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## EDUCATION

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

Ph.D. | [Materials Science and Engineering](#) (MSE), advised by Professor [Mark Asta](#) | 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

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## 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](#) (UC Berkeley, CA) 08/2019—present

- Use atomistic simulations ([DFT](#) and [MD](#)) and [materials informatics](#) (MI) to study interfaces in alloys.
- Performed high-throughput DFT calculations and applied ML for superalloy design. *First-author* manuscript accepted at [npj Computational Materials](#) and gave an [oral presentation](#) at [TMS 2021](#).
- Performed semi-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](#)).
- Training machine-learned interatomic potentials for modeling planar defects in Ti–Al–O and its subsystems.

**Summer intern** at [Lawrence Livermore National Laboratory](#) (remote; Livermore, CA) Summer 2020 and 2022

- 2020 [MaCI intern](#) in a project on Ni-based superalloy design. [SLAM presentation](#) finalist.
- 2022 [CCMS summer student](#) to study Ti grain boundaries for hydrogen storage ([HyMARC](#) collaboration).

**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

- Demonstrated transferability of machine-learned KMC models for predicting reactions in different chemical systems (hydrocarbon decomposition in extreme environments).
  - *Oral presentation* at the 2017 MRS Fall Meeting ([TC04.08.08](#)).
  - *First-author* publication: E. Chen et al. [The Journal of Physical Chemistry A](#), 123, 2019.
  - Co-authored book chapter in [Computational Approaches for Chemistry Under Extreme Conditions](#).
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## TEACHING 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 **six** undergraduate researchers in using MI techniques for data-driven discovery of high- $\kappa$  dielectrics.
- *Spotlight presentation* at the 2021 MRS Fall Meeting ([BI01.02.01](#)) and *first-author* manuscript in preparation.