

My main interest is semiconductor manufacturing equipment.
I'm a mechanical engineer with additional experience in semiconductor microfabrication and processing, electrical engineering, and software.

Experience

- 7/19–10/24 University of California, Berkeley, electrical engineering PhD
Studied microfabrication and MEMS. Developed direct-write nanoparticle deposition techniques. Built custom vacuum chambers, electronics, and process equipment. Also built world's longest MEMS electrostatic motor in Berkeley Marvell NanoLab research fab. Advised by Prof. Kristofer Pister.
- 8/22–5/24 Berkeley EE143 Microfabrication Class, lead teaching assistant
Taught hands-on lab course (Berkeley EE143) building NMOS transistors from scratch on silicon wafers, four semesters in a row. Instructed students, maintained equipment, troubleshot processes, and managed other TAs.
- 8/17–6/19 Fan Nanomaterial Innovation Lab, research assistant. Built real-time electrostatic control system.
- 5/18–8/18 Nano Functionality Integration Group, Japan, research intern. Studied nanowire networks.
- 6/17–8/17 Cornell NanoScale Facility, research intern. Learned microfabrication, built and tested SAW MEMS.
- 9/15–5/19 UT Maker Studios, student assistant. Trained students on & maintained 3D printers and laser cutters.
- 9/15–5/19 UT Robotics & Automation Society, member. Built assorted robots including motorized couch.
- 8/17–5/19 UT ME Undergraduate Advisory Board, member. Ran the first UT Createathon hardware hackathon.
- 11/15–11/16 UT Advanced Manufacturing Center, research assistant. Built high-speed impact test chamber.
- 6/15–8/15 UT Applied Research Laboratories, intern. Acoustically detected quadcopters.
- 9/11–6/15 FIRST Tech Challenge, design & build lead, LASA High School Robotics. 2014-2015 world finalists.
- 6/11–8/15 DIY 3D printer design & construction, hobbyist. Self-taught mechatronics.

2019 NSF GRFP Fellow

- Honors** 2022-2023 Demetri Angelakos Memorial Achievement Award
Fall 2020 and Fall 2024 BSAC Conference Best Presentation Award

Education

University of California, Berkeley
PhD, Electrical Engineering and Computer Science, 2024
microfabrication, devices, process engineering, MEMS

University of Texas at Austin
BS Mechanical Engineering, BS Mathematics, 2019
solids/dynamics, material science, thermodynamics,
organic chemistry, heat transfer, numerical analysis

Skills

- Microfabrication:** MEMS, litho, deposition, etching, metrology, packaging
- Hardware:** part design/simulation/fab, thermal/vacuum systems
- Electronics:** KiCad PCB design, analog electronics, some embedded
- Prototyping:** 3D printing, laser cutting, machining
- CAD & FEA:** SolidWorks, Fusion 360, SIMION, some ANSYS & COMSOL
- Programming:** Python, C/C++, Rust, Linux, \LaTeX , HTML/CSS

Portfolio
dteal.org/portfolio.html

