

---

# Hannah J. Miller

University of Minnesota  
Department of Computer Science  
200 Union Street, Minneapolis, MN 55455

(920) 604-2885  
hmiller@cs.umn.edu  
<https://www.cs.umn.edu/~hmiller>

---

## EDUCATION

---

*University of Minnesota – Twin Cities* *September 2013 – Present*

Doctor of Philosophy, Computer Science and Engineering

- ◆ Specialty: Human-Computer Interaction, GroupLens Research
- ◆ Advisors: Dr. Loren Terveen and Dr. Brent Hecht

*University of Wisconsin – Eau Claire*

*September 2009 – May 2013*

Bachelor of Science Degree, Summa Cum Laude

- ◆ Major: Computer Science, Software Engineering Emphasis
- ◆ Minors: Mathematics and Business Administration

## RESEARCH STATEMENT

---

As a *Human-Computer Interaction* and *Social Computing* researcher, I am passionate about studying how we can design technology to *improve the quality of life for people*.

## PUBLICATIONS

---

**Miller, H.**, Kluver, D., Thebault-Spieker, J., Terveen, L., and Hecht, B. (2017) Understanding Emoji Ambiguity in Context: The Role of Text in Emoji-Related Miscommunication. *Proceedings of the International AAI Conference on Web and Social Media (ICWSM 2017)*. Menlo Park, CA: AAAI Press.

**Miller, H.**, Thebault-Spieker, J., Chang, S., Johnson, I., Terveen, L., and Hecht, B. (2016) “Blissfully Happy” or “Ready to Fight”: Varying Interpretations of Emoji. *Proceedings of the International AAI Conference on Web and Social Media (ICWSM 2016)*. Menlo Park, CA: AAAI Press.

Buhr, H., Hoepner, J., **Miller, H.**, and Johnson, C. (2016) AphasiaWeb: development and evaluation of an aphasia-friendly social networking application. *Aphasiology*: 1–22. 2015 Impact Factor: 1.139

**Miller, H.**, Chang, S., and Terveen, L. (2015) “I LOVE THIS SITE!” vs. “It’s a Little Girly”: Perceptions of and Initial User Experience with Pinterest. *Proceedings of the ACM*

*Conference on Computer Supported Cooperative Work & Social Computing (CSCW 2015)*, pp. 1728–1740. New York: ACM Press.

Knights, D., Ward, T., McKinlay, C., **Miller, H.**, Gonzalez, A., McDonald, D., and Knight, R. (2014) Rethinking “Enterotypes.” *Cell Host & Microbe* 16, 4: 433–437. 2015 Impact Factor: 12.552

**Miller, H.**, Buhr, H., Johnson, C., and Hoepner, J. (2013) AphasiaWeb: A Social Network for Individuals with Aphasia. *Proceedings of the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2013)*, Article 4: pp. 1–8. New York: ACM Press.

Komiskey, L., Brinkerhoff, D., **Miller, H.**, Morrison, J., and Morrison, C. (2010) A Peer Review System to Enhance Collaborative Learning: Testing and Preliminary Evaluation. *Proceedings of the Midwest Instruction and Computing Symposium (MICS 2010)*. pp. 1–13.

## ACADEMIC HONORS, FELLOWSHIPS, & SCHOLARSHIPS

---

### *Fellowships*

National Science Foundation Graduate Research Fellowship

- ◆ Full funding for 3 years. 2015–Present.

Graduate Assistance in Areas of National Need (GAANN) and Block Grant Fellowships

- ◆ University of Minnesota Department of Computer Science and Engineering
- ◆ Full funding for 1 year. 2013–2014.

Blugold Fellowship Award

- ◆ University of Wisconsin – Eau Claire
- ◆ Funding 2 years of undergraduate research. 2009–2011.

### *Awards and Honors*

*University of Wisconsin – Eau Claire*

- ◆ University Outstanding Senior Award
- ◆ Department of Computer Science Outstanding Senior Award
- ◆ Honors Program

### *Scholarships*

- ◆ Upsilon Pi Epsilon (UPE) ACM Student Chapter Scholarship Award. \$1,000. 2012.
- ◆ Northwestern Mutual Computer Science Corporate Scholarship. \$5,000. 2011–2012.
- ◆ Barry Goldwater Scholarship Honorable Mention. 2011.
- ◆ Karlgaard Computer Science Scholarship. \$16,000. 2009–2013.
- ◆ Wisconsin Academic Excellence Scholarship. \$9,000. 2009–2013.

## TEACHING EXPERIENCE

---

*Preparing Future Faculty Experience* *Spring 2017*  
*University of Minnesota – Twin Cities*

GRAD 8101: Teaching in Higher Education

- ◆ Participated in course designed to help me become a stronger, more reflective teacher via reading, discussion, observation and practice of educational theory and process
- ◆ Designed a student-centered learning syllabus with a rationale that demonstrates the relationship between course objectives, content, assessments, and methodology

*Graduate Teaching Assistant* *Fall 2014*  
*University of Minnesota – Twin Cities*

CSCI 5115: User Interface Design, Implementation and Development

- ◆ Guided 10 groups of 5 students through course-long project via bi-weekly deliverables and feedback meetings
- ◆ Prepared and delivered mobile application development lecture to both sections of class

*Teaching Assistant* *Spring 2010 – Spring 2013*  
*University of Wisconsin – Eau Claire*

CS 145: Introduction to Object-Oriented Programming

CS 245: Advanced Programming and Data Structures

CS 255: Algorithms and Discrete Structures

MATH 214: Calculus I

MATH 215: Calculus II

- ◆ Helped students in introductory computer science courses with labs and assignments
- ◆ Graded students' assignments for computer science courses, calculus I, and calculus II

*Honors Program Mentor* *Spring 2012*  
*University of Wisconsin – Eau Claire*

HNRS 100: Honors Seminar

- ◆ Reflected on college experience and generated a syllabus highlighting important topics for a class of freshmen
- ◆ Prepared materials, presentations and events to administer the class with a co-mentor

## ACADEMIC SERVICE

---

*Computer Science Graduate Student Association President* *Fall 2015 – Spring 2016*  
*University of Minnesota – Twin Cities*

- ◆ Organize group meetings and social events
- ◆ Represent computer science graduate student body at faculty meetings

*Graduate Recruiting Chair* *Springs 2014 – 2016*  
*University of Minnesota – Twin Cities*

- ◆ Assist Program Advisor in planning prospective graduate student visit weekend
- ◆ Participate in the students' visit through panels, tours, and networking meals and events

*Women in Information Technology Systems (WITS) President*      *Fall 2009 – Spring 2013*  
*University of Wisconsin – Eau Claire*

- ◆ Motivated towards empowering and supporting women in computer technologies
- ◆ Hold meetings and plan professional development, service, and social events

*Campus Ambassador*      *Fall 2010 – Spring 2013*  
*University of Wisconsin – Eau Claire*

- ◆ Advertise campus to prospective students through campus tours and on-line chats
- ◆ Stay current and passionate regarding campus statistics, events, and offerings

## INDUSTRY EXPERIENCE

---

*3M Research & Development Internship*      *Summers 2013 & 2014; St. Paul, MN*

- ◆ Partnered with mentor from previous summer to redesign the data management solution for 3M ESPE True Definition Scanner resources to improve efficiency and scalability
- ◆ Optimally combining legacy code with new, well-informed design and business ideas

*3M Research & Development Internship*      *Summer 2012; St. Paul, MN*

- ◆ Collaborated with mentors to plan and implement a Microsoft Windows Azure application and repository for maintaining resources on many remote systems
- ◆ Encountered process of releasing a public product and learned importance of prioritization through observation of technical, business, and field personnel in an alliance to deliver a successful and innovative launch

*Humana IT Internship*      *Summer & Winter 2011; Green Bay, WI*

- ◆ Developed a Security Process System for the security department as an agile software team
- ◆ Built the system as a Silverlight application in Visual Studio 2010 using a SQL Server 2008 database