
EDUCATION

University of California, Berkeley (2019–2024, anticipated)

Ph.D. | [Materials Science and Engineering](#) (MSE) | GPA: 4.000

Stanford University (2014–2018)

M.S. | [Computational and Mathematical Engineering](#) (CME) | GPA: 3.970

B.S. | [Materials Science and Engineering](#) (MSE), with [Honors](#), with [Distinction](#) | GPA: 3.965

SKILLS AND AWARDS

- 2020 [National Science Foundation Graduate Research Fellowship](#) (NSF GRFP) worth a total of \$138,000.
 - Scientific computing and machine learning (ML) expertise for physical science problems.
 - Experienced in Python and MATLAB. Working knowledge of C++ and Linux systems/tools.
 - 2022 UC Berkeley [Outstanding Graduate Student Instructor Award](#).
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RESEARCH EXPERIENCE

Ph.D. Candidate co-advised by Prof. [Mark Asta](#) and Dr. [Timofey Frolov](#) (Berkeley, CA) 08/2019—present

- Use atomistic simulations ([DFT](#) and [MD](#)) and [materials informatics](#) (MI) to study interfaces in alloys.
- Used high-throughput DFT calculations and ML for superalloy design. E. Chen et al. *npj Comp. Mater.* 2022.
- Performed grand canonical structure search for twin boundary phases in Ti as part of an [ONR](#) project. Co-authored manuscript under review at *Nature Materials* ([arXiv preprint](#)).

Summer Intern at [Lawrence Livermore National Laboratory](#) (Livermore, CA) Summer 2020 and 2022

- 2020 [MaCI intern](#) working on Ni-based superalloy design. Presented at [LLNL SLAM](#) and [TMS 2021](#).
- 2022 [CCMS student](#) studying Ti grain boundaries for H storage. Presented at [LLNL SLAM](#) and [TMS 2023](#).

R&D Intern at [Sandia National Laboratories](#) (Albuquerque, NM) 06/2018—09/2018

- Mentored by [John Mitchell](#) and [Jay Lofstead](#) in the [Center for Computing Research](#).
- Multiscale modeling studies of [kinetic Monte Carlo](#) (KMC) simulations for [additive manufacturing](#).
- Co-authored publication: J. Lofstead et al. in *Proceedings of the 34th IEEE IPDPS*, 2020.

UG Research Assistant advised by Prof. [Evan Reed](#) (Stanford, CA) 06/2016—06/2018

- Mentored by [Qian Yang](#) and demonstrated transferability of machine-learned KMC models for predicting reactions in different chemical systems (hydrocarbon decomposition in extreme environments).
 - *First-author* publication: E. Chen et al. *J. Phys. Chem. A*, 123, 2019 and [co-authored book chapter](#).
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TEACHING AND MENTORING EXPERIENCE

Research Internship Mentor for [LBNL MSD DEI](#) initiative (Berkeley, CA) Summer 2021 and 2022

- Designed an original, open-source [materials informatics \(MI\) curriculum](#) using [Jupyter Book](#).
- Mentored 11 undergraduate researchers in using MI techniques for data-driven discovery of high- κ dielectrics.
- *Spotlight presentation* at the [2021 MRS Fall Meeting](#) and *first-author* article published in *J. Chem. Educ.*

Graduate Student Instructor for [MSE 45](#) and [MSE 104](#) (Berkeley, CA) 08/2021—05/2022

- Designed lab lectures and taught labs about introductory MSE concepts and materials characterization. Also held OH and assisted with the overall course (~ 250 students total). *Overall effectiveness: 4.8/5.0* ($n = 34$).
- Leading an education research project introducing data science modules in MSE 104L. Abstract submitted to the [2023 ASEE Annual Conference](#).