

Problem-driven work

- design studies
 - in collaboration with target users
 - real data, real tasks
 - intensive requirements analysis
 - iterative refinement
 - deploy tools/systems
 - typical evaluation: field studies
- my strategy: opportunistic collaboration
 - many domains
 - both industrial and academic partners

talk slides: <http://www.cs.ubc.ca/~tmunzner/talks/alibali17/alibali17-munzner.pdf>

Problem-driven: Tech industry

SessionViewer: web log analysis
<https://youtu.be/T4Ma7Zd56G4>

LiveRAC: systems time-series logs
<https://youtu.be/00c3H0Vskw>

Problem-driven: Energy, sustainability

Energy Manager

Vismon
<https://youtu.be/h0kHoS4VYmk>

Maryam Booshehriani **Torsten Moeller (SFU)**

Problem-driven: Genomics

Aaron Barsky **Jenn Gandy (UBC Micro)** **Robert Kincaid (Agilent)**

Cerebral
<https://youtu.be/76HhG1FQngI>

Miriah Meyer **Hanspeter Pfister (Harvard)**

MizBee

MulteeSum, Pathline

RelEx (BMW)
<https://youtu.be/89lsQXc6Ao4>

Problem-driven: Genomics, journalism

Joel Ferstny **Cydney Nielsen (BC Cancer)**

Variant View
https://youtu.be/aHDmv_gMXgQ

Jonathan Stray (Assoc Press)

Overview
<https://vimeo.com/71483614>

current work: Mobify clickstream collaboration

Problem-driven: Autos, e-commerce

Michael Sedlmair

Kimberly Dextrus-Romagno

RelEx (BMW)
<https://youtu.be/89lsQXc6Ao4>

Technique-driven work

- scalable algorithms & systems
 - typical evaluation: computational benchmarks
- new layout & interaction techniques
 - typical evaluation: controlled experiments on human subjects

Technique-driven: Graph drawing

Daniel Archambault **David Auber (Bordeaux)**

TopoLayout **SPP** **Grouse** **GrouseFlocks** **TugGraph**

Benjamin Renoust **Guy Melançon (Bordeaux)**

Detangler
<https://youtu.be/QOInHsuvV8k>

TreeJuxtaposer
<https://youtu.be/GdApj8sQEOo>

Stretch and squash navigation

Evaluation experiments: Graph drawing

Dmitry Nekrasovski **Adam Bodnar** **Joanna McGrenere**

Jessica Dawson **Joanna McGrenere**

Search set model of path tracing

Technique: Dimensionality reduction

Stephen Ingram

Glimmer

DimStiller

Glint

QSOSE

Dimensionality reduction for documents

Task 1

Task 2

Task 3

Evaluation experiments: Dim. reduction

Melanie Tory

Points vs landscapes for dimensionally reduced data

Guidance on DR & scatterplot choices

Michael Sedlmair **Melanie Tory**

Taxonomy of cluster separation factors

Evaluation in the field: Dim. reduction

DR in the Wild

Matt Brehmer **Michael Sedlmair** **Melanie Tory** **Stephen Ingram**

Curation & Presentation: Timelines

Johanna Fulda (Süd. Zeitung)

Matt Brehmer

Bongshin Lee (Microsoft) **Benjamin Bach (Microsoft)** **Nathalie Henry-Riche (Microsoft)**

TimelineCurator
<https://vimeo.com/123246662>

Timelines Revisited
<https://timelinesrevisited.github.io/>

Theoretical foundations

domain abstraction idiom algorithm

Nested Model

Design Study Methodology

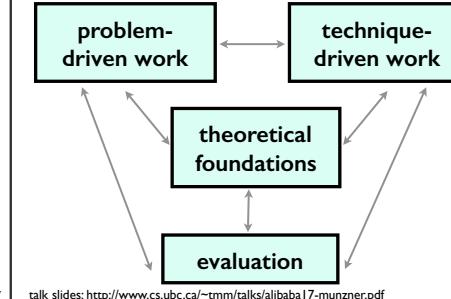
Abstract Tasks

Matt Brehmer



T
F
E
P

Research agenda: interleaved angles of attack



17

18

talk slides: <http://www.cs.ubc.ca/~tmm/talks/alibaba17-munzner.pdf>