

Noura Howell

Assistant Professor
Department of Communication
North Carolina State University

nhowell@ncsu.edu
nourahowell.com

▷ EDUCATION

School of Information, University of California, Berkeley

Ph.D., 2020, in Information Management & Systems with a Designated Emphasis in New Media.
Physical computing, critical making, design research, qualitative research methods.

Olin College of Engineering

B.S., 2012, in Engineering with a Concentration in Computing. Human centered design, software engineering.

▷ REFEREED JOURNAL & CONFERENCE PUBLICATIONS

Cracks in the Success Narrative: Rethinking Failure in Design Research Through a Retrospective Trioethnography. Noura Howell, Audrey Desjardins, Sarah Fox. 2021 (forthcoming). ACM Transactions on Computer-Human Interaction (TOCHI).

Calling for a Plurality of Perspectives on Design Futuring: An Un-Manifesto. Noura Howell, Britta F. Schulte, Amy Twigger Holroyd, Rocío Fatás Arana, Sumita Sharma, Grace Eden. 2021 (forthcoming). Extended Abstracts of Human Factors in Computing Systems (alt.chi).

Teachable Machine: Approachable Web-Based Tool for Exploring Machine Learning Classification. Michelle Carney, Barron Webster, Irene Alvarado, Kyle Phillips, Noura Howell, Jordan Griffith, Jonas Jongejan, Amit Pitaru, Alexander Chen. 2020. Extended Abstracts of Human Factors in Computing Systems (CHI). (23% acceptance rate)

Expanding Modes of Reflection in Design Futuring. Sandjar Kozubae, Chris Elsdon, Noura Howell, Marie Louise Juul Søndergaard, Nick Merrill, Britta Schulte, Richmond Y. Wong. 2020. Human Factors in Computing Systems (CHI). (23.4%)

Life-Affirming Biosensing in Public: Sounding Heartbeats on a Red Bench. Noura Howell, Greg Niemeyer, Kimiko Ryokai. 2019. Human Factors in Computing Systems (CHI). (24%)

Emotional Biosensing: Exploring Critical Alternatives. Noura Howell, John Chuang, Abigail De Kosnik, Greg Niemeyer, Kimiko Ryokai. 2018. Proceedings of the ACM on Human-Computer Interaction (CSCW). (26%)

Tensions of Data-Driven Reflection: A Case Study of Real-Time Emotional Biosensing. Noura Howell, Laura Devendorf, Tomás Vega Gálvez, Rundong (Kevin) Tian, Kimiko Ryokai. 2018. Human Factors in Computing Systems (CHI). (26%)

Vivewell: Speculating Near-Future Menstrual Tracking through Current Data Practices. Sarah Fox, Noura Howell, Richmond Wong, Franchesca Spektor. 2019. Designing Interactive Systems (DIS). (25%)

Capturing, Representing, and Interacting with Laughter. Kimiko Ryokai, Elena Duran, Noura Howell, Jonathan Gillick, David Bamman. 2018. Human Factors in Computing Systems (CHI). (26%)

Biosignals as Social Cues: Ambiguity and Emotional Interpretation in Social Displays of Skin Conductance. Noura Howell, Laura Devendorf, Rundong (Kevin) Tian, Tomás Vega Gálvez, Nan-Wei Gong, Ivan Poupyrev, Eric Paulos, Kimiko Ryokai. 2016. Designing Interactive Systems (DIS). (26%)

"I don't want to wear a screen": Probing Perceptions of and Possibilities for Dynamic Displays on Clothing. Laura Devendorf, Joanne Lo, Noura Howell, Jung Lin Lee, Nan-Wei Gong, M. Emre Karagozler, Shiho Fukuhara, Ivan Poupyrev, Eric Paulos, Kimiko Ryokai. 2016. Human Factors in Computing Systems (CHI) - Best Paper Award. (1%)

Celebrating Laughter: Capturing and Sharing Tangible Representations of Laughter. Kimiko Ryokai, Elena Duran, Dina Bseiso, Noura Howell, Ji Won Jun. 2017. Extended Abstracts of Designing Interactive Systems (DIS). (22%)

Doodle Daydream: An Interactive Display to Support Playful and Creative Interactions Between Coworkers. Samitha Elvitigala, Samantha W. T. Chen, Noura Howell, Denys J. C. Matthies, Suranga Nanayakkara. 2018. Proceedings of the Symposium on Spatial User Interaction. (31%)

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

Effect of Microbial Pretreatment on Enzymatic Hydrolysis and Fermentation of Cotton Stalks for Ethanol Production. Jian Shi, Ratna R. Sharma-Shivappa, Mari Chinn, Noura Howell. 2009. Biomass and Bioenergy.

▷ TEACHING

Biosensing Communication Technologies in Everyday Life

Lead instructor, North Carolina State University, 2021. Readings, discussion, and student-driven projects on sociotechnical implications of biosensing technologies such as algorithmic oppression, surveillance, and emotional biosensing.

Multimedia Production & Digital Culture

Lead instructor, North Carolina State University, 2020, 2021. Readings, discussion, and student-driven critical design futuring projects on topics such as algorithmic oppression, facial recognition, biometric surveillance, content moderation, etc.

Creative Programming & Electronics

Teaching assistant, University of California, Berkeley, 2018. Hands-on Arduino, p5.js, circuits, and soldering.

Theory & Practice of Tangible User Interfaces

Teaching assistant, University of California, Berkeley, 2016, 2017, 2018. Curriculum development of readings, lectures, design activities, and labs combining embodied interaction, design theory, Arduino, and circuits, and soldering. Design critique and project mentorship.

Deconstructing Data Science

Teaching assistant, University of California, Berkeley, 2016. Machine learning methods with critical social analysis of assumptions and bias embedded in algorithms and how these can reinforce inequality. Python tutoring, project advising.

Creative Code Immersive

Teaching assistant, Gray Area Foundation for the Arts, 2014. Night class for artists. Hands-on Arduino, Processing, circuits, and JavaScript.

▷ ACADEMIC WORKSHOPS

Love in the Time of a Pandemic: Reimagining the Past, Present, and Future Using Critical Design Fiction. Sumita Sharma, Netta Iivari, Marianne Kinnula, Grace Eden, Rocío Fatás, Noura Howell, Britta F. Schulte, Amy Twigger Holroyd. 2021. Workshop to be hosted at INTERACT.

Challenges and Opportunities for Designing with Biodata as Material. Vasiliki Tsaknaki, Tom Jenkins, Laurens Boer, Sarah Homewood, Noura Howell, Pedro Sanches. 2020. Workshop hosted around NordiCHI.

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

Representation and Interpretation of Biosensing. Noura Howell. 2016. Doctoral Consortium at Designing Interactive Systems (DIS).

Connecting Two Oakland Neighborhoods: Surveillance and Self-Representation. Noura Howell. 2015. Workshop paper at Critical Alternatives Aarhus Decennial Conference.

▷ SCHOLARSHIPS, GRANTS, & AWARDS

Center for Technology, Society, & Policy and Algorithmic Fairness & Opacity Group, 2020

Center for Technology, Society, & Policy and Center for Long Term Cybersecurity Fellowship, 2019

Center for Long Term Cybersecurity, 2019

New Media Undergraduate Research Mentorship Award, 2019

Tech for Social Good, 2018

Jacobs Innovation Center, 2018

Arts Research Center Fellowship, 2018

Center for Technology, Society, & Policy and Center for Long Term Cybersecurity Fellowship, 2018

New Media Summer Research Award, 2018

Graduate Division Summer Grant, 2018

New Media Undergraduate Research Mentorship Award, 2018

Outstanding Graduate Student Instructor, 2017

Cota Robles Fellowship, 2014

▷ ART EXHIBITONS

Heart Sounds Buckets, 2019, at Worth Ryder Art Gallery, Berkeley, U.S.

Salaam Participatory Sculpture, 2018, at Figment Arts Festival, Oakland, U.S.

Ebb Color-Changing Fabric, 2018, at the Tech Museum of the Center for Information Technology Research in the Interest of Society, Berkeley, U.S.

Salaam Participatory Sculpture, 2017, at the Islamophobia Conference, Berkeley, U.S.

▷ INDUSTRY COLLABORATIONS & WORK EXPERIENCE

Project Jacquard at Google ATAP

Color-changing fabric real time data display, 2016

Intel Labs

Galileo IoT programming kit UI design and code, multi client sync protocol, 2014

Augmented Human Lab

Visiting Researcher with Suranga Nanayakkara at Singapore University of Technology & Design, 2017

The Echo Nest & SiriusXM

Software Developer. Data viz, full stack web, parallelization, and a dashboard for 50K+ dynamic music objects for SiriusXM, 2012 - 2013

Army Corps of Engineers

Parallelized a 10K+ line FORTRAN coastal water flow simulation with OpenMP directives, 2007

▷ ACADEMIC SERVICE

Beyond Big Tech: Careers in Social Impact, Tech for Good, and Research Panel, UC Berkeley, 2021

Associate Chair, Designing Interactive Systems (DIS), 2019 - 2020

Reviewer for Human Factors in Computing Systems (CHI) 2016 - 2021, Designing Interactive Systems (DIS) 2017 - 2021, Design Issues 2017, Tangible Embedded Embodied Interactions (TEI) 2018 - 2021, NordiCHI 2018, Computer-Supported Cooperative Work and Social Computing (CSCW) 2019 - 2021, ACM Group 2020, Transactions on Human-Computer Interaction (ToCHI) 2021, Journal of Textile Design Research and Practice 2021

Diversity Admissions Panel, UC Berkeley, 2020

Grants Committee, NC State Dept. of Communication, 2020

Peer Teaching Evaluations Standards & Scheduling, NC State Dept. of Communication, 2020

Masters Students Meet & Greet Mixer, NC State Dept. of Communication, 2020

Office Redesign Committee, UC Berkeley School of Information, 2019

PhD Student Representative to the Faculty, UC Berkeley School of Information, AY 2015-16

▷ INVITED TALKS

Designing for Emotional Meaning-Making with Data: Imagining an Affirmative Biopolitics, talk at Coffee & Viz Research Exchange, North Carolina State University, U.S., 2021

Reimagining Cybersecurity through the Design of the Heart Sounds Bench, talk at Center for Long-Term Cybersecurity Research Exchange, Berkeley, U.S., 2019

Emotional Biosensing, talk at InfoCamp Conference, Berkeley, U.S., 2019

Emotional Biosensing, talk at Bay Area Signal Hackers, Pandora, Oakland, U.S., 2019

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

Design Thinking: From Idea to Innovation, workshop for tech industry executives with the Augmented Human Lab, Colombo, Sri Lanka, 2017

Emotional Biosensing, guest lecture for the class Mind-Reading and Telepathy for Beginners and Intermediates at UC Berkeley, 2017

Machine Learning Introduction, guest lecture for the class City Planning 101 at UC Berkeley, 2017

Information vs. Interaction: A Case Study of Affective Computing, lecture for the class Deconstructing Data Science at UC Berkeley, 2016

Rethinking Data with Emotion and Materiality, guest lecture for the class Sensors, Humans, Data, Apps at UC Berkeley, 2016

Rethinking Data with Emotion and Materiality, lecture for the class Tangible User Interfaces at UC Berkeley, 2016