# Aaron Lorenzo Woods

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Department of Biomedical Engineering
Cockrell School of Engineering
The University of Texas at Austin
Austin, TX 78712

## EDUCATION

**Ph.D. Biomedical Engineering**            June 2026 *(expected)*
University of Texas at Austin               GPA: 4.0
Portfolio in Imaging Science

**B.S. Engineering Leadership**             December 2020
University of Texas at El Paso (UTEP)        GPA: 3.46
Minor in Commercial Music and Recording

## ACADEMIC APPOINTMENTS

**Graduate Student Researcher**             2021 – Present
University of Texas at Austin, Department of Biomedical Engineering

**Undergraduate Student Researcher**        2019 – 2020
UTEP, Department of Engineering Education and Leadership

**Undergraduate Student Researcher**        Summer 2018, 2019
University of Wisconsin-Madison, Department of Biomedical Engineering

**Undergraduate Teaching Assistant**        Spring 2018
UTEP, Department of Engineering Education and Leadership

## RESEARCH EXPERIENCE

**Graduate Student Researcher,** University of Texas at Austin          2021 – Present
Department of Biomedical Engineering | *Advisor: Dr. Andrew Dunn*
- Developing microvasculature optical imaging techniques
- Investigating digital image processing and quantification
- Training on surgical craniotomies for biomedical imaging

**Graduate Student Researcher,** University of Texas at Austin          Summer 2021 *(rotation)*
Department of Biomedical Engineering | *Advisor: Dr. Mia Markey*
- Design of decision support system for breast cancer patients

**Graduate Student Researcher,** University of Texas at Austin          Fall 2021 *(rotation)*
Department of Biomedical Engineering | *Advisor: Dr. Evan Wang*
- Conducted EEG data acquisition and analysis
- Created SOP for fabricating dry electrodes for long recordings

**Undergraduate Student Researcher,** University of Texas at El Paso    2019 – 2020
CREaTE Lab | *Advisor: Dr. Peter Golding*
- Innovated on engineering education regarding ethics and leadership
- Programmed advising software to assist with course recommendation
- Optimized the advising process to better falicitate faculty and student

**Undergraduate Student Researcher,** University of Wisconsin-Madison    Summer 2019
Adult Neurology Ketogenic Diet Therapy Clinic | *Advisor: Dr. Elizabeth Felton*
- Data visualization of patient data for clinical and dietary analysis
- Managed HIPAA compliance, safety, and ethics for patient research
- Shadowed doctor-patient relationship and treatment of epilepsy

**Undergraduate Student Researcher,** University of Wisconsin-Madison    Summer 2018
Biomedical Optics Lab | *Advisor: Dr. Jeremy Rogers*
- Constructed an interferometer to measure phase delay
- Programmed an automated calibration software for optical equipment
- Inspected laboratory standards and practices for maintaining lab

## TEACHING EXPERIENCE

**Undergraduate Teaching Assistant,** University of Texas at El Paso    Spring 2018
Department of Engineering Education and Leadership | *Design Nature*
- Coordinated the trainings of students to use a fabrication laboratory
- Taught procedures on computer-aided design and simulation
- Directed the development process to build working prototypes

## RESEARCH FUNDING

**Ruth Kirchstein Imaging Science Fellowship,** National Institutes of Health    2021 – 2022
- $27,591 awarded over 1 year

**West Texas Fellowship,** The University of Texas at Austin    2022 – 2024
- $32,000 awarded over 1 year

**Cockrell School Fellowship**, The University of Texas at Austin    2024 – 2025
- $20,000 awarded over one year

**Thrust Fellowship Supplement,** The University of Texas at Austin    2021 – 2025
- $36,000 awarded over four years

**Dean's Fellowship Supplement,** The University of Texas at Austin    2021
- $1,000 awarded over one year

## PUBLICATIONS

Niemeier, R., N. Schnoor, **A.L. Woods**, and J.D. Rogers, "Calibration of liquid crystal variable retarders using a common-path interferometer and fit of a closed-form expression for the retardance curve," published to Applied Optics, October. 2020.

## HONORS & AWARDS

**Engineering Leadership Character Award,** University of Texas at El Paso    2020
Awarded by staff, teachers, and the department chair to one graduating
student who exhibits exceptional character.

**Hunt Startup Sponsorship,** Arrowhead Center    2020

**Bob & Diane Malone Leadership Scholarship** University of Texas at El Paso    2016 – 2020

**Theta Delta Lambda Education Scholarship,** University of Texas at El Paso    2016

**Robert G Neill, Jr Scholarship,** University of Texas at El Paso    2016

**College of Engineering Dean's List,** University of Texas at El Paso    2016 – 2018


## POSTER PRESENTATIONS

Arron L. Woods; Daniel Y. Chu; Michele N. Ravelli; Kelly Faltersack; Elizabeth Felton.
**Carnitine Deficiencies: Clinical Insights for Ketogenic Diet Therapies.** UW- Madison
SURE Poster Session, Madison, WI, USA, July 31, 2019

Arron L. Woods; Jeremy D. Rogers. **Automated Calibration of Liquid Crystal Variable
Retarder**. UW- Madison SURE Poster Session, Madison, WI, USA, July 31, 2018

ESW-UTEP. Project Mine-Rcycler: **Producing filament and 3D printed consumer goods
from plastic waste.** Engineers for a Sustainable World 2019 Annual Conference Poster
Session, El Paso, TX, USA, April 5, 2019


## PROFESSIONAL EXPERIENCE

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| **Board Member,** Executive Coordinating Committee l ICC Austin | 2021 – 2022 |
| **Community Outreach Specialist,** University of Texas at El Paso | 2020 |
| **Project Analyst,** University of Texas at El Paso | 2018 – 2019 |
| **Sound Engineer,** Beacon Hill Recording Studios, LLC | 2018 – 2019 |
| **Student Ambassador,** Amazon l Riddle and Bloom | 2018 – 2019 |
| **Project Engineer,** Sonora Bank | 2017 |

## COMMUNITY SERVICE

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|---|---|
| **Community Organizer,** Sunrise Movement El Paso | 2020 – 2021 |
| **Social Chair,** Green Team | 2020 |
| **Webmaster,** Engineers for a Sustainable World | 2017 – 2019 |
| **College Recruiter,** University of Texas at El Paso | 2018 |
| **Volunteer Leader,** Young Life College | 2016 – 2018 |

## CONFERENCE PARTICIPATION

**Latinx Student Leadership Community Summit,** Google                    2020
**Neuroscience Initiative to Enhance Diversity Program,** UC Davis        2020
**Social Change Leadership Summit,** UTEP                                 2019 – 2020
**Opportunities in Engineering Conference,** UW-Madison                   2018