

# Alexander Redding

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## Education

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<b>University of California San Diego</b> <i>Ph.D. Computer Science (In progress)</i> Advisors: Ryan Kastner, Pat Pannuto	2022 – Present La Jolla, CA
<b>Northwestern University</b> <i>B.A. Computer Science</i>	2018 – 2022 Evanston, IL

## Research Experience

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<b>University of California San Diego</b> <i>Research Assistant</i> Advisors: Ryan Kastner, Pat Pannuto	Jan. 2022 – Present La Jolla, CA
<b>University of California San Diego</b> <i>Research Assistant</i> Advisor: Tajana Šimunić Rosing (rotation)	Sept. 2022 – Dec. 2022 La Jolla, CA
<b>Northwestern University</b> <i>Research Assistant</i> Advisor: Josiah Hester	May 2021 – Sept. 2022 Evanston, IL
<b>Northwestern University</b> <i>Laboratory Assistant</i> Advisor: Marcelo Worsley	Nov. 2020 – May 2021 Evanston, IL

## Awards and Memberships

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<b>Department of Computer Science and Engineering First-Year Rotation Fellowship</b> University of California San Diego	2022 – 2023
<b>Society of Hispanic Professional Engineers</b>	2020 – Present

## Publications

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<b>Environmental Benefits and Drawbacks of Repurposing Smartphones as Sensor Devices</b> Jennifer Switzer, Alexander Redding, Jaemok Lee, Julia Le, Lillian Ho, Edward Jin, Ryan Kastner, Pat Pannuto.	In submission
<b>Perceptions of Wearable Health Tools Post-COVID 19 in Low-income Latine Communities</b> Stefany Cruz, Claire Lu, Mara Ulloa, Alexander Redding, Josiah Hester, Maia Jacobs.	In submission
<b>Practical Obfuscation of BLE Physical-Layer</b> Hadi Givehchian, Nishant Bhaskar, Alexander Redding, Han Zhao, Aaron Schulman, Dinesh Bharadia. In <i>Proceedings of the 2024 IEEE Symposium on Security and Privacy (S&amp;P)</i> . San Francisco, CA. May 2024	To appear
<b>EmbHD: A Library for Hyperdimensional Computing Research on MCU-Class Devices</b> Alexander Redding, Xiaofan Yu, Shengfan Hu, Pat Pannuto, Tajana Rosing. In <i>Proceedings of the 2nd Workshop on Networked Sensing Systems for a Sustainable Society (NET4us)</i> . Madrid, Spain. Oct. 2023	NET4us 2023
<b>EquityWare: Co-Designing Wearables With and For Low Income Communities</b> Stefany Cruz, Alexander Redding, Connie W. Chau, Claire Lu, Julia Persche, Josiah Hester, Maia Jacobs. In <i>Proceedings of the 2023 Conference on Human Factors in Computing Systems (CHI)</i> . Hamburg, Germany. April 2023	CHI 2023

## Presentations

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<b>EmbHD: A Library for Hyperdimensional Computing Research on MCU-Class Devices</b> <i>2nd Workshop on Networked Sensing Systems for a Sustainable Society</i> . Madrid, Spain	Oct. 6, 2023
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## Teaching

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**CSE 160:** Introduction to Parallel Computing – *TA*

Present

Rewriting course projects from CUDA to OpenCL for future open-source heterogeneous computing education.

**CS 343:** Operating Systems – *Peer Mentor*

Spring 2022

Topics include concurrency, scheduling, virtual memory, and file systems.

**CS 211:** Fundamentals of Computer Programming II – *Peer Mentor*

Fall 2021, Winter 2022

Topics include C and C++ programming, memory management, and the Unix shell.