Enze Chen ("EN-zee", he/him)

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EDUCATION

University of California, Berkeley (08/2019–05/2024, 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).
- Scientific computing and machine learning (ML) expertise for physical science problems.
- Experienced in Python and MATLAB. Working knowledge of Linux systems/tools and C++.
- 2022 UC Berkeley Outstanding Graduate Student Instructor (GSI) Award.
- 2023 Certificate of Teaching and Learning and GSI Teaching Effectiveness Award.

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 planar defects in metals.
- Used high-throughput DFT 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 a collaboration. Co-authored manuscript under review at *Nature Materials* (arXiv preprint).
- Developed an improved algorithm to parallelize grand canonical optimization of grain boundary structures, extending our work to more diverse, multi-component systems. Presentation accepted at TMS 2024.

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

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

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

- 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).
- Multiple publications: **E. Chen**, et al. *J. Phys. Chem. A*, 2019; and co-authored book chapter.

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) research curriculum for 11 undergraduates.
- *Spotlight presentation* at the 2021 MRS Fall Meeting and published **E. Chen**, et al. *J. Chem. Educ.*, 2022.

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 generally assisted with the courses ($\sim$ 250 students total). *Overall effectiveness*: **4.8/5.0**.
- Leading an education research project introducing data science modules in MSE 104L: Materials Characterization Laboratory. See **E. Chen**, et al. *2023 ASEE Annual Conference*.