NOURA HOWELL

PhD Candidate
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BioSENSE Lab

I explore **tangible interactions with emotional biosensory data**. How might interactions with data influence our sense of self, social relationships, and practices of care? What might it be like to experience data without quantification? How can emotional biosensing support alternative ways of feeling and living?

EDUCATION

School of Information UC Berkeley

Ph.D., 2014 - 2020 (est.)
Information
physical prototyping, critical/
speculative design research
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, John Chuang, Abigail De Kosnik, Greg Niemeyer. 2018. **Emotional Biosensing: Exploring Critical Alternatives**. Computer Supported Cooperative Work (CSCW'18).

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**. Human Factors in Computing Systems (CHI'18).

Kimiko Ryokai, Elena Duran, Noura Howell, Jonathan Gillick, David Bamman. 2018. **Capturing, Representing, and Interacting with Laughter**. Human Factors in Computing Systems (CHI'18).

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**. 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**. 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**. Extended Abstracts of Designing Interactive Systems Companion (DIS'17).

Nick Merrill, Richmond Wong, Noura Howell, Luke Stark, Lucian Leahu, Dawn Nafus. 2017. **Interrogating Biosensing in Everyday Life**. Workshop Hosted at Designing Interactive Systems (DIS Companion'17).

Noura Howell. 2016. **Representation and Interpretation of Biosensing**. 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

Augmented Human Lab - Singapore

Visiting Researcher with Suranga Nanayakkara, Singapore University of Technology & Design. Jun - Aug 2017

Intel Labs - U.S.

Software Developer. Galileo IoT programming kit UI design and development, server side microcontroller, multi client sync protocol. Feb - Aug 2014

MIT Media Lab - U.S.

Research Assistant. User studies, UI design, and software development for WaaZam!, a networked video system for full-body Kinect play. Jul - Oct 2013

The Echo Nest - U.S.

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

Mobile Phone Aid - Morocco

Human centered design and business model development for a mobile phone aid for illiterate adults. Sep 2011 - Jun 2012

Microsoft - U.S.

Program Manager Intern. Design and implementation of a showcase Windows 8 app. 2011

One Earth Designs - China

Solar cooker field testing and user research for Tibetan villages in the Himalayas. May - Jun 2010

Army Corps of Engineers - U.S.

Parallelized a 10K+ line FORTRAN coastal water flow simulation with OpenMP directives. May - Jul 2007

TEACHING

Tangible User Interfaces

Teaching assistant with Prof. Kimiko Ryokai. Curriculum development of readings, lectures, and labs. Design critique and project mentorship. Teaching hands-on Arduino, electronics, and soldering. 2017 & 2016 & 2018

Creative Programming & Electronics

Teaching assistant with Instructor J.D. Zamfirescu-Pereira. Hands on instruction in p5.js, Arduino and electronics. 2018

Deconstructing Data Science

Teaching assistant with Prof. 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. Hands on instruction in Arduino, Processing, electronics, and JavaScript for artists. 2014

AWARDS

Jacobs Ignite Grant, 2018, for "Heart Sounds Bench."

Arts Research Center Fellowship, 2018, for "Critical Urban & Emotional Sensing."

Center for Technology, Society, & Policy / Center for Long Term Cybersecurity Fellowship, 2018, for "Menstrual Biosensing Survival Guide."

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."

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