Intro

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University of British Columbia

Utah Viz Course Intros
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http://www.cs.ubc.ca/~tmm/talks.html#utah22intro
About me

• technical staff, Geometry Center 1991-1995
www.cs.ubc.ca/~tmm/talks.html#utah22intro
About me

- technical staff, Geometry Center 1991-1995
- PhD @ Stanford w/ Pat Hanrahan, 1995-2000
- [DEC/Compaq] Systems Research Center (SRC), 2000-2002
- UBC, 2002-now

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A quick taste of my own work!

- technique-driven work
- problem-driven work
- theoretical foundations
- evaluation

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Technique-driven: Graph/network drawing

Daniel Archambault
(Daniele Archambault)

David Auber (Bordeaux)

TopoLayout
SPF
Grouse
GrouseFlocks
TugGraph

Benjamin Renoust

Guy Melançon (Bordeaux)

Detangler

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https://youtu.be/AWXAe8zykt8

https://youtu.be/QOtNHSsUV6k
Technique-driven: Tree drawing

Zipeng Liu  Shing Hei Zhan

Aggregated Dendrograms  https://youtu.be/2SLcz7KNLJw

TreeJuxtaposer  https://youtu.be/GdaPj8a9QEO

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Evaluation experiments: Graph/tree drawing

Dmitry Nekrasovski  Adam Bodnar  Joanna McGrenere

Stretch and squish navigation

Jessica Dawson  Joanna McGrenere

Search set model of path tracing

Zipeng Liu

Sprawlter Metric

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Technique-driven: Dimensionality reduction

Stephen Ingram

Glimmer

Glint

Glimmer Outer Loop

DimStiller

QSNE

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Evaluation experiments: Dimensionality reduction

Melanie Tory

Points vs landscapes for dimensionally reduced data

Michael Sedlmair  Melanie Tory

Taxonomy of cluster separation factors

Guidance on DR & scatterplot choices

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Evaluation in the field: Dimensionality reduction

DR in the Wild

Matt Brehmer  Michael Sedlmair  Melanie Tory  Stephen Ingram

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Technique-driven: Recommenders

Anamaria Crisan

Michael Oppermann

Robert Kincaid (Tableau)

https://youtu.be/SRAWFr4tBjA
https://youtu.be/7-7v4m-1bVY
VizCommender
VizSnippets

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Problem-driven: Genomics

Aaron Barsky (Microbio)

Jenn Gardy (Microbio)

Robert Kincaid (Agilent)

Miriah Meyer (Harvard)

Hanspeter Pfister (Harvard)

MizBee
https://youtu.be/86p7brwuz2g

MulteeSum, Pathline

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https://youtu.be/76HhG1FQngI
Problem-driven: Genomics, fisheries

Joel Ferstay
(BC Cancer)

Cydney Nielsen

Maryam Booshehrian
(SFU)

Torsten Moeller
(SFU)

Variant View
https://youtu.be/AHDnv_qMXxQ

Vismon
https://youtu.be/h0kHoS4VYmk

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Problem-driven: Tech industry

Heidi Lam
(Google)

Diane Tang

Peter McLachlan
(AT&T Research)

Stephen North

SessionViewer: web log analysis
https://youtu.be/T4MaTZd56G4

LiveRAC: systems time-series
https://youtu.be/ld0c3H0VSkw

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Problem-driven: Building energy mgmt, journalism

Kevin Tate (Pulse/EnerNOC)

Matt Brehmer (Pulse/EnerNOC)

Jonathan Stray (Assoc Press)

Matt Brehmer
Stephen Ingram

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Overview
https://vimeo.com/71483614
Problem-driven: Data science

Kimberly Dextras-Romagnino
Segmentifier (Mobify)
e-commerce clickstreams
build tools for human-in-the-loop
visual data analysis

Michael Oppermann
Ocupado (Sensible Building Science)
wifi proxy for real-time building occupancy
visual analytics for facilities management

https://youtu.be/TobYDFeISOg
https://youtu.be/KcwjVK8eUdw
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Theoretical foundations: Typologies

Matt Brehmer

Abstract Tasks

Anamaria Crisan

GEViT: Genomic Epidemiology Visualization Typology

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Timelines Revisited
timelinesrevisited.github.io/

Bongshin Lee
(Microsoft)

Benjamin Bach
(Microsoft)

Steve Kasica

Nathalie Henry-Riche
(Microsoft)

TableScraps
Theoretical foundations

- Strategy Pitfalls
- What I Did Over My Summer
- Least Publishable Unit
- Dense As Plutonium
- Bad Slice and Dice

Papers Process & Pitfalls

Nested Model

Design Study Methodology

Data-First Design Studies

Goals2Tasks

Heidi Lam (Tableau)

Anamaria Crisan

Data Recon

Regulatory & Organizational Constraints

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Machine Learning Curation

https://youtu.be/sQMF50aNtKI
Zipeng Liu
Jürgen Bernard
Yang Wang (Uber/Facebook)

CorGIE

Matt Brehmer
Johanna Fulda (Sud. Zeitung)

Anamaria Crisan

Adjutant

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Visualization Analysis and Design.