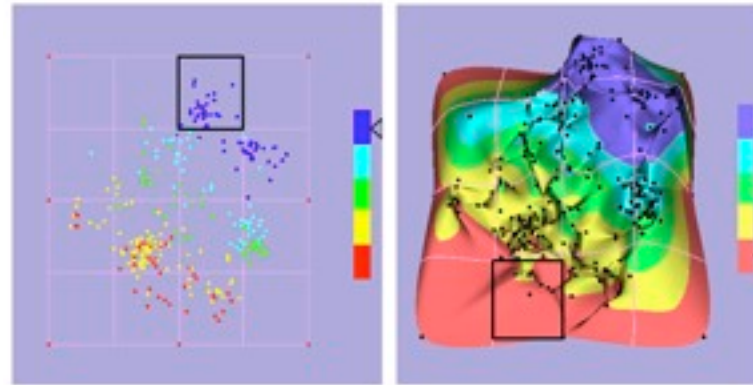


**QSNE**

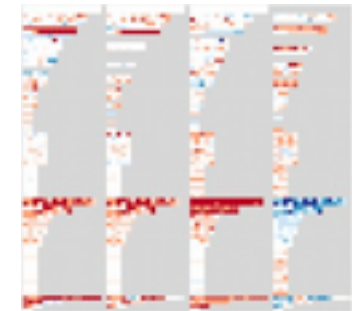
# Evaluation: Dimensionality reduction

T  
P  
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E

Melanie Tory



Points vs landscapes for dimensionally reduced data

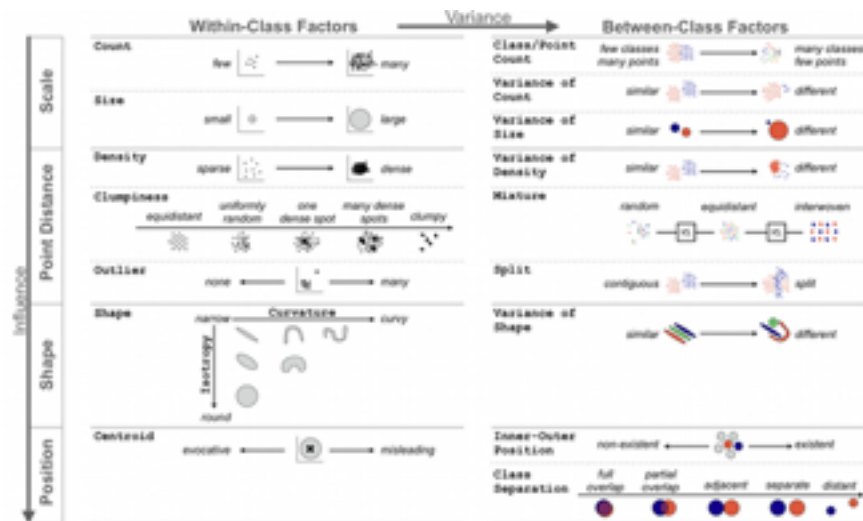


Guidance on DR & scatterplot choices

Michael Sedlmair



Melanie Tory (UVic)



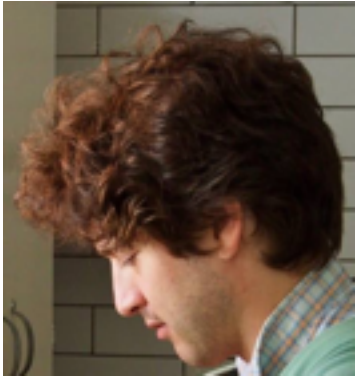
Taxonomy of cluster separation factors



# Problem-driven: Genomics

T  
F  
E  
P

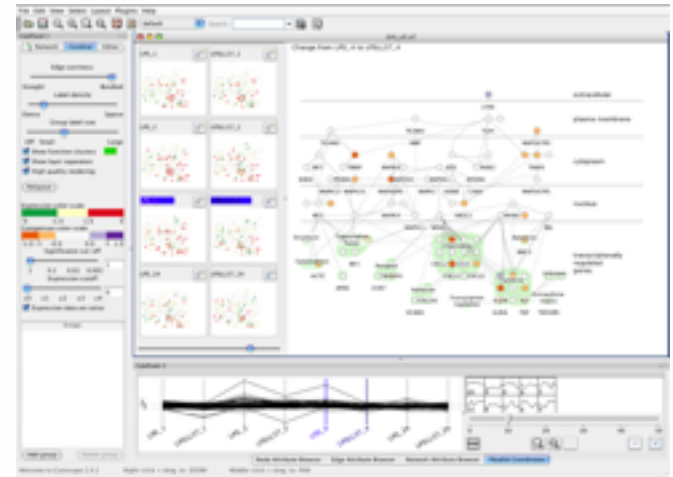
Aaron Barsky



Jenn Gardy  
(Microbio)



Robert Kincaid  
(Agilent)

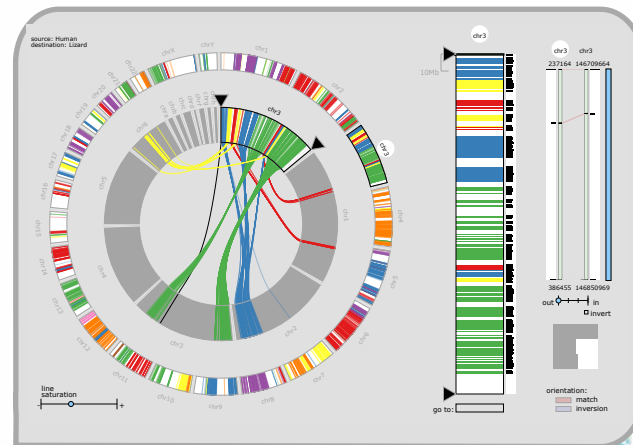


Cerebral

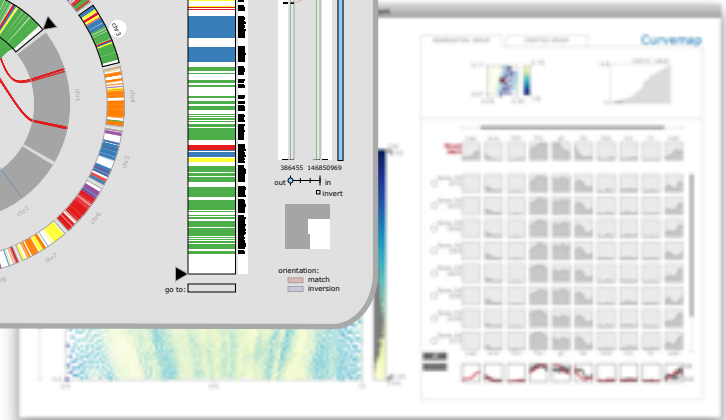
Miriah Meyer



Hanspeter Pfister  
(Harvard)



MizBee



MulteeSum, Pathline

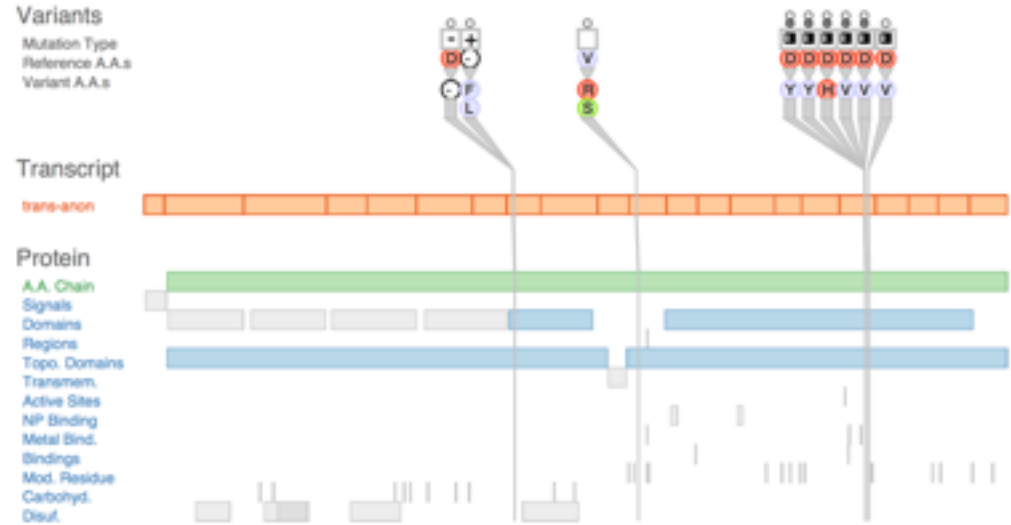
# Problem-driven: Genomics, fisheries

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E  
P

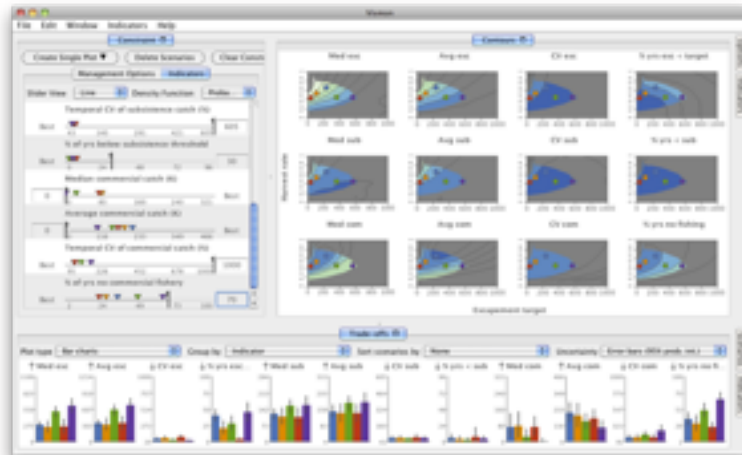
Joel Ferstay



Cydney Nielsen  
(BC Cancer)



Variant View



Vismon

Maryam Booshehrian



Torsten Moeller  
(SFU)



# Problem-driven: Many domains

T

P

F

E



Heidi Lam



Diane Tang  
(Google)

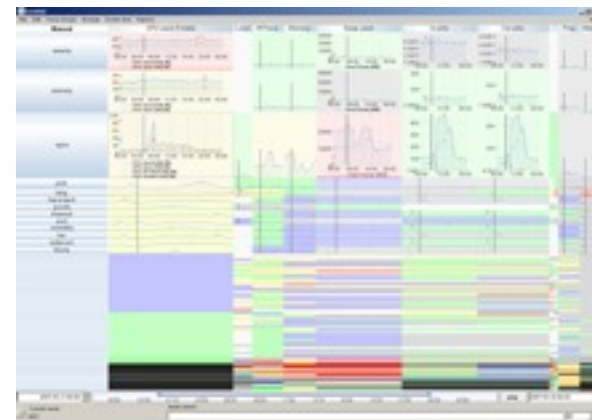


SessionViewer: web log analysis

Peter McLachlan



Stephen North  
(AT&T Research)



LiveRAC: systems time-series

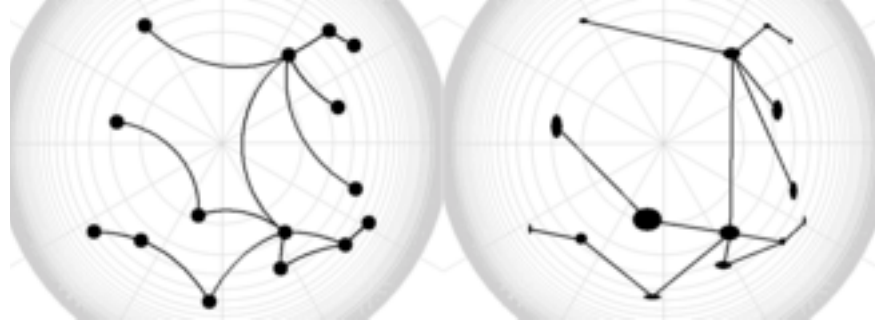
# Evaluation: Focus+Context

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E

Heidi Lam

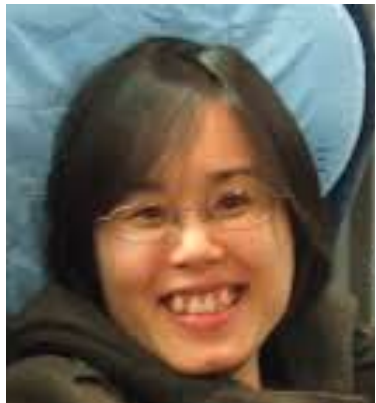


Ron Rensink  
(UBC)

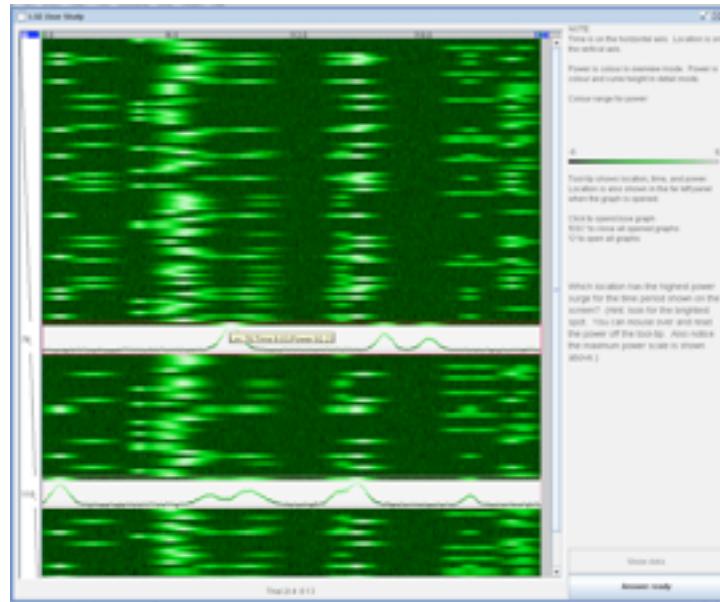


Distortion impact on search/memory

Heidi Lam



Robert Kincaid  
(Agilent)



Separate vs integrated views

# Journalism

T  
P  
F  
E

**Matt Brehmer**



**Stephen Ingram**



**Jonathan Stray  
(Assoc Press)**



**Overview**

**Johanna Fulda  
(Sud. Zeitung)**



**Matt Brehmer**



**TimeLineCurator**

# Theoretical foundations

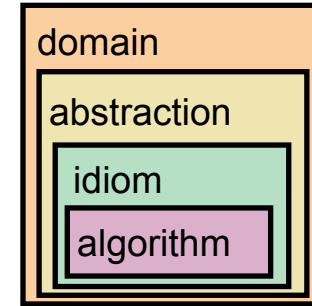
T

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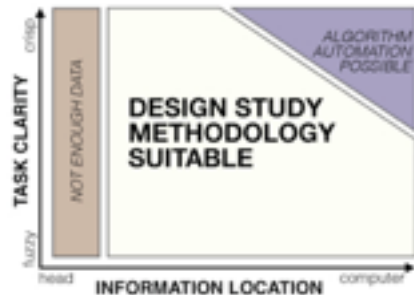
E

- Visual Encoding Pitfalls
  - Unjustified Visual Encoding
  - Hammer In Search Of Nail
  - 2D Good, 3D Better
  - Color Cacophony
  - Rainbows Just Like In The Sky
- Strategy Pitfalls
  - What I Did Over My Summer
  - Least Publishable Unit
  - Dense As Plutonium
  - Bad Slice and Dice



**Nested Model**

## Papers Process & Pitfalls



## Design Study Methodology

**Michael Sedlmair**



**Miriah Meyer**



**Matt Brehmer**



## Abstract Tasks

# Thanks to many!

