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Expertise

Mobile health, consumer health informatics, human-computer interaction, mobile and ubiquitous computing

Education

National Library of Medicine Fellowship in Biomedical and Health Informatics. July 2011-June 2012

School of Medicine, University of Washington, Seattle

Ph.D. in Information Science. December 2010. GPA: 3.92/4.0

Dissertation title: “Supporting Unanchored Information Work of Cancer Patients with Mobile Technology”

University of Washington, Seattle

Dissertation committee

Wanda Pratt, Chair (University of Washington, Information School and School of Medicine)

Julie Kientz (University of Washington, Information School and Human-Centered Design and Engineering)

Suzanne Bakken (Columbia University, Biomedical Informatics and the School of Nursing)

Beverly Harrison (Intel Research Seattle)

B.A. with honors in Physics and Religious Studies. August 1995. GPA: 3.97/4.0

Graduate work in Cognitive Science and Philosophy of Mind

University of Tennessee, Knoxville

Academic and Research Positions

Group Health Research Institute, Seattle, WA

Assistant Scientific Investigator, Dec 2015-present

School of Information and the Department of Health Behavior and Health Education, University of Michigan, Ann Arbor

Assistant Professor, July 2012-present

Biomedical and Health Informatics, University of Washington, Seattle

National Library of Medicine Postdoctoral Fellow, July 2011-June 2012

The Information School, University of Washington, Seattle

Research Scientist, January-June 2011

Biomedical and Health Informatics, University of Washington, Seattle

Graduate Research Assistant, September 2009-December 2010, September 2005-August 2008

Refereed Papers

Note: Conference papers in Computer Science and Biomedical Informatics are peer-reviewed publications indexed in Medline or ACM Digital Library with acceptance rates in the 15% to 25% range, depending on the conference.

Barbarin, A.M., **Klasnja, P.**, & Veinot, T.C. (2016). Good or bad, ups and downs, and getting better: Uses of personal health data for temporal reflection in chronic illness. *International Journal for Medical Informatics*, 9, 237-245. doi: 10.1016/j.ijmedinf.2016.06.011.

Hekler, E.B., **Klasnja, P.**, Riley, W.T., Buman, M.P., & Huberty, J. (2016). Agile Science: Creating useful products for behavior change in the real-world. *Translational Behavioral Medicine*, 6(2), 317-28. doi: 10.1007/s13142-016-0395-7

Liao, P., **Klasnja, P.**, Tewari, A., & Murphy, S. A. (2015). Sample size calculations for micro-randomized trials in mHealth. *Statistics in Medicine*, 35: 1944–1971. doi: 10.1002/sim.6847

Klasnja, P., Hekler, E.B., Shiffman, S., Boruvka, A., Almirall, D., Tewari, A., & Murphy, S.A. (2015). Microrandomized trials: An experimental design for developing just-in-time adaptive interventions. *Health Psychology*, 34(Suppl), 1220-1228.

Klasnja, P., Kendall, L., Pratt, W. & Blondon, K. (2015). Long-Term Engagement with Health-Management Technology: a Dynamic Process in Diabetes. *Proceedings of AMIA 2015, American Medical Informatics Association*.

Barbarin, A., Veinot, T., & **Klasnja, P.** (2015). Taking our time: Chronic illness and time-based objects In families. *Proceedings of CSCW 2015, ACM Press*.

Flynn, A.J., **Klasnja, P.**, Friedman, C.P. (2014). MedMinify: An advice-giving system for simplifying the schedules of daily home medication regimens used to treat chronic conditions. *Proceedings of AMIA 2014, American Medical Informatics Association*.

Consolvo, S., **Klasnja, P.**, McDonald, D.W., & Landay, J.A. (2014). Designing For healthy lifestyles: Design considerations for mobile technologies to encourage consumer health and wellness. *Foundations and Trends in Human-Computer Interaction*, 6(3-4), 167-315. [first author on chapters 2 and 3]

Blondon, K., **Klasnja, P.**, Coleman, K., & Pratt, W. (2014). An exploration of attitudes toward the use of patient incentives to support diabetes self-management. *Psychology & Health*, 29(5), 552-563.

Kendall, L., **Klasnja, P.**, Iwasaki, J., Best, J.A., White, A.A., Khalaj, S., Amdahl, C., & Blondon, K. (2013). Use of simulated physician handoffs to study cross-cover chart biopsy in the electronic medical record. *Proceedings of AMIA 2013, American Medical Informatics Association*.

Blondon, K., & **Klasnja, P.** (2013). Designing supportive mobile technology for stable diabetes. *Proceedings of HCI International, Springer-Verlag*.

Hekler, E.B., **Klasnja, P.**, Froehlich, J.E., & Buman, M.P. (2013). Mind the theoretical gap: Interpreting, Using, and developing behavioral theory in HCI research. *Proceedings of CHI 2013, ACM Press*. [Best Paper Award]

Patel, R., **Klasnja, P.**, Hartzler, A., Unruh, K., & Pratt, W. (2012). Probing the benefits of real-time tracking during cancer care. *Proceedings of AMIA 2012, American Medical Informatics Association*.

Klasnja, P., & Pratt, W. (2012). Healthcare in the pocket: Mapping the space of mobile-phone health interventions. *Journal of Biomedical Informatics*, 45(1), 184-198.

Klasnja, P., Hartzler, A., Powell, C., & Pratt, W. (2011). Supporting cancer patients' unanchored health information management with mobile technology. Proceedings of AMIA 2011, American Medical Informatics Association.

Hartzler, A., Skeels, M. M., Mukai, M., Powell, C., **Klasnja, P.,** & Pratt, W. (2011). Sharing is caring, but not error free: Transparency of granular controls for sharing personal health information in social networks. Proceedings of AMIA 2011, American Medical Informatics Association.

Klasnja, P., Consolvo S., & Pratt, W. (2011). How to evaluate technologies for health behavior change in HCI research. Proceedings of CHI 2011, ACM Press. (acceptance rate: 26%).

Kendall, L., Hartzler, A., **Klasnja, P.,** & Pratt, W. (2011). Descriptive analysis of physical activity conversations on Twitter. CHI 2011 Extended Abstracts, ACM Press.

Klasnja, P., Hartzler, A., Powell, C., Phan, G., & Pratt, W. (2010). HealthWeaver Mobile: Designing a mobile tool for managing personal health information during cancer care. Proceedings of AMIA 2010, American Medical Informatics Association.

Klasnja, P., Civan-Hartzler, A., Unruh, K.T., & Pratt, W. (2010). Blowing in the wind: Unanchored patient information work during cancer care. Proceedings of CHI 2010, AMC Press. (acceptance rate: 22%)

Klasnja, P., Consolvo, S., McDonald, D.W., Landay, J.A., & Pratt, W. (2009). Using mobile and personal sensing technologies to support health behavior change in everyday life: Lessons learned. Proceedings of AMIA 2009, American Medical Informatics Association.

Klasnja, P., Consolvo, S., Choudhury, T., & Beckwith, R. (2009). Exploring privacy concerns about personal sensing. Proceedings of Pervasive Computing 2009, Springer. (acceptance rate: 18.4%).

Klasnja, P., Consolvo, S., Jung, J., Greenstein, B., LeGrand, L., Powledge, P.S., & Wetherall, D. (2009). "When I am on Wi-Fi, I am fearless": Privacy concerns & practices in everyday Wi-Fi use. Proceedings of CHI 2009, ACM Press. (acceptance rate: 24.5%).

Froehlich, J., Dillahunt, T., **Klasnja, P.,** Mankoff, J., Consolvo, S., Harrison, B., & Landay, J.A. UbiGreen: Investigating a mobile tool for tracking and supporting green transportation habits. Proceedings of CHI 2009, ACM Press. (acceptance rate: 24.5%).

Consolvo, S., **Klasnja, P.,** McDonald, D.W., & Landay, J.A. (2009). Goal-setting considerations for persuasive technologies that encourage physical activity. Proceedings of Persuasive Computing 2009, Springer.

Kane, S. & **Klasnja, P.** (2009). Supporting volunteer activities with mobile social software. CHI 2009 Extended Abstracts, ACM Press.

Klasnja, P., Harrison, B., LeGrand, L., LaMarca, A., Froehlich, J., & Hudson, S.E. (2008). Using wearable sensors and real time inference to understand human recall of routine activities. Proceedings of UbiComp 2008, ACM Press. (acceptance rate: 19%).

Consolvo, S., **Klasnja, P.,** McDonald, D.W., Avrahami, D., LeGrand, L., Libby, R., Mosher, K.E., Froehlich, J., & Landay, J. (2008). Flowers or a robot army? Encouraging awareness & activity with personal, mobile displays. Proceedings of UbiComp 2008, ACM Press. (acceptance rate: 19%).

Jones, W., **Klasnja, P.,** Civan, A., & Adcock, A. (2008). The personal project planner: Planning to organize personal information. Proceedings of CHI 2008, ACM Press. (acceptance rate: 22%).

Jones, E., Bruce, H., **Klasnja, P.,** & Jones, W. (2008). I give up! Five factors that contribute to the abandonment of information management strategies. Proceedings of ASIS&T 2008.

Civan, A., Jones, W., **Klasnja, P.,** Bruce, H. (2008). Better to organize personal information by folders or by tags: The devil is in the details. Proceedings of ASIS&T 2008. American Society of Information Science & Technology.

- Nathan, L.P., Friedman, B., **Klasnja, P.**, Kane, S., and Miller, J.K. (2008). Envisioning systemic effects on persons and society throughout the interactive system design. Proceedings of DIS 2008, ACM Press.
- Consolvo, S., McDonald, D.W., Toscos, T., Chen, M.Y., Froehlich, J., Harrison, B., **Klasnja, P.**, LaMarca, A., LeGrand, L., Libby, R., Smith, I., and Landay, J. (2008). Activity Sensing in the Wild: A field trial of UbiFit Garden. Proceedings of CHI 2008, ACM Press.
- Choudhury, T., Borriello, G., Consolvo, S., Haehnel, D., Harrison, B., Hemingway, B., Hightower, J., **Klasnja, P.**, Koscher, K., LaMarca, A., Lester, J., Landay, J., LeGrand, L., Rahimi, A., Rea, A., & Wyatt, D. (2008). The mobile sensing platform: An embedded system for capturing and recognizing human activities. *IEEE Pervasive Computing*, 7(2), 32-41.
- Nathan, L. P., **Klasnja, P.**, & Friedman, B. (2007). Value scenarios: A technique for envisioning systemic effects of new technologies. CHI 2007 Extended Abstracts, ACM Press.

Refereed Book Chapters

- Smith, S.N., Lee, A., Hall, K., Seewald, N., Boruvka, A., Murphy, S.A., & **Klasnja, P.** (in press). Design lessons from a micro-randomized pilot study in mobile health. In Rehg, J., Murphy, S., & Kumar, S. (Eds.), *Mobile health: Sensors, analytic methods, and applications*. Springer.

Refereed Abstracts, Posters, and Short Papers

- Boruvka, A., Almirall, D., Witkiewitz, K., **Klasnja, P.**, & Murphy, S.A. (2015). Assessing moderation from intensive longitudinal data: Application to mHealth interventions. Abstract accepted for the Joint Statistical Meetings, Seattle, WA, August 2015.
- Huh, J., Dzibur, E., Cerrada, C., Ku, J., & **Klasnja, P.** (2015). Building a Just-in-Time, Adaptive Cessation Intervention for Korean American Emerging Adult Smokers. 2015 Abstract accepted for the Center for Advancing Longitudinal Drug Abuse Research (CALDAR) Summer Institute, July 2015.
- Liao, P., **Klasnja, P.**, Tewari, A., & Murphy, S. A. (2015). Micro-randomized trials in mHealth. Workshop paper accepted for the Small Data Workshop.
- Hall, K., Paruthi, G., Smith, S., **Klasnja, P.**, & Murphy, S.A. (2015) Dynamical health communication for the twenty-first century. Poster presented at annual meeting of the Society for Behavioral Medicine, San Antonio, TX, April 2015.
- Flynn, A.J., **Klasnja, P.**, Friedman, C.P. (2014). Taking it easy – A needs analysis for computer-generated advice to simplify home medication regimens. Poster presented at the 2014 Annual Symposium of the American Medical Informatics Association.

Articles in Professional Magazines

- Dempsey, W., Liao, P., **Klasnja, P.**, Nahum-Shani, I. and Murphy, S. A. (2015), Randomized trials for the Fitbit generation. *Significance*, 12(6), 20–23.
- Klasnja, P.**, & Pratt, W. (2014). Managing health with mobile technology. *Interactions*, 21(1), 66-69.
- Hekler, E.B., **Klasnja, P.**, Traver, V., & Hendriks, M. (2013). Realizing effective behavioral management of health. *IEEE Pulse*, 4(5), 29-34.

Presentations

“Infusing design into mHealth development.” An invited lecture at the 2016 mHealth Training Institute. UCLA, August, 2016.

“Building just-in-time adaptive interventions in mobile health: The role of micro-randomized trials” (with Susan Murphy, Bonnie Spring, and Inbal Nahum-Shani). An invited workshop at the 2016 annual convention of the Association for Psychological Science. Chicago, IL, May, 2016.

“HeartSteps: A JITAI for encouraging regular, opportunistic physical activity.” An invited presentation at the Training on Optimization of Behavioral and Biobehavioral Interventions. Bethesda, MD, May 2016.

“Micro-randomized trials and the design of effective just-in-time adaptive mHealth interventions.” An invited presentation at the 2016 annual scientific meeting of the NIDA Clinical Trials Network. Gaithersburg, MD, April 2016.

“Building just-in-time adaptive interventions in mobile health: The role of micro-randomized trials” (with Susan Murphy, Bonnie Spring, and Inbal Nahum-Shani). A workshop at the 2016 annual meeting of the Society of Behavioral Medicine. Washington DC, March 2016.

“Designing digital health interventions: A workshop on how to create usable, enjoyable, and effective digital health user experiences” (with Eric Hekler, Sayali Phatak, and David Klein). A workshop at the 2016 annual meeting of the Society of Behavioral Medicine. Washington DC, March, 2016.

“Novel methods for mobile health.” Invited workshop presentation at the 2016 annual meeting of the American Psychosomatic Society. Denver, CO, March, 2016.

“Optimizing mHealth Interventions with Micro-Randomized Trials.” Panel presentation at the 2015 annual meeting of the Society of Behavioral Medicine. San Antonio, TX, April 2015.

“Designing Digital Health Interventions: A Workshop on How to Create Usable, Enjoyable, and Effective Digital Health User Experiences” (with Eric Hekler and Erika Pool). A workshop at the 2015 annual meeting of the Society of Behavioral Medicine. San Antonio, TX, April 2015.

“Design thinking for health behavior research and practice.” Invited opening talk at the Day of Design Thinking conference. Ann Arbor, MI, January 16, 2015.

“Supporting health management in everyday life with mobile technology.” Invited presentation at the annual meeting of the Eastern North American Region International Biometrics Society (ENAR 2015). Miami, FL, March 15, 2015.

“Looking back and looking forward: Towards the next generation of pervasive technologies for health and wellness.” Invited keynote at the Pervasive Health 2014 conference. Oldenburg, Germany, May 24, 2015.

“How to create usable, enjoyable, and effective e-Health user experiences.” (with Eric Hekler). A workshop at the 2014 annual meeting of the Society of Behavioral Medicine. Philadelphia, PA, April 24, 2014.

“Designing user-centered just-in-time adaptive interventions.” Invited presentation at the NIH Workshop on Innovative Study Designs and Methods for Developing, Testing and Implementing Behavioral Interventions to Improve Health. Bethesda, MD, April 2, 2014.

“Making it awesome: The role of design.” Invited lecture at the NIH mHealth Training Institute 2014. February 2014.

“Designing consumer-health technologies: The devil in the details.” Invited 3-hour course for Health 2.0.edu, Health 2.0 conference, Santa Clara, CA, September 30, 2013.

“Healthier each day: Supporting health management in everyday life with mobile technology.” Invited talk at the Cell and Self Conference. Ann Arbor, MI, April 2013.

“Reflections on using goal-setting in technologies to encourage physical activity.” Symposium talk at the annual meeting of the Society of Behavioral Medicine. San Francisco, CA, March 2013.

“How do I find and work productively with a computer scientist? A panel discussion on working across the disciplinary divide for developing behavior change technologies.” Panel discussion at the annual meeting of the Society of Behavioral Medicine. San Francisco, CA, March 2013.

“Supporting health management in everyday life with mobile technology.” Invited talk at the Center for Management of Chronic Diseases. Ann Arbor, MI, January 2013.

“Supporting cancer patients’ information management for clinic visits.” Invited talk at the Workshop for Interactive Systems in Healthcare. Chicago, IL, November 2012.

“Emphatic systems: Designing for behavior change and autonomy.” Invited talk at the International Workshop on New Computationally-Enabled Theoretical Models to Support Health Behavior Change and Maintenance. Brussels, Belgium, October 2012. In collaboration with Niles Boye.

“Pocket healthcare: Promise and challenges of mobile health.” Invited talk at the Fall into IT Symposium 2012. Ann Arbor, MI, September 2012.

“Pocket heart-health: Using mobile phones to manage cardiovascular disease.” Invited talk at the Michigan Cardiovascular Outcomes Research and Reporting Program. Ann Arbor, MI, July 2012.

“Building and deploying mobile systems for activity recognition.” Full day tutorial at UbiComp 2011. Beijing, China, September 2011. In collaboration with Tanzeem Choudhury and Nicholas Lane.

“Sensing-enabled mobile technologies for health promotion.” Invited presentation at the UrbanSense 2008 (part of SenSys 2008). Raleigh, NC, November 2008.

“Expectations, dissociations, and other frustrations: On scientific explanation and the nature of hypnosis.” Presentation given at the annual meeting of the Society for Clinical and Experimental Hypnosis, New Orleans, November 1999.

“Cyber-religion: Changing the landscape of religious discourse and discourse on religion.” Presentation given at VI Congreso Latinoamericano sobre Religión y Etnicidad. Bogotá, Colombia, June 1996.

Funding

Active

1-R01-HL125440-01. PI: **Klasnja**. Heart Steps: Adaptive mHealth intervention for physical-activity maintenance. National Heart Lung and Blood Institute. 2014-2019. (\$1,887,315).

1-R01-HS-021681-01-A1. PI: Zikmund Fisher. Systematic Design of Meaningful Presentations of Medical Test Data for Patients. Agency For Healthcare Research And Quality. 2013-2016. (\$1,498,903). Role: **Co-I**.

PI: Jackson. An Adaptive mHealth Intervention to Improve Lifestyle Behaviors among Patients with Metabolic Syndrome: A Pilot Study. Michigan Institute for Clinical & Health Research (MICHHR). (\$50,000). Role: **Co-I**.

PIs: Jackson and **Klasnja**. Reducing barriers to access to lifestyle interventions for metabolic syndrome: A pilot study. Frankel Cardiovascular Center Inaugural Award. (\$40,000).

Past

PI: **Klasnja**. Using mobile technology to manage bipolar disorder. University of Michigan's MCubed program. 2013-2014. (\$60,000).

PI: Strecher. "Developing and testing an innovative health risk assessment." University of Michigan Third Century Grand Challenges Initiative. 2013-2014. (\$170,000). Role: **Co-I**.

1-R01-LM009143-01. PI: Pratt. Managing health information in your life. National Library of Medicine. 2007-2011. (\$1,473,070 direct costs). Role: named personnel.

PI: Pratt. Change of heart: Leveraging mobile devices and social networks to support heart-healthy lifestyles. Microsoft Be Well Fund. 2008-2009. (\$200,000).

Teaching Experience

University of Michigan, Ann Arbor

Instructor for SI 554: Consumer health informatics. Fall, 2014.

Instructor for SI 684: Designing consumer-health technologies. Winter, 2014, Winter 2015.

Instructor for SI 582: Introduction to Interaction Design. Fall 2012, Winter 2013, Fall 2013, Fall 2014.

University of Washington, Seattle

Mentor undergraduate and PhD students in the iMed research group. Fall 2009-Spring 2012

Teaching assistant for Informatics 440: Design Methods for Interaction and Systems. Autumn, 2005

Teaching assistant for Informatics 490: Senior Capstone. Winter 2006 and Spring 2006

Teaching assistant for Informatics 444: Value-Sensitive Design. Winter 2006

Teaching assistant for Informatics 447: Computer Supported Cooperative Work. Spring 2006

Professional Service

Core faculty at the 2016 and 2014 NIH mHealth Training Institutes.

Organizer of the Dagstuhl Seminar on Life-long behavior-change technologies. Dagstuhl, Germany, June 2015.

Associate Chair, CHI 2013, CHI 2014, CHI 2016, CHI 2017, Pervasive Health 2014, & AMIA 2016 Program Committees.

Reviewer for NSF and AHRQ.

Reviewer for CHI, AMIA, CSCW, DIS, UbiComp, UIST, Pervasive Health, Mobile HCI, ICIS, Pervasive Computing, and ISWC conferences.

Reviewer for the Journal of Biomedical Informatics, Journal of the American Medical Informatics Association, ACM Transactions on CHI, IEEE Pervasive Computing Magazine, Interacting with Computers, International Journal of HCI, Journal of American Society of Information Science and Technology, Journal of Medical Internet Research, Health Education Research, and Current Directions in Psychological Science.

Organizing Committee for the Workshop on Interactive Systems in Healthcare 2012, 2013, 2014.

Awards

Distinguished Reviewer Award, American Medical Informatics Association, 2011

Graduate School Top Scholar Award, *University of Washington, Seattle*, 2005

Associations

Association of Computing Machinery, American Medical Informatics Association, Society of Behavioral Medicine.

Phi Beta Kappa, National Honors Society