

Sean P. McKenna

Ph.D. Candidate

about

mckennapsean.com
sean@cs.utah.edu

385-231-7651
Salt Lake City, UT

programming

javascript (d3, jquery, css)
python
java
c/c++
L^AT_EX
R
sql

education

exp. May 2017 **Ph.D. in Computing: Graphics and Visualization** University of Utah: Salt Lake City, UT
Thesis: *The Design Activity Framework: Analyzing the User-Centered Design Process for Data Visualization*. Advisor: Dr. Miriah Meyer
2008 – 2012 **B.A. in Computer Science & Physics** Cornell College: Mount Vernon, IA
Summa Cum Laude. Minor: Chemistry

publications

journal:

S. McKenna, D. Staheli, C. Fulcher, M. Meyer. **BubbleNet: A Cyber Security Dashboard for Visualizing Patterns**, Computer Graphics Forum, 35(3):281–290, 2016.

S. McKenna, M. Meyer, C. Gregg, S. Gerber. **s-CorrPlot: An Interactive Scatterplot for Exploring Correlation**, Journal of Computational and Graphical Statistics, 25(2):445–463, 2016.

S. McKenna, D. Mazur, J. Agutter, M. Meyer. **Design Activity Framework for Visualization Design**, IEEE Transactions on Visualization and Computer Graphics (Proceedings of InfoVis), 20(12):2191–2200, 2014.

conference:

S. McKenna, D. Staheli, M. Meyer. **Unlocking User-Centered Design Methods for Building Cyber Security Visualizations**, Proceedings of the Twelfth International Symposium on Visualization for Cyber Security (VizSec), 2015.

D. Staheli, T. Yu, J. Crouser, S. Damodaran, K. Nam, D. O’Gwynn, **S. McKenna**, L. Harrison. **Visualization Evaluation for Cyber Security: Trends and Future Directions**, Proceedings of the Eleventh International Symposium on Visualization for Cyber Security (VizSec), 2014.

in progress:

S. McKenna, N.H. Riche, B. Lee, J. Boy, M. Meyer. **Understanding the Role of Animated Visualizations in Data-Driven Stories**.

S. McKenna, A. Lex, M. Meyer. **Teaching the Design Activity Framework to Novice Designers using Worksheets**.

presentations

posters:

S. McKenna, M. Meyer, C. Gregg, S. Gerber. **s-CorrPlot: Encoding and Exploring Correlation**, IEEE VIS: InfoVis, 2014.

S. McKenna. **Designing STAR: A Cyber Dashboard Prototype**, International Symposium on Visualization for Cyber Security (VizSec), 2014.

S. McKenna, P. Quinan, A. Bigelow. **compariSeq: Rethinking Sequence Logos**, BioVis Redesign Contest, 2013.

teaching experience

Spring 2016 **Algorithms and Data Structures** Salt Lake City, UT
CS-2420, University of Utah

- teaching assistant and lecturer for an undergraduate course (175 students)
- created and presented three lectures; designed and wrote a new final project

Fall 2013 **Introduction to Visualization** Salt Lake City, UT
CS-6630, University of Utah

- teaching assistant for a graduate-level course (60 students)
- created and presented five lectures; wrote several new assignments

professional experience

Aug '12 – present **Research Assistant** Salt Lake City, UT
Scientific Computing and Imaging Institute

- created a design process model geared for novice designers
- designed a new scatterplot for exploring correlation

Jul '16 – Sep '16 **Research Assistant** Redmond, WA
Microsoft Research

- developed an interactive technique for building scrolling, animated stories
- conducted an online study of story engagement based on animated transitions

Feb '15 – Apr '15 & Jun '14 – Aug '14 **Research Assistant** Lexington, MA
MIT Lincoln Laboratory

- designed a new cyber dashboard for visualizing network activity
- evaluated the design of the dashboard with network analysts and managers

Jun '11 – Aug '11 **Research Assistant** Baltimore, MD
NASA's Space Telescope Science Institute

- contributed to a Hubble Space Telescope archival research project
- collaborated with nine others to support a citizen science project

awards & fellowships

- Winner of Teapot Rendering Competition: University of Utah, 2013
- Winner of the second challenge at the Human Brain Mapping Hackathon: Allen Institute for Brain Science & Amazon Web Services, 2013
- Wayne Brown Fellowship (\$30,000): University of Utah, 2012 – 2014
- Phi Beta Kappa: Cornell College, 2011

service

- Program Committee Member: Visualization for Cybersecurity Symposium, 2015 – 2016
- C.S. Graduate Student Advisory Committee: University of Utah, 2013 – 2015

affiliations

- IEEE Member, 2013 – present

References available upon request.