Fateme Rajabiyazdi | Curriculum Vitae

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Education

University of Calgary, PhD Candidate in Computer Science **Canada**
Thesis: Design & develop technology and software to improve doctor-patient communication, *2014–Present*

Graduation Expected Date: Summer 2018.
Supervisors: Dr. Sheelagh Carpendale and Dr. Lora Oehlberg.
Member of Interaction lab and Innovis lab groups at the University of Calgary.

Australian National University, Master of Computer Science **Australia**
Thesis: Interface designs for iPads with different screen sizes, *2010–2012*
Supervisors: Dr. Tom Gedeon and Dr. Duncan Stevenson

University of Tehran, Bachelor of Software Engineering **Iran**
Thesis: Finding Social Network Graphs in News Websites, *2006–2010*
Supervisor: Dr. Masoud Asadpour

Research Interest

Health Informatics, Provider-Patient Communication

Design and development of healthcare technologies

Patient Data Analysis

Collaboration

Ward of the 21st Century, Alberta Health Services (Since Aug 2015). W21C is a research institute working with academia, government, and industry to bring new ideas into health care. I was involved in an innovative project for designing a care plan for patients with chronic conditions. As part of this project, as a group we conducted extensive literature review and field studies understanding patients' and physicians' needs to inform our design process.

Pain Studies Lab, SIAT, SFU (Sep 2014 - Sep 2015). The Pain Studies Lab was founded and is directed by Dr Gromala. In this lab, the research group studies, invents and designs technologies for people who live with persistent pain, their pain physicians and healthcare professionals. I was a visitor in this lab for a year collaborating with Dr. Gromala and her students in several projects.

Publications

Fateme Rajabiyazdi, Charles Perin, Jo Vermeulen, Diane Gromala, and Sheelagh Carpendale. Differences That Matter: In-Clinic Communication Challenges. In *Proceedings of the 2017 Pervasive Computing Technologies for Healthcare*. ACM, 2017.

Alice Thudt, Jagoda Walny, Charles Perin, **Fateme Rajabiyazdi**, Lindsay MacDonald, Riane Vardeleon, Saul Greenberg, and Sheelagh Carpendale. Assessing the Readability of Stacked Graphs. In *Proceedings of the 42nd Graphics Interface Conference, GI'16*, pages 167–174, 2016.

Fateme Rajabiyazdi, Jagoda Walny, Carrie Mah, John Brosz, and Sheelagh Carpendale. Understanding

researchers' use of a large, high-resolution display across disciplines. In *Proceedings of the 2015 International Conference on Interactive Tabletops & Surfaces*, pages 107–116. ACM, 2015.

Fateme Rajabiyazdi and Tom Gedeon. Hand Grip Strength on a Large PDA: Holding While Reading Is Different from a Functional Task. In *2012 Sixth International Conference on Complex, Intelligent, and Software Intensive Systems*, pages 475–480, July 2012.

Fateme Rajabiyazdi and Tom Gedeon. Comparing User Performance on an iPad to a 17-inch BackPad. In *2012 Sixth International Conference on Complex, Intelligent, and Software Intensive Systems*, pages 469–474, July 2012.

Peer Reviewed Workshop Papers

Fateme Rajabiyazdi, Charles Perin, Lora Oehlberg, and Sheelagh Carpendale. The Challenges of Individuality to Technology Approaches to Personally Collected Health Data, In *Proceedings of the 2017 Pervasive Computing Technologies for Healthcare*, pages to be announced. ACM, 2017.

Fateme Rajabiyazdi. Designing and Developing Technologies to Facilitate Clinician-Patient Communication, In *Proceedings of the 2016 International Conference on on Interactive Surfaces and Spaces*, pages 19-24. ACM, 2016.

Fateme Rajabiyazdi, Charles Perin, Julie Babione, Joseph Tropiano, Maria Santana, Jaime Kaufman, William Ghali, Peter Sargious, Sheelagh Carpendale. Challenges Involving Patients in their Care Plan from Clinicians' Perspectives, In *Workshop on Interactive Systems in Healthcare*, ACM, 2016.

Xin Tong, Diane Gromala, Lyn Bartram, **Fateme Rajabiyazdi**, Sheelagh Carpendale. Evaluating the Effectiveness of Three Physical Activity Visualizations - How People Perform vs. Perceive, In *Electronic Proceedings of the IEEE Transactions on Visualization and Computer Graphics*, 2015.

Tamara Flemisch, **Fateme Rajabiyazdi**, Mona Hosseinkhani, Sheelagh Carpendale. NeckLan: Language as Jeweller, In *Electronic Proceedings of the IEEE Transactions on Visualization and Computer Graphics*, 2015.

Peer Reviewed Posters

Julie Babione, **Fateme Rajabiyazdi**, Charles Perin, Joseph Tropiano, Megan Cosby, Maria Santana, Jaime Kaufman, Sheelagh Carpendale, William Ghali, Peter Sargious. Identifying Opportunities for Innovation in Patient-Centred Care Plans Through User-Centred Design Research, Presented in *the Patient Oriented Research Summer Institute Conference*, Canada, Calgary, 2016.

Fateme Rajabiyazdi, Charles Perin, Sheelagh Carpendale. WESt: Visualizing non-Emergency Surgery Waiting Times, Presented in *the IEEE Transactions on Visualization and Computer Graphics*, Chicago, USA, 2015.

Thesis

Fateme Rajabiyazdi. Design and development of interface for different tablet sizes. *Master Thesis*
I manipulated a 17-inch MacBook configuration to a tablet mock-up. I designed and developed a new interface for the tablet mock-up and later I evaluated the design in a lab study setting. , School of Computer Science, Australian National University, 2012.

Fateme Rajabiyazdi. Finding Social Network Graphs in News Websites (Balatarin.com), *Bachelor Thesis*, School of Electrical and Computer Engineering, University of Tehran, 2010 (in Persian).

Teaching Experience

Introduction to Information Visualization - **CPSC583**   **University of Calgary**
Guest Lecturer   *Fall 2017*

I was invited to present guest lectures on principles of designing visualization. To give students a first-hand experience, I ran activities asking students to critique sample visualization designs and sketch new visualization designs in a group. I believe for teaching software engineering and computer science running hands-on activities will create a more active environment for students to learn the new concepts.

Visualization and Visual Analytics - **CPSC599**   **University of Calgary**
Guest Lecturer   *Winter 2016*

During my guest lecture for this course, I delivered materials on how to use Python to run stats. I provided students with an initial code framework and while I was running a live demo for them, I have asked them to start filling the blanks in the code framework at the same time. This will give the students an opportunity to get involved, make mistakes, and ask questions.

Introduction to Information Visualization - **CPSC583**   **University of Calgary**
Teaching Assistance, Third and fourth year computer science students   *Fall 2017*
Instructor: Dr. Sheelagh Carpendale

During the tutorials for this course, I prepared materials for tutorials teaching students about different visualization concepts and the most commonly used algorithms for designing a visualization such as force-directed graph and reingold-tilford tree algorithms. In addition, I taught students how to program with JavaScript and D3 to make their own visualization for their assignments and course projects.

Thinking with Data - **SCIE201**   **University of Calgary**
Teaching Assistance, Open to none-computer science major students   *Summer 2017*
Instructor: Dr. Nelson Wong

The goal of this course was to familiarize students with the process of data collection, data cleaning, and data presentation. The department of Computer Science offered this course for the first time and because of my previous experience with teaching other data science and analytics courses, I was invited to tutor for this course. I outlined all the course assignments and helped the instructor in designing the course projects. I have designed and delivered materials and activities for two 3-hour tutorial sessions weekly. During the tutorials, I grouped the students and led them for their course projects with weekly feedback.

Visualization and Visual Analytics - **CPSC599**   **University of Calgary**
Teaching Assistance, Third and fourth year computer science students   *Winter 2016*
Instructor: Dr. Wesley Willett

In fall 2016, department of computer science offered this course for the first time. I ran the tutorial sessions for this course, marked students' projects, and helped the instructor of the course with outlining the assignments. I taught students how to use visualization software such as Tableau and Wrangler. In addition, I delivered materials teaching statistics using Python and R.

Human Computer Interaction - **CPSC481**   **University of Calgary**
Teaching Assistance, Third and fourth year computer science students   *Winter 2015*
Instructor: Dr. Ehud Sharlin

For this course, I was responsible to lead ten students' projects during the semester. I guided students through the entire cycle of task-centered system design technique to design and evaluate interfaces based on the real-world tasks. Mentoring student groups involved helping students scope their projects, teaching them how to conduct interviews and identify tasks, teaching C# and WPF, helping with technical problems, regularly meetings with student to discuss problems and suggest possible alternatives to improve the interface design. Finally, I evaluated the projects through review of their portfolios and final project demonstrations.

Introduction to CS Application Software - **CPSC203**   **University of Calgary**
Teaching Assistance, First year non-computer science students   *Winter 2014*
Instructor: Dr. James Tam

This course is offered in the department of Computer Science with the goal of familiarizing students not majored in computer science with basic computer science software such as Microsoft Excel and Microsoft Access. I ran weekly tutorials, each week introducing a new concept such as conditional formating and conducting hands on activities working with the software.

Ecommerce   **Australian National Uni.**
Teaching Assistance, Second year computer science students   *Winter 2012*
Instructor: Dr. Chris Johnson

For this course, I ran weekly tutorials engaging students in discussing how technology is changing global commerce and how to create new opportunities. I helped students with their projects and taught web programming.

Microprocessor   **University of Tehran**
Teaching Assistance, Second year software engineering students   *Winter 2009*
Instructor: Dr. Omid Fatemi

For this course, I was responsible with leading students' group projects from helping them define their topic, implement the hardware, test and evaluating the hardware. Each week, I gave students feedback on their project and helped them with building the hardware.

Experience

Lexdata - Junior Web developer   **Australia**
Manager: Michael Hall   *2012–2013*
Lexdata is a document and information management company that provides specialist solutions to law firms, government departments and corporate organisations around Australia. As a web developer, I was working on designing and developing accessible websites using JavaScript, HTML, XML, and CSS.

CSIRO - Research Assistance   **Australia**
Supervisor: Dr. Matt Adcock   *2012*
The Commonwealth Scientific and Industrial Research Organization is the federal government agency for scientific research in Australia. During my visit, I was involved in the process of designing a controlled user study for a large screen technology to evaluate the use of iPad in people's personal view on the screen in a collaborative setting.

Australian National University - Intern   **Australia**
Supervisor: Dr. Rob Mahoney   *2009*
During my internship, I worked on developing code with MATLAB for nonlinear attitude filter to remove noise in the data. I worked with attitude kinematics on the group of rotation matrices and the unit quaternion.

Scholarship and Awards

Computer Science Dept. Research Award: University of Calgary, $11,000	*01/2018 - 04/2018*
Ward of 21st Century, Alberta Health Services: $30,000	*08/2016 - 08/2017*
Ward of 21st Century, Alberta Health Services: $30,000	*08/2015 - 08/2016*
Computer Science Dept. Research Award: University of Calgary, $8,000	*09/2016 - 04/2017*
Faculty of Graduate Studies Travel Award: University of Calgary, $1,000	*07/2015*
Computer Science Dept. Research Award: University of Calgary, $2,000	*09/2015 - 04/2016*
Awarded 4th at Microsoft Imagine Cup: University of Calgary	*2014*
Computer Science Dept. Research Award: University of Calgary, $8,000	*09/2014 - 04/2015*

Academic Services

Mobile App Chair: Interactive Surfaces and Spaces Conference 2016

In charge of creating and maintaining the conference website.

Best Poster Award Committee: IUI 2015

In charge of selection the best poster and honorable mention awards.

Student Volunteer: CHI Conference 2018 and 2016, ITS Conference 2015, OZCHI Conference 2011

In charge of IT technical supports during the conference sessions.

Paper Reviewer: AMIA, TEI18, CHI18, CHI17, CHI16, CHI15, ITS15, IUI15, CHI14, OZCHI12

Reviewed a range of papers short and long papers, posters, and workshops.

Master Student Representative Council: Australian National University, 2011

In charge of representing Computer Science master students and echoing their voice to the university.

Robogal Student Chapter Volunteer: Australian National University, 2011

In charge of helping with running robotic workshops.

ACM Student Chapter Secretary: University of Tehran, 2008 - 2009

In charge of running technical and programming workshops and advertising them to students.

References

Dr. Sheelagh Carpendale   **PhD Supervisor**

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