

DANIELE FATTÒ OFFIDANI

3085 Whisperwood Dr., Apt. 460, Ann Arbor, MI, 48105
(805) 837-4471

EDUCATION

University of Michigan - Ann Arbor
Ph.D. Candidate in Materials Science and Engineering

August 2021 - Present (Expected 2026)

University of Michigan - Ann Arbor
Masters of Science and Engineering in Materials Science and Engineering

August 2021 - April 2023

University of California - Santa Barbara
Bachelor of Science in Physics (High Honors)

August 2017 - June 2021

RELEVANT EXPERIENCE

Irradiation Effects on MPEAs

August 2021 - Present

My current project is focused on the analysis of the chemical and microstructural evolution of FCC Multi-Principal Element Alloys (MPEAs) due to irradiation. I use a combination of SEM, EBSD, FIB, TEM, and APT to characterize grain boundaries in ion irradiated materials.

Development of Automated Neuron Tracing Algorithm (Senior Thesis)

August 2020 - June 2021

I developed a script for generating 3-D reconstructions of neurons starting from stacks of optical fluorescent confocal microscope images of mice neuronal networks. The code made use of a combination of signal analysis and machine learning (clustering algorithms) for neuron isolation and structure extraction.

RELEVANT SKILLS

Electron Microscopy - SEM, EDS, EBSD, S/TEM, APT

Programming - Python3, MATLAB, large-dataset analysis, 3-D image processing, clustering algorithms

Irradiation - Ion beam irradiation, ion accelerator and beamline operation

General Lab Skills - Mechanical polishing, electropolishing, cold-rolling, heat-treatments, oxy-fuel system operation, arc-melting

WORK EXPERIENCE

Graduate Student Research Assistant — Marquis Group — UofM - Ann Arbor

August 2021 - Present

Research assistant in Professor Emmanuelle Marquis's research group at the University of Michigan - Ann Arbor, studying the chemical and structural evolution of irradiated MPEAs.

Undergraduate Research Assistant — Daly Lab — UCSB

March 2020 - September 2020

Undergraduate research assistant in Professor Samantha Daly's research group in the Mechanical Engineering Department at UCSB for seven months, working on shape memory Nickel-Titanium alloys and 3-D image reconstruction of neurites.

Learning Assistant — Quantum Mechanics — UCSB

September 2020 - December 2020

Learning facilitator in a quantum mechanics course in the Physics Department at UCSB. Tasked with aiding students in mastering the course materials.

AWARDS, MEMBERSHIPS, POSTERS AND PRESENTATIONS

- **TMS 2023 - Poster Session** - Irradiation-induced segregation in complex concentrated alloys.
- Summer Undergraduate Research Fellowship at Caltech (Awarded)

EXTRA-CURRICULAR AND CERTIFICATIONS

President of International Student Association — UCSB

April 2019 - April 2020

CPR/First Aid Certified

November 2022

Certified Community Emergency Responder

November 2019

LANGUAGES

- **Italian:** Native or bilingual proficiency
- **English:** Full professional proficiency