

Zoey Tumbleson

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WORK EXPERIENCE

Lawrence Berkeley National Laboratory

September 2021 – August 2025

Graduate Student Researcher

Berkeley, CA

- Discovered unexpected phases in magnetic material from statistical analysis of experimental data
- Communicated results between different teams and wrote a published article (see [Tumbleson *et al.*, Sci. Adv. 11, eadt5680 \(2025\)](#))
- Performed research in small groups and led experiments and worked as a team member
- Commissioned equipment for both personal experiments and user research
- Wrote GPU-accelerated micromagnetic simulations to understand experimental observations
- Determined and implemented new methods in Python to find correlations of enhanced fluctuations on timescales of between hundreds of picoseconds and minutes
- Presented research results to funding agencies
- Generated 3 PB of data and wrote high throughput pipelines in Python to process data
- Authored and co-authored several peer-reviewed scientific journal articles (see [LinkedIn](#) for list) and presented findings at meetings and conferences

EDUCATION

University of California, Santa Cruz

Ph.D. Physics

August 2025

Santa Cruz, CA

Ohio University

Honors Tutorial College

B.S. Engineering Physics, GPA 3.93/4.0

May 2019

Athens, OH

SKILLS

Materials science and characterization: Soft X-ray Synchrotron Coherence Techniques, X-ray Scattering, X-ray photon correlation spectroscopy (XPCS), X-ray Free electron Lasers (XFEL), Scanning Tunneling Microscopy (STM), Magnetic Force Microscopy (MFM), Atomic Force Microscopy (AFM), Laue X-ray Diffraction, X-ray magnetic Circular Dichroism (XMCD)

Data analysis and software: Python, MATLAB, C++, GoLang, SLURM high performance computing (HPC), Numpy, Scipy, Numba, Matplotlib, Dask, Pytorch, xarray, Bokeh, SQL, Multiprocessing, Microsoft Office, Google Suite, Mumax3, Monte-Carlo, pymc, diffusion

Soft skills: Scientific writing, Public speaking, Communication, Teamwork, Leadership, Teaching, Mentorship