

Christine Dierk

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Education

- 2020 **University of California, Berkeley**
Ph.D. in Computer Science, Designated Emphasis in New Media
Thesis: Heirloom Wearables: A Hybrid Approach to the Design of Embodied Wearable Technologies
Advisor: Eric Paulos; *Readers:* Björn Hartmann, Kimiko Ryokai
- 2014 **Elon University**
B.S. in Computer Science and Math, Minor in Psychology
Thesis: Real-Life Musical Composition through Virtual Means: a Mobile Application Controlled Ukulele-Playing Robot
Advisor: Joel Hollingsworth

Research Experience

- 2020 — **Adobe Research** | San Jose, CA
Research Scientist
- 2014 — 2020 **University of California, Berkeley** | Berkeley, CA
Graduate Student Researcher
Hybrid Ecologies Lab - *Advisor:* Eric Paulos
- 2019 **Adobe Research** | San Jose, CA
Research Intern
Creative Intelligence Lab - *Mentors:* Gavin Miller, TJ Rhodes
- 2018 **FX Palo Alto Laboratory** | Palo Alto, CA
Research Intern
Mentors: Scott Carter, Patrick Chiu, Tony Dunnigan, Don Kimber
- 2013 — 2014 **Elon University** | Elon, NC
Undergraduate Researcher
Advisor: Joel Hollingsworth
- 2013 **University of California, Berkeley** | Berkeley, CA
Undergraduate Researcher
Berkeley Institute of Design - *Advisor:* Björn Hartmann
- 2012 **University of Notre Dame** | Notre Dame, IN
Undergraduate Researcher
Distributed and Adaptive Real-Time Systems Lab - *Advisor:* Christian Poellabauer

Peer-Reviewed Publications

- 2023 **Lotio: Lotion-Mediated Interaction with an Electronic Skin-Worn Display**
*Christine Dierk**, Katherine W Song*, Szu Ting Tung, and Eric Paulos
CHI: ACM SIGCHI Conference on Human Factors in Computing Systems
- 2022 **Project Primrose: Reflective Light Diffuser Modules for Non-Emissive Flexible Display Systems**
Christine Dierk, TJ Rhodes, and Gavin Miller
UIST: ACM Symposium on User Interface Software and Technology
- 2019 **Use Your Head! Exploring Interaction Modalities for Hat Technologies**
Christine Dierk, Scott Carter, Patrick Chiu, Tony Dunnigan, and Don Kimber
DIS: ACM SIGCHI Conference on Designing Interactive Systems
- 2018 **AlterWear: Battery-Free Wearable Displays for Opportunistic Interactions**
Christine Dierk, Molly Jane Pearce Nicholas, and Eric Paulos
CHI: ACM SIGCHI Conference on Human Factors in Computing Systems
- HäirLö: Human Hair as Interactive Material**
Christine Dierk, Sarah Sterman, Molly Jane Pearce Nicholas, and Eric Paulos
TEI: ACM SIGCHI Conference on Tangible, Embedded and Embodied Interaction
- 2017 **AlterNail: Ambient, Batteryless, Stateful, Dynamic Displays at your Fingertips**
Christine Dierk, Tomas Vega Gálvez, and Eric Paulos
CHI: ACM SIGCHI Conference on Human Factors in Computing Systems
- 2016 **MyPart: Personal, Portable, Accurate, Airborne Particle Counting**
Rundong Tian, *Christine Dierk*, Christopher Myers, and Eric Paulos
CHI: ACM SIGCHI Conference on Human Factors in Computing Systems

Patents Issued

- 2023 **Control Techniques for Multiple Alternating-Input Devices**
Tenell Rhodes, Gavin SP Miller, *Christine Dierk*
US Patent App. 17/524,156 - Issued May 11, 2023
- 2021 **Smart Hat Device for Interacting with Remote Devices and Displays**
Christine Dierk, Scott Carter, Patrick Chiu, Anthony Dunnigan, Chelhwon Kim, Donald Kimber, Nami Tokunaga, Hajime Ueno
US Patent No. 10,990,185 - Issued April 27, 2021
- Modular Reflective Light-Diffuser Devices**
Tenell Rhodes, Gavin SP Miller, *Christine Dierk*
US Patent No. 10,935,861 - Issued March 2, 2021
- 2020 **Low-Power, Personalized Smart Grips for VR/AR interaction**
Daniel Avrahami, *Christine Dierk*, Scott Carter
US Patent No. 10,867,448 - Issued December 15, 2020
- 2016 **Portable Airborne Particle Counting Systems and Methods**
Eric Paulos, Rundong Tian, *Christie Dierk*, and Chris Myers
US Patent No. 62/096,371 and WIPO 2016/105555 - Issued June 30, 2016

Selected Talks, Posters, and Demos

Talks **The Body as a Medium: Designing Digital Content for On-Body Displays**
Adobe Tech Summit (2022)

Cosmetic Computing

Christine Dierk, Molly Nicholas
SWARM Lab Fall Retreat (2017)

Real-Life Musical Composition through Virtual Means: a Mobile Application Controlled Ukulele-Playing Robot

Christine Dierk, Joel Hollingsworth
National Conference on Undergraduate Research (2014)

A Recursive Solution to Enumerating Directed Graphs

Christine Dierk, Todd Lee
UNCG Regional Mathematics and Statistics Conference (2013)

Posters **Determining Proximity through High Frequency Emission and Detection**

Christine Dierk, Kurtis Heimerl, Björn Hartmann
National Conference on Undergraduate Research (2014)

Controlling an OSX Application through iOS and Kinect Input

Christine Dierk, Christian Poellabauer
Experimental Research on Wireless Networking Poster Session (2012)

Demos **MAX Sneaks: Project Primrose**

Christine Dierk, TJ Rhodes, Gavin Miller
Adobe MAX 2023 | The Creativity Conference

Project Primrose: Reflective Light Diffuser Modules for Non-Emissive Flexible Display Systems

Christine Dierk, TJ Rhodes, Gavin Miller
UIST: ACM Symposium on User Interface Software and Technology (2022)

AlterWear: Battery-Free Wearable Displays for Opportunistic Interactions

Christine Dierk, Molly Jane Pearce Nicholas, Eric Paulos
Berkeley Center for New Media Fall Open House (2018)

HäirLÖ: Human Hair as Interactive Material

Christine Dierk, Sarah Serman, Molly Jane Pearce Nicholas, Eric Paulos
TEI: ACM SIGCHI Conference on Tangible, Embedded and Embodied Interaction (2018); Berkeley Center for New Media Fall Open House (2017 & 2018)

AlterNail: Ambient, Batteryless, Stateful, Dynamic Displays at your Fingertips

Christine Dierk, Tomas Vega Gálvez, Eric Paulos
Berkeley Center for New Media Fall Open House (2016 & 2017); SWARM Lab Fall Retreat (2016)

MyPart: Personal, Portable, Accurate, Airborne Particle Counting

Rundong Tian, *Christine Dierk*, Christopher Myers, Eric Paulos
Berkeley EECS Annual Research Symposium (2015)

Workshop **Wearables Should Transcend Cultural Norms and Practices**

Christine Dierk, Eric Paulos

(Un)Acceptable!?! -- Re-thinking the Social Acceptability of Emerging Technologies
CHI: ACM SIGCHI Conference on Human Factors in Computing Systems (2018)

In the Press

"Adobe Introduces Project Primrose, a Digital Animated Dress That Can Change Patterns".
Bailey Richards, **People**. October 14, 2023.

"Project Primrose: The Fabric of the Future".
Tomiwa Olubiire, **Medium**. October 20, 2023.

"Adobe's Wild Interactive Dress Changes Patterns When You Want It To".
Leslie Katz, **Forbes**. October 16, 2023.

"Adobe's AI-enhanced dress speaks to 'smart' fashion's bigger problem".
Madeleine Schulz, **Vogue Business**. October 18, 2023.

"Adobe Previews Dress Design You Can Change on a Dime".
Meghan Hall, **Sourcing Journal**. October 17, 2023.

"Adobe unveils interactive, digital dress in Los Angeles".
Josh DuBose, **KTLA**. October 15, 2023.

"Adobe Scientist Cuts a Dash with LCD Shifting Dress".
Richard Baguley, **Hackaday**. October 22, 2023.

"meet project primrose, adobe's real-life interactive dress that changes design every second".
Matthew Burgos, **design boom**. October 13, 2023.

"Adobe Project Primrose interactive dress capable of changing patterns".
Julian Horsey, **Geeky Gadgets**. October 16, 2023.

"Adobe's Christine Dierk Becomes the Canvas with a Wearable Display Dress Based on Project Primrose".
Gareth Halfacree, **Hackster.io**. October 19, 2023.

"Alum Christine Dierk Leads Adobe's Project Primrose".
Berkeley Center for New Media Blog. October 26, 2023.

"Adobe Research interns hone their communication and coding skills in a summer of learning".
Adobe Research Blog. October 17, 2022.

"From intern to mentor: How former Adobe Research interns welcome the next generation".
Adobe Research Blog. January 13, 2022.

"Interactive Human Hair is the Latest in Wearable Tech".
Matthew Hart, **Nerdist**. April 25, 2018.

"Human hair as a computer interface".
David Pescovitz, **Boing Boing**. April 23, 2018.

"HairIO: an Interactive Extension of the Self".
Kristina Panos, **Hackaday**. March 29, 2018.

"These interactive hair extensions can communicate over Bluetooth".
Arduino Team, **Arduino Blog**. March 20, 2018.

"HäirIÖ Turns Hair Extensions into an Interactive Medium".
Jeremy Cook, **Hackster.io**. March 20, 2018.

Teaching

- 2020 **UC Berkeley CS160** - User Interface Design and Development
Graduate Student Instructor
- 2018 **UC Berkeley NWMEDIA C203** - Critical Making
Graduate Student Instructor
- 2017 **UC Berkeley DESINV 22** - Prototyping and Fabrication
Graduate Student Instructor
- 2014 **Elon University** - Introduction to Electronics
Teaching Assistant

Interns Mentored

- 2023 **Shreyosi Endow** — PhD Student, University of Texas at Arlington
- 2022 **Ningjing Chen** — MFA Student, School of Visual Arts
- 2021 **Levi Kapllani** — PhD Student, Drexel University
- 2021 **Annie Liu** — WiT Scholarship Recipient, University of Washington
- 2021 **Agnes Nantista** — BFA Student, San Jose State University

Academic Service

- 2015 — 2022 **ACM Reviewer**
109 reviews total; 9 Special Recognitions for Outstanding Reviews
Special Recognition Reviews: UIST, CHI, DIS, MobileHCI, C&C, CHI PLAY
- 2021 & 2022 **Associate Chair**
MobileHCI: ACM International Conference on Mobile Human-Computer Interaction
- 2021 **Associate Chair**
CHI: ACM SIGCHI Conference on Human Factors in Computing Systems
- Associate Chair, Pictorials Track**
TEI: ACM SIGCHI Conference on Tangible, Embedded and Embodied Interaction
- 2019 — 2020 **PhD Admissions Committee, Computer Science Division**
Human-Computer Interaction [HCI]
University of California, Berkeley
- 2019 **MEng Admissions Committee, Computer Science Division**
Visual Computing & Computer Graphics [VCCG]; Data Science & Systems [DSS]
University of California, Berkeley
- 2015 **Student Volunteer**
UIST: ACM Symposium on User Interface Software and Technology

Industry Service

- 2022 — **Intern Core Team**
Adobe Research
- 2021 — **Code Quality Jam Planning Committee**
Adobe Research
- 2022 **Co-Chair, Code Quality Jam Intern Event**
Adobe Research
- 2021 & 2022 **Research Fellowship Selection Committee**
Adobe Research
- 2021 **Women in Technology Scholarship Selection Committee**
Adobe Research

Awards & Fellowships

- 2015 **National Science Foundation (NSF) Graduate Research Fellow**
“Cosmetic Computing: Epidermal Interfaces and Interactive Electro Chemical Materials”
- 2014 **EECS Departmental Excellence Award**
University of California, Berkeley
- Computer Science Academic Achievement Award**
Elon University
- Janie Crumpton Evans Reece Mathematics Scholar**
Elon University
- 2013 **J. Albert Carpenter Computing Sciences Scholar**
Elon University
- 2012 **Richard Carlisle Haworth Mathematics Scholar**
Elon University
- 2010 **Presidential Scholar & Honors Fellow**
Elon University