

Danielle Albers

University of Wisconsin-Madison

Department of Computer Sciences
1210 W Dayton St.
Madison, WI 53706
☎ 608.609.1551
✉ dalbers@cs.wisc.edu

Homepage: <http://cs.wisc.edu/~dalbers>

Research Interests

Data Visualization
Graphic Design
Perceptual Science

Computer Graphics and Vision
Human-Computer Interaction
Machine Learning and Data Mining

Education

- PhD in Computer Science**, *University of Wisconsin-Madison*.
2009 – 2014 (Projected)
- Studying computer graphics and visualization under Professor Michael Gleicher.
- Conducting research on perceptually-motivated design for scalable data visualization.
- GPA: 3.84/4.00.
- Masters of Science in Computer Science**, *University of Wisconsin-Madison*.
2009 – 2011
- GPA: 3.77/4.00.
- Bachelors of Science in Computer Science**, *University of Washington*.
2007 – 2009
- NASA Space Grant Scholar and four-time Dean's List Member.
- Graduated with a Bachelors of Science at age 20.
- Minor in Mathematics.
- GPA: 3.60/4.00.

Experience

Academia

- 2010 – Present **Graduate Researcher**, *BACTER Research Program*, University of Wisconsin-Madison.
- Conducting research in visualization and computational biology under a program sponsored by the Department of Energy.
- Research focuses include designing perceptually-motivated scalable visualization techniques for scientific analysis and characterizing visual comparisons over complex datasets.
- Collaborating with researchers across multiple countries and disciplines to discover and apply novel findings integrating perception, visualization, and domain science.
- Autumn 2010 **Teaching Assistant**, *Human-Computer Interaction*, University of Wisconsin-Madison.
- Assisted students with concepts from the first graduate-level course offered by the University introducing the principles of human-computer interaction and general research skills.
- Helped grade assignments and assisted with general course administration.
- Autumn 2010 **Laboratory Instructor**, *Introduction to Programming*, University of Wisconsin - Madison.
- Supervised semester-long hands-on programming sessions for an introductory programming course.
- Worked one-on-one with students to enforce course concepts in weekly consulting hours.

Industry

- Summer 2009 **Software Development Intern**, *Boston Scientific, CRM*, Redmond, WA.
- Designed an application to derive automated testing suites from XML requirement files for complete parameter-based testing of Class 3 medical devices.
- Worked in an Agile development environment to implement the above tool for automated testing generation using Python.
- Communicated with employees at off-site locations in order to design a thorough and complete testing paradigm capable of delivering quality output content and structure.

- 2008 – 2009 **Software Development Intern**, *Apptio*, Bellevue, WA.
- Served as an intern for a leading software-as-a-service company founded by one of Seattle's most successful serial entrepreneurs.
- Analyzed software for debugging and development using Java and GWT for product development.

Volunteer Positions

- 2010 – Present **ACM-W Graduate Mentor**, *Department of Computer Sciences, University of Wisconsin-Madison*, Madison, WI.
2011 – Present **Assistant Coach**, *Wisconsin Timberwolves Special Needs Hockey Team*, Madison, WI.
2009 – Present **Web Manager**, *University of Wisconsin-Madison Women's Hockey Club*, Madison, WI.
April 2010 **GRE Tutor**, *University of Wisconsin-Madison*, Madison, WI.
October 2009 **Majors Fair Representative**, *Department of Computer Sciences, University of Wisconsin-Madison*, Madison, WI.
May 2009 **Department Guide**, *Department of Computer Sciences, University of Washington*, Seattle, WA.
2007 – 2008 **Ice Hockey Officiating Mentor**, *Cascade Hockey Officiating Association*, Seattle, WA.

Publications

Journal Publications

- Michael Gleicher and **Danielle Albers**. "Visual Comparison: Taxonomies and Tradeoffs." *Computer Graphics Forum*, 2012. (In review).
- Michael Correll, **Danielle Albers**, Steve Franconeri, and Michael Gleicher. "Comparing Averages in Time Series Data." *CHI '12: Proceedings of the 2012 Annual Conference on Human Factors in Computing Systems*, 2012. (In press).
- Danielle Albers**, Colin Dewey, and Michael Gleicher. "Sequence Surveyor: Leveraging Overview for Scalable Genomic Alignment Visualization." *Proceedings of IEEE Information Visualization, IEEE Transactions of Visualization and Computer Graphics*, 17(5), October 2011.
- Michael Gleicher, **Danielle Albers**, Rick Walker, Ilir Jusufi, Charles Hansen, and Jonathan Roberts. "Visual Comparison for Information Visualization." *Information Visualization*, 10(4), October 2011.

Refereed Abstracts

- Danielle Albers** and Michael Gleicher. "Sequence Surveyor: Leveraging Overview for Large-Scale Genomic Alignment Visualization." *2011 VizBi: Visualizing Biological Data Poster Session*, March 2011.
- Danielle Albers** and Michael Gleicher. "Poster: Perceptual Principles for Scalable Sequence Alignment Visualization." *2010 IEEE Information Visualization Poster Proceedings*, October 2010.
- Danielle Albers** and Michael Gleicher. "Perceptual Principles for Scalable Sequence Alignment Visualization." *Proceedings of the 7th Symposium on Applied Perception in Graphics and Visualization*, August 2010.

Computing Skills

Programming Languages:	Java, Python, ActionScript, C, C#, C++, SQL, XML, HTML, Ruby, Haskell, Scheme	Operating Systems:	Linux, Windows, Mac OS X
		Scientific Languages:	Matlab, Maple, R

Professional and Academic Memberships

ACM Student Member	Sigma Alpha Lambda Honor Society Member
IEEE Student Member	Phi Theta Kappa International Honor Society Member

Honors and Awards

BACTER Research Fellow	Graduated with a Bachelors of Science at age 20
NASA Space Grant Scholar	Four-time University of Washington Dean's List member