

Nick Merrill

102 South Hall
University of California
Berkeley, CA 94720-4600
ffff@berkeley.edu

Education

- University of California, Berkeley** 2018
PhD, Information Systems & Management
Committee: John Chuang (adviser), Coye Cheshire, Alva Noë
- Northwestern University** 2013
BA, Cognitive Science, *cum laude*, *Phi Beta Kappa*
Thesis advised by Darren Gergle and Steven Franconeri

Publications

Conference proceedings

- Wong, RY., **Merrill, N.**, & Chuang, J. (2018). When BCIs have APIs: Design Fictions of Everyday Brain-Computer Interface Adoption. Designing Interactive Systems (DIS '18). Hong Kong, PRC. ***Honorable mention.***
- Pierce, J., **Merrill, N.**, Wong, RY., Fox, S. & Paulos, E. (2018). An Interface Without a User: An Exploratory Design Study of Online Privacy Policies and Digital Legalese. Designing Interactive Systems (DIS '18). Hong Kong, PRC.
- McVeigh-Schultz, J., Márquez Segura, E., **Merrill, N.**, Isbister, K. (2018). What's It Mean to "Be Social" in VR?: Mapping the Social VR Design Ecology. Designing Interactive Systems (DIS '18) Companion. Hong Kong, PRC.
- Merrill, N.** & Chuang, J. (2018). From Scanning Brains to Reading Minds: Talking to Engineers about Brain-Computer Interface. Computer Human Interaction (CHI '18). Montreal, QC.
- Merrill, N.**, Curran, M. & Chuang, J. (2017). Is the Future of Authenticity All in Our Heads? Moving Passtoughts from the Lab to the World. New Security Paradigms (NSPW '17). Islamorada, FL.
- Curran, M., **Merrill, N.**, Chuang, & Gandhi, SJ. (2017). One-Step, Three-Factor Authentication in a Single Earpiece. ACM Conference on Ubiquitous Computing (UBICOMP '17). Maui, HI.
- Merrill, N.** (2017). Better Not To Know? The SHA-1 Collision Compute and the Limits of Polemic Computation. ACM Conference on the Limits of Computing (LIMITS '17). Santa Barbara, CA.
- Merrill, N.** & Cheshire, C. (2017). Trust Your Heart: Assessing Cooperation and Trust with Biosignals in Computer-Mediated Interactions. (CSCW '17). Portland, OR. ***Honorable mention.***
- Merrill, N.**, Wong, RY., Howell, N., Stark, L., Leahu, L. & Nafus, D. Interrogating Biosensing in Everyday Life. Designing Interactive Systems (DIS '16). Edinburgh, UK.
- Merrill, N.** & Cheshire, C. (2016). Habits of the Heart(rate): Interpreting and Acting on Biosignals in Risky Social Situations. ACM Conference on Supporting Groupwork (GROUP '16). St Sanibel Island, FL.

Curran, M., Yang, J.K., **Merrill, N.**, & Chuang, J. (2016). Passtoughts Authentication with Low Cost, In-Ear EEG. IEEE Engineering in Medicine and Biology Conference (EMBC '16). Orlando, FL.

Merrill, N., Curran, M., Yang, J.K., & Chuang, J. (2016). Classifying Mental Gestures with In-Ear EEG. IEEE EMBS Body Sensor Networks (BSN '16). San Francisco, CA.

Merrill, N., Maillart, T, Johnson, B, Chuang, J. (2015). Improving Physiological Signal Classification Using Logarithmic Quantization & a Progressive Calibration Technique. Physiological Computing Systems (PhyCS'15). Angers, France.

Merrill, N., Foucault-Welles, B, Contractor, N. (2012). Network Factors Leading to Group Commitment in Second Life. 97th Annual NCA Conference, New Orleans, LA.

Journal articles

Welles, B. F., Rouse, T., **Merrill, N.**, & Contractor, N. (2014). Virtually friends: An Exploration of Friendship Claims and Expectations in Immersive Virtual Worlds. *Journal for Virtual Worlds Research*, 7(2).

Invited talks

Merrill, N. Narratives and (Consumer) Brainscanning. (2017). Annual Meeting of the Society for the Social Study of Science (4S). Boston, MA.

Teaching

Fall 2017 UC Berkeley	<u>Info 290T: Mind Reading & Telepathy for Beginners & Intermediates</u> Instructor (with John Chuang)
Fall 2014 UC Berkeley	<u>Info 213: User Interface Design</u> Teaching assistant
Fall 2015 UC Berkeley	<u>Info 213: User Interface Design</u> Teaching assistant
Fall 2014 UC Berkeley	<u>Info 290: Humans, Data, Sensors, Apps</u> "Hacker in residence"

Guest lectures

2016	<u>Prototyping sensor-based applications</u> Berkeley Institute for Data Science (BIDS)
2015	<u>The social life of physiological signals.</u> i299: Hacking Measurement, School of Information 213: User Interface Design & Development
2015	<u>Streams for the damned.</u> Sudo Room; Oakland, CA. [repository] [video]
2014	<u>Distributed web architectures and social change.</u> 290M: Information Access, School of Information.

Media coverage

Muse magazine. [Think your password: Devices that measure brainwaves make it possible](#). March 2017.

Neo.life. [When computers read your mind, you'll need a great passthought](#). July 15, 2017.

Techonomy. [Will your next password be a brainwave?](#) June 20, 2017.

CNet. Facebook's moonshots: [Making brains type and skins hear](#). April 19, 2017.

UC Berkeley ISchool News. [What happens when an app shares your biosignals?](#) March 3, 2017.

KRON4. [New brainwave reading tech from Cal Berkeley released](#). November 18, 2016.

Employment

- 2017 [Unify.ID](#), AI Fellow
San Francisco, CA
Supervisor: Vinay Prabhu
- 2016 [Bio/Nano/Programmable Matter](#), Autodesk Research, Research Intern
Pier 9, San Francisco, CA
Supervisor: Florencio Mazzoldi
Software for self-assembling DNA nanostructures.
- 2012-2013 [Collablab](#), Northwestern University, Undergraduate Researcher
Evanston, IL
Supervisors: Patti Bao, Darren Gergle
- 2011-2012 [SONIC](#), Northwestern University, Undergraduate Researcher
Evanston, IL
Supervisor: Brooke Foucault-Welles

Open-source software (@elsehow)

- 2017 [signal-protocol](#)
The signal cryptographic protocol (used in the Signal messenger app),
for Node and web browsers ([github](#)).
- 2017 [signal-stream](#)
Encrypt and decrypt Node streams using the Signal protocol.
- 2016 [aaronson oracle](#)
Press the 'f' and 'd' keys randomly. It's easy. Just use your "free will." ([github](#))
- 2016 [hyperreal](#)
Verified and encrypted communication over a distributed ledger.
- 2014 [dontcreeponme](#)
Pseudonymous, real-time chat, for anyone with a web browser. ([github](#))

2013

[clippy clippy](#)

A visual clipboard for the [monome](#).

Service

Workshops organized

2017

Co-chair, [Biosensing in Everyday Life](#).

DIS 2017, Edinburgh, UK.

with Richmond Y Wong, Noura Howell, Lucian Leahu and Dawn Nafus

2017

Organizer, [Sensing Subjectivities: Biosensing and Human/Machine Entanglements](#). 4S 2017, Boston, Massachusetts, USA

with Dawn Nafus and Alex S Taylor

Reviewing

2015-2017

Computer Human Interaction (CHI)

2015-2017

Computer Supported Cooperative Work (CSCW)

2016-2017

Designing Interactive Systems (DIS)

2017

IEEE Transactions on Information Forensics and Security

2017

Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)

Committees

2016

Faculty search committee, UC Berkeley School of Information

2016

PhD admissions committee, UC Berkeley School of Information

2015

PhD representative to faculty, UC Berkeley School of Information

Awards

2017

UC Berkeley Dissertation Completion Fellowship

2017

School of Information Summer Research Award

2017

Research Project Grant, Center for Long-Term Cybersecurity

2016

Research Project Grant, Center for Long-Term Cybersecurity

2016

Seed Grant for BioSENSE lab, Center for Long-Term Cybersecurity

2013

School of Information Doctoral Fellowship

2012

Undergraduate Research Grant