Enze Chen

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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

SKILLS AND AWARDS

- 2020 National Science Foundation Graduate Research Fellowship (NSF GRFP).
- Scientific computing and machine learning (ML) expertise for physical science problems.
- Experienced in Python and MATLAB. Working knowledge of C++ and Linux systems/tools.
- Pedagogical content knowledge in physical science domains with experience in instructional design.

RESEARCH EXPERIENCE

Ph.D. Student advised by Prof. Mark Asta (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 under review 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 (MLIPs) for modeling extended defects in Ti–Al and Ti–Al–O.

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

- MaCI intern mentored by Timofey Frolov in a project on superalloy design. LLNL SLAM presentation finalist.
- Returned as a CCMS summer student in 2022 to study Ti grain boundaries for hydrogen storage and MLIPs.

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*.

TEACHING EXPERIENCE

Research internship mentor for LBNL MSD DEI initiative (Berkeley, CA) 06/2021—07/2021

- 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-κ dielectrics.
- *Poster presentation* at the 2021 MRS Fall Meeting (BI01.02.01).