Jessica Schroeder jesscs@cs.washington.edu
PhD Candidate https://homes.cs.washington.edu/~jesscs/

SUMMARY

My multidisciplinary work focuses on supporting people and health providers in collecting, analyzing, and interpreting their data to meet personalized goals. I draw on human-computer interaction (HCI) theories and techniques to examine specific health contexts, including: 1) formative studies to identify context-specific needs and opportunities; 2) iterative design and development of novel methods and tools; and 3) evaluations of those methods and tools to understand how patients and providers use and respond to them. Throughout this process, I consult and collaborate with health professionals experienced in the context I am examining to draw on their expertise in medicine and clinical practice.

EDUCATION

University of Washington (9/2014—Present) **Seattle, WA**
PhD Student in Computer Science & Engineering
Advisors: James Fogarty, Sean Munson
M.S. in Computer Science & Engineering earned December 2016
GPA: 3.9

Pomona College (8/2010—5/2014) **Claremont, CA**
Computer Science Major, Neuroscience Experience
GPA: 3.9

University of Edinburgh (8/2012—12/2012) **Edinburgh, Scotland**
GPA: 3.9

PROFESSIONAL EXPERIENCE

Research Intern, Microsoft Research (Summer 2017)
Investigated how mobile tools can support mental health patients with high clinical complexity. (*Mentor: Mary Czerwinski*)

Project Manager, Harvey Mudd Clinic (August 2013—May 2014)
Led the development of a web application for Expedia, Inc. for my senior capstone project.

Undergraduate Research Assistant, Carnegie Mellon HCII (Sumer 2013)
Investigated how website augmentation to help users of a chronic illness forum find credible and useful information more quickly. (*Mentor: Jennifer Mankoff*)

Research Intern, Stanford School of Medicine (Summers 2011 and 2012)
Ran wet lab experiments at the Conte Center for Neuroscience Research. (*Mentor: Lu Chen*)

Undergraduate Research Assistant, Pomona College (Spring of 2012)
Developed a web application to identify fusion genes, which have implications in certain kinds of cancer. (*Mentor: Andre Cavalcanti*)

AWARDS/HONORS

Best Paper Honorable Mention, ACM Conference on Designing Interactive Systems (2018)
Best Paper Award, ACM Conference on Human Factors in Computing Systems (2017)
Best Paper Honorable Mention, ACM Conference on Human Factors in Computing Systems (2017)
NSF GRFP Awardee (2016)
Marilyn Fries Endowed Regental Fellowship Recipient (2014)
ARCS Foundation Fellow (2014)
Harvey Mudd Computer Science Clinic Team Award Winner (2014)

Pomona College Marshall and Rhodes Scholarship Nominee (2013)
Six-Time Pomona College Scholar (2010-2013)
Grace Hopper Scholarship Recipient (2013)
DREU-CRAW Participant (2013)
National Merit Scholar (2010)

SKILLS

User research: semi-structured interviews, surveys, field studies, observation, contextual inquiry

Data analysis: qualitative data analysis (e.g., coding, thematic analysis, affinity diagraming), quantitative data analysis (e.g., with R, Python, Pandas, NumPy, Matplotlib)

Prototyping: prototypes, mobile and web app development (e.g., in AngularJS, Ionic, D3.js)

Communication/leadership: Project management, scientific & technical writing, presentations

PUBLICATIONS

Jessica Schroeder, Ravi Karkar, Natalia Murinova, James Fogarty, Sean A. Munson (2020). Examining Opportunities for Goal-Directed Self-Tracking to Support Chronic Condition Management. *Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2020)*. In press.

Chia-Fang Chung, Qiaosi Wang, **Jessica Schroeder**, Allison Cole, Jasmine Zia, James Fogarty, Sean A. Munson (2019). Identifying and Planning for Individualized Change: Patient-Provider Collaboration Using Lightweight Food Diaries in Healthy Eating and Irritable Bowel Syndrome. *Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2019)*. https://doi.org/10.1145/3314394

Jessica Schroeder, Ravi Karkar, James Fogarty, Julie A. Kientz, Sean A. Munson, Matthew Kay (2018). A Patient-Centered Proposal for Bayesian Analysis of Self-Experiments for Health. *Journal of Healthcare Informatics Research*. http://doi.org/10.1007/s41666-018-0033-x

Jessica Schroeder, Chia-Fang Chung, Daniel A. Epstein, Ravi Karkar, Adele Parsons, Natalia Murinova, James Fogarty, Sean A. Munson (2018). Examining Self-Tracking by People with Migraine: Goals, Needs, and Opportunities in a Chronic Health Condition. *Proceedings of the ACM Conference on Designing Interactive Systems (DIS 2018)*. Best paper honorable mention. https://doi.org/10.1145/3196709.3196738

Jessica Schroeder, Chelsey Wilks, Kael Rowan, Arturo Toledo, Ann Paradiso, Mary Czerwinski, Gloria Mark, Marsha M. Linehan (2018). Pocket Skills: A Conversational Mobile Web App To Support Dialectical Behavioral Therapy. *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2018)*. https://doi.org/10.1145/3173574.3173972

Ravi Karkar, **Jessica Schroeder**, Daniel Epstein, Laura Pina, Jeffrey Scofield, James Fogarty, Julie Kientz, Sean Munson, Roger Vilardaga, Jasmine Zia (2017). TummyTrials: A Feasibility Study of Using Self-Experimentation to Detect Individualized Food Triggers. *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2017)*. Best paper honorable mention. https://doi.org/10.1145/3025453.3025480

Chia-Fang Chung, Elena Agapie, **Jessica Schroeder**, Sonali Mishra, James Fogarty, Sean Munson (2017). When Personal Tracking Becomes Social: Examining the Use of Instagram for Healthy Eating. *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2017)*. https://doi.org/10.1145/3025453.3025747

Daniel Epstein, Nicole Lee, Jennifer Kang, Elena Agapie, **Jessica Schroeder**, Laura Pina, James Fogarty, Julie Kientz, Sean Munson (2017). Examining Menstrual Tracking to Inform the Design of Personal Informatics Tools. *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2017)*. Best paper awardee. https://doi.org/10.1145/3025453.3025635

Jessica Schroeder, Jane Hoffswell, Chia-Fang Chung, James Fogarty, Sean Munson, Jasmine Zia (2017). Supporting Patient-Provider Collaboration to Identify Individual Triggers using Food and Symptom Journals. *Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW 2017)*. http://doi.org/10.1145/2998181.2998276

Jasmine Zia, Chia-Fang Chung, **Jessica Schroeder**, Sean Munson, Julie Kientz, James Fogarty, Elizabeth Bales, Jeanette Schenk, Margaret Heitkemper (2016). The Feasibility, Usability, and Perceived Clinical Utility of Traditional Paper Food and Symptom Journals for Patients with Irritable Bowel Syndrome. *Neurogastroenterology and Motility*. http://doi.org/10.1111/nmo.12935

Jasmine Zia, **Jessica Schroeder**, Sean Munson, James Fogarty, Linda Nguyen, Pamela Barney, Margaret Heitkemper, Uri Ladabaum (2016). Feasibility and Usability Pilot Study of a Novel Irritable Bowel Syndrome Food and Gastrointestinal Symptom Journal Smartphone App. *Clinical and Translational Gastroenterology*. http://doi.org/10.1038/ctg.2016.9

Jamie L. Crawford, Cheng Guo, **Jessica Schroeder**, Rosa I. Arriaga, Jennifer Mankoff (2014). Is it a Question of Trust?: How Search Preferences Influence Forum Use. *PervasiveHealth 2014*. 118-125. http://doi.org/10.4108/icst.pervasivehealth.2014.254988

Federica Sarti, Zhenjie Zhang**, Jessica Schroeder**, Lu Chen (2013). Rapid Suppression of Inhibitory Synaptic Transmission by Retinoic Acid. *Journal of Neuroscience*, 33(28): 11440-11450. http://doi.org/10.1523/JNEUROSCI.1710-13.2013

Federica Sarti, **Jessica Schroeder**, Jason Aoto, Lu Chen (2012). Conditional RARa Knockout Mice Reveal Acute Requirement for Retionic Acid and RARa in Homeostatic Plasticity. *Frontiers in Molecular Neuroscience*, 5(16). http://doi.org/10.3389/fnmol.2012.00016

TALKS

Supporting Patient-Provider Collaboration to Identify Individual Triggers Using Food and Symptom Journals. Session: Human Computer Interaction and Self-Tracking. *University of Washington Computer Science & Engineering Affiliates.* October 2016.

WORKSHOP PUBLICATIONS

Personalizing Health Technologies to Support Patient and Provider Goals. **Jessica** Schroeder, James Fogarty, Sean A. Munson. *Identifying Challenges and Opportunities in Human–AI Collaboration in Healthcare* (CSCW 2019).

Examining Self-Tracking by People with Migraine: Goals, Needs, and Opportunities in a Chronic Health Condition. **Jessica Schroeder**, Chia-Fang Chung, Daniel A. Epstein, Ravi Karkar, Adele Parsons, Natalia Murinova, James Fogarty, Sean A. Munson. *Workshop on Interactive Systems in Healthcare* (CHI 2019).

Mobile Health and Personal Informatics in Mental Health and Migraine. **Jessica Schroeder**. *Symposium on Computing and Mental Health* (CHI 2018).

Needs, Challenges, and Opportunities in Long-Term Tracking to Support Migraine Management. **Jessica Schroeder**, Natalia Murinova, James Fogarty, Sean Munson. *A Short Workshop on Next Steps Towards Long Term Self Tracking* (CHI 2018).

Supporting Patient-Provider Collaboration to Identify Individual Triggers using Food and Symptom Journals. **Jessica Schroeder**, Jane Hoffswell, Chia-Fang Chung, James Fogarty, Sean Munson, Jasmine Zia. *Workshop on Interactive Systems in Healthcare* (CHI 2017).

Supporting Patient-Provider Communication and Relationships with Personal Informatics Data. Chia-Fang Chung, **Jessica Schroeder**, Jasmine Zia, James Fogarty, Julie A. Kientz, Sean A. Munson. *Workshop on Quantified Data and Social Relationships* (CHI 2017).

Hypothesis Formation and Hypothesis Testing: Design Challenges in Self-Experimentation. Ravi Karkar, **Jessica Schroeder**, James Fogarty, Julie A. Kientz, Sean A. Munson, Jasmine Zia. *Digital Health & Self-Experimentation Workshop* (CHI 2017).

Exploring New Design Directions for Menstrual Tracking Technology. Daniel A. Epstein, Nicole B. Lee, Jennifer H. Kang, Elena Agapie, **Jessica Schroeder**, Laura R. Pina, James Fogarty, Julie A. Kientz, Sean A. Munson. *Hacking Women's Health* (CHI 2017).

Using Personal Data in Everyday Life: Self-Experimentation in Personalized Health. Ravi Karkar, **Jessica Schroeder**, Jasmine Zia, Roger Vilardaga, James Fogarty, Sean A. Munson, Julie A. Kientz. *Symposium on Use of Patient-Generated Data Beyond Self-Regulation* (ISRII 2016).

The Feasibility, Usability, and Perceived Clinical Utility of Traditional Paper Food and Symptom Journals for Patients with Irritable Bowel Syndrome. Jasmine Zia, Chia-Fang Chung, **Jessica Schroeder,** Jeanette Schenk, Sean A. Munson, Julie A. Kientz, James Fogarty, Margaret Heitkemper. *The Federation of Neurogastroenterology & Motility*.

POSTERS

Examining Self-Tracking by People with Migraine: Goals, Needs, and Opportunities in a Chronic Health Condition. *University of Washington Computer Science & Engineering Affiliates* 2017.

Supporting Patient-Provider Collaboration to Identify Individual Triggers Using Food and Symptom Journals. *University of Washington Computer Science & Engineering Affiliates* 2016.

Personal Guidance on Individualized Food Triggers for IBS Patients. *University of Washington Computer Science & Engineering Affiliates* 2015.

Personal Guidance on Individualized Food Triggers for IBS Patients. *Intel Science and Technology Center for Pervasive Computing Retreat* 2015.

TEACHING EXPERIENCE

Teaching Assistant, CSE 510: Advanced Topics in HCI (Winter 2018, Fall 2018)

Designed and graded assignments, critiqued projects, and advised students. (*Professor: James Fogarty*)

Writing Fellow, Pomona Writing Center (August 2011—May 2014)

Appointed position to help students improve papers (e.g., essays, personal statements, lab reports). As Senior Science Writing Fellow in 2013/2014, I led improvements in scientific writing support.

PREVIOUS WORK, SERVICE, AND LEADERSHIP

HCI Seminar Lead, UW Computer Science & Engineering (January 2017—June 2018)

Led improvements to the seminar and organized quarterly themes, presentations, and feedback.

Reviewer (Fall 2016—Present)

ACM Conference on Human Factors in Computing Systems (CHI 2017—2020), ACM Conference on Computer Supported Cooperative Work (CSCW 2018 & 2019), ACM Conference on Designing Interactive Systems (DIS 2018 & 2019), and PACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT 2020).

HCI Visit Days Coordinator, UW Computer Science & Engineering (Winter 2018)

Coordinated one-on-ones with faculty and current grad students; organized afternoon activity.

Graduate Student Admissions Volunteer, UW Computer Science & Engineering (Fall 2016)

Reviewed graduate student applications to advise on admissions.

New Graduate Orientation Leader, UW Computer Science & Engineering (Fall 2015)

Organized orientation for the new computer science graduate students at the University of Washington. Coordinated talks from student organizations, grad students, and professors.

Class Representative, University of Edinburgh Informatics Department (Fall 2012)

Acted as a liaison between faculty and students to help voice complaints and deliver suggestions.

Volunteer, Miscellaneous Organizations (Fall 2008—Present)

Volunteer with Equality California/the Human Rights Campaign, Organization for Special Needs Families, Pomona College Draper Center, and AmeriCorps Jumpstart Little Readers Program. My recent volunteering focuses on outreach to people—particularly girls and young women—considering pursuing computer science or other STEM fields, including discussing STEM research with girls ages 6-18 and their parents at a Go, Girl, Go! event, working at a UW computer science grad recruitment booth at Hopperx1 Seattle and the Tapia Celebration of Diversity in Computing, and visiting the Pomona College Computer Science Department to talk to undergraduates considering graduate school.