

Ely Osher Algave

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EDUCATION

University of Florida, Herbert Wertheim College of Engineering
B.S. Mechanical Engineering | Certificate in Project Management

Gainesville, FL
Aug 2024 – May 2028

EXPERIENCE

Rinaldi-Ramos Laboratory

Undergraduate Research Assistant

Gainesville, FL
June 2026 – Present

- Design and fabricate a custom, removable mouse-bed insert in SolidWorks and Onshape that positions magnetic nanoparticle-filled capillary fiducials at standardized locations, fixing capillary position and orientation between scans for repeatable image registration in Magnetic Particle Imaging (MPI) datasets.
- 3D-print **dozens** of tumor phantoms (**5–10 μ L**) using resin printing, and prepare capillary-based imaging phantoms with iron oxide nanoparticle solutions to support AMF heating experiments and MPI scanner calibration.
- Test and calibrate the lab's Alternating Magnetic Field (AMF) system, verifying fiber-optic temperature probe accuracy; rewrite the AMF manual and train fellow undergraduate researchers on its operation.

Evren Technologies

Engineering Intern

Gainesville, FL
August 2026 – Present

- Manufacture, assemble, and test ear-worn bioelectronic devices end-to-end, including injection-molding silicone housings using 3D-printed molds, cutting electrodes, and wiring earpieces, then perform quality checks and troubleshooting to support production readiness.
- Apply DFM principles to electrode fabrication and assembly workflows, improving repeatability and reducing production time.
- Design housing components in Onshape and validate fit with 3D-printed prototypes for rapid iteration.

Electrosonic

Junior Engineer

Remote
July 2026 – Present

- Revise and standardize **70+** engineering line drawings across **4** large-scale projects in AutoCAD, syncing updates between Bluebeam and Revit to keep drawings, models, and field documentation aligned.
- Grow and maintain the D-Tools equipment catalog past **800** items, supporting technical research, documentation accuracy, and organization of cut sheets, manuals, and warranty information.

Generational Relief in Prosthetics (GRiP)

Open Source & Design Division

Gainesville, FL
January 2026 – Present

- Prototype and refine 3D-printed assistive devices, adaptive gaming controllers, and custom solutions for individuals with physical disabilities on an interdisciplinary engineering team.
- Develop, document, and review CAD models and design files for accuracy, manufacturability, and specification adherence, then open-source them to support scalable end-use and community reproduction.

First Responder Gator

First Year Member

Gainesville, FL
January 2026 – June 2026

- Certified in Basic Life Support (BLS), including CPR, AED operation, and foreign body airway obstruction (FBAO) management, after training in emergency response protocols for simulated and real-world incidents.

PROJECTS

Air Engine | Mechanical Manufacturing Project

- Manufactured **4** pistons, piston blocks, bases, and flywheels for a functional air engine on manual lathes and mills, applying DFM to select tolerances and machining processes.
- Worked to very tight tolerances, cross-referencing specs against manufactured parts and iterating on design to keep components in spec.

UHMWPE Knee Implant Failure Analysis | Literature Review

- Conducted a literature-based failure analysis of a knee implant, synthesizing published SEM and DSC studies to evaluate oxidative degradation of Ultra-High Molecular Weight Polyethylene (UHMWPE).
- Analyzed how packaging design, oxygen permeability, and mechanical testing data reported in the literature relate to implant failure modes, including wear, microcracking, and aseptic loosening, and proposed improvements to enhance biocompatibility and longevity.

SKILLS

Technical: CSWA (SolidWorks), Onshape, 3D Slicer, AutoCAD, DFM, 3D Printing (Resin, PLA), Lathe Machining, Mill Machining, TIG Welding, Arduino, MATLAB, Data Analysis, Bluebeam Revit, D-Tools System Integrator, Microsoft Suite

Languages: English, Hebrew

LEADERSHIP

University of Florida Recreational Sports

Intramural Sports Official

Gainesville, FL
May 2025 – Present

- Officiate 15-20 intramural games per week across **5** sports, managing game flow, enforcing rules, and accurately recording scores.
- Certified by UF RecSports to officiate co-recreational, single-gender, and fraternity leagues after completing **30 hours** of rules, safety, positioning, timing, and conflict de-escalation training.

AFFILIATIONS

UF Engineers in Medicine and Biology Society (UF EMBS), Tau Epsilon Phi Fraternity, Chabad UF Student Board, NCSY Alumni