

NOURA HOWELL

PhD Student
BioSENSE Lab
School of Information
UC Berkeley
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I explore **tangible interactions with emotional biosensory data**. How might interactions with data influence our sense of self and social relationships? What might it be like to experience data without quantification? In addition to self-knowledge, self-improvement, or self-expression, what other practices can be explored with biosensory data, such as cherishing, celebrating, self-acceptance, or just being?

EDUCATION

School of Information UC Berkeley

Ph.D., 2014 - 2020 (est.)
Information
physical prototyping, critical
design
3.96 GPA

Olin College of Engineering

B.S., 2008 - 2012
Engineering with Computing
software engineering, human
centered design
3.68 GPA

Mississippi State University

gap year, 2007 - 2008
pure math just for fun
graph theory, group theory,
topology
3.46 GPA

PUBLICATIONS

Noura Howell, Laura Devendorf, Tomás Vega Gálvez, Rundong (Kevin) Tian, Kimiko Ryokai. 2018. **Tensions of Data-Driven Reflection: A Case Study of Real-Time Emotional Biosensing**. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI'18) - forthcoming.

Kimiko Ryokai, Elena Duran, Noura Howell, Jonathan Gillick, David Bamman. 2018. **Capturing, Representing, and Interacting with Laughter**. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI'18) - forthcoming.

Noura Howell, Laura Devendorf, Rundong (Kevin) Tian, Tomás Vega Gálvez, Nan-Wei Gong, Ivan Poupyrev, Eric Paulos, Kimiko Ryokai. 2016. **Biosignals as Social Cues: Ambiguity and Emotional Interpretation in Social Displays of Skin Conductance**. In Proceedings of the SIGCHI Conference on Designing Interactive Systems (DIS'16).

Laura Devendorf, Joanne Lo, Noura Howell, Jung Lin Lee, Nan-Wei Gong, M. Emre Karagozler, Shiho Fukuhara, Ivan Poupyrev, Eric Paulos, Kimiko Ryokai. 2016. **"I don't want to wear a screen": Probing Perceptions of and Possibilities for Dynamic Displays on Clothing**. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI'16) - **Best Paper Award**.

Kimiko Ryokai, Elena Duran, Dina Bseiso, Noura Howell, Ji Won Jun. 2017. **Celebrating Laughter: Capturing and Sharing Tangible Representations of Laughter**. In Extended Abstracts of the SIGCHI Conference on Designing Interactive Systems Companion (DIS'17).

Nick Merrill, Richmond Wong, Noura Howell, Luke Stark, Lucian Leahu, Dawn Nafus. 2017. **Interrogating Biosensing in Everyday Life**. In Proceedings of the Companion Publication on Designing Interactive Systems (DIS Companion'17).

Noura Howell. 2017. Personal Reflection as Creative Practice in Collaboration with Biosensing Machines. Workshop Paper at CHI'17.

Noura Howell. 2016. **Representation and Interpretation of Biosensing**. In Proceedings of the Companion Publication on Designing Interactive Systems (DIS Companion'16).

Noura Howell. 2015. Connecting Two Oakland Neighborhoods: Surveillance and Self-Representation. Workshop Paper at Critical Alternatives 2015.

Sarah Spence Adams, Noura Howell, Nathaniel Karst, Denise Sakai Troxell, Junjie Zhu. 2013. On the $L(2,1)$ -Labelings of Amalgamations of Graphs. *Discrete Applied Mathematics*, 161(7-8): 881-8.

Jian Shi, Ratna R. Sharma-Shivappa, Mari Chinn, Noura Howell. 2009. Effect of Microbial Pretreatment on Enzymatic Hydrolysis and Fermentation of Cotton Stalks for Ethanol Production. *Biomass and Bioenergy*, 33(1): 88-96.

EXPERIENCE

Intel Labs

Software Contractor

Galileo Connect Anything IoT programming learner kit - UI design & development, server side microcontroller, multi client sync protocol
2014 Feb - Aug

The Echo Nest

Software Developer

UI design, interactive data visualizations, data analysis, computation parallelization for sales demos, internal tools, and a dashboard for 50K+ dynamic music objects for SiriusXM
2012 Jul - 2013 Feb

MIT Media Lab

Research Assistant

User studies, UI design, and software development for WaaZam!, a networked video environment for parents and children to create their own worlds and play together at a distance with Kinect
2013 Jul - Oct

Microsoft

Program Manager Intern

Drove a showcase Windows 8 app from feature specification to UI design to implementation
2011 May - Jul

Augmented Human Lab

Visiting Researcher

with Suranga Nanayakkara
Singapore University of Technology & Design
2017 Jun - Aug

Army Corps of Engineers

My first programming project:
Parallelized a 10K+ line FORTRAN coastal water flow simulation with OpenMP directives
2007 May - Jul

AWARDS

Outstanding Graduate Student Instructor, 2016-2017, University of California, Berkeley.

Cota Robles Fellowship, 2014, University of California, Berkeley. "Awarded to exceptional applications who also advance the Regents' goals for diversification of the academy."

TEACHING

Tangible User Interfaces

teaching assistant with professor Kimiko Ryokai

Theory and practice of tangible interaction design. My duties included providing critique and mentorship on student projects and hands-on Arduino, electronics, and soldering. 2017 & 2016

Deconstructing Data

Science teaching assistant with professor David Bamman

Quantitative machine learning methods with critical analysis of the assumptions and bias these algorithms can reinforce. My duties included Python tutoring and project advising. 2016

Creative Code Immersive

teaching assistant with instructor Matt Ganucheau

By Gray Area Foundation. Arduino, Processing, electronics, and JavaScript for artists. My duties included hands-on instruction in programming and electronics. 2014

INVITED TALKS, GUEST LECTURES, EDUCATIONAL WORKSHOPS

Design Thinking: From Idea to Innovation, day long facilitation of design thinking workshop for tech industry executives in Sri Lanka, for LetMeKnow.lk, with the Augmented Human Lab. 2017

Human Centered Design Introduction, for the course Technology and Delegation taught by Deirdre Mulligan. 2017

Emotional Biosensing: Possibilities, Problematics, & Critical Alternatives, for the I School PhD Research Reception, University of California, Berkeley. 2017

A Case Study of Emotional Biosensing: Tensions of Data-Driven Reflection, for the Society for the Social Studies of Science (4S) Annual Meeting, Boston, MA. 2017

Emotional Biosensing, for the course Mind-Reading and Telepathy for Beginners and Intermediates taught by Nick Merrill and John Chuang. 2017

Machine Learning Introduction, for the course City Planning 101 taught by Karen Chapple. 2017

Information vs. Interaction: A Case Study of Affective Computing, for the course Deconstructing Data Science taught by David Bamman. 2016

Rethinking Data with Emotion and Materiality, for the course Sensors, Humans, Data, Apps taught by John Chuang. 2016

Rethinking Data with Emotion and Materiality, for the course Tangible User Interfaces taught by Kimiko Ryokai. 2016