Enze Chen (he/him)

enze.chen1@gmail.com | (314) 562-1965 | https://enze-chen.github.io

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) 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.

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 published 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*.

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 **11** undergraduate researchers in using MI techniques for data-driven discovery of high-κ dielectrics.
- *Spotlight presentation* at the 2021 MRS Fall Meeting (BI01.02.01) and *first-author* manuscript in preparation.