

Aaron Lorenzo Woods

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

Experienced and passionate researcher with a Ph.D. in Biomedical Engineering and a portfolio in Imaging Science. Skilled in microvasculature optical imaging techniques and digital image processing, with experience in neurovascular imaging and clinical research.

EDUCATION

Ph.D. Biomedical Engineering University of Texas at Austin Portfolio in Imaging Science	June 2026 (<i>expected</i>) GPA: 4.0
B.S. Engineering Leadership University of Texas at El Paso (UTEP) Minor in Commercial Music and Recording	December 2020 GPA: 3.46

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.

RESEARCH EXPERIENCE

Graduate Student Researcher , University of Texas at Austin Department of Biomedical Engineering <i>Advisor: Dr. Andrew Dunn</i> <ul style="list-style-type: none">Developing microvasculature optical imaging techniquesInvestigating digital image processing and quantificationTraining on surgical craniotomies for neurovascular imagingConducted experiments, simulations, and data analysis	2021 – Present
Graduate Rotation Student , University of Texas at Austin Department of Biomedical Engineering <i>Advisor: Dr. Mia Markey</i> <ul style="list-style-type: none">Design of decision support system for breast cancer patientsCollaborated with researchers and cliniciansInvestigated the role of emotions, biases, and heuristics in decision making.	Summer 2021
Graduate Rotation Student , University of Texas at Austin Department of Biomedical Engineering <i>Advisor: Dr. Evan Wang</i> <ul style="list-style-type: none">Conducted EEG data acquisition and analysisCreated SOP for fabricating dry electrodes for long recordingsAssisted with the design and testing of novel electrode materials	Fall 2021

Undergraduate Student Researcher , University of Texas at El Paso CREaTE Lab <i>Advisor: Dr. Peter Golding</i> <ul style="list-style-type: none"> • Innovated on engineering education regarding ethics and leadership • Programmed advising software to assist with course recommendation • Optimized the advising process to better facilitate faculty and student 	2019 – 2020
Undergraduate Student Researcher , University of Wisconsin-Madison Adult Neurology Ketogenic Diet Therapy Clinic <i>Advisor: Dr. Elizabeth Felton</i> <ul style="list-style-type: none"> • 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 	Summer 2019
Undergraduate Student Researcher , University of Wisconsin-Madison Biomedical Optics Lab <i>Advisor: Dr. Jeremy Rogers</i> <ul style="list-style-type: none"> • Constructed an interferometer to measure phase delay • Programmed an automated calibration software for optical equipment • Inspected laboratory standards and practices for maintaining lab 	Summer 2018

RESEARCH FUNDING

Ruth Kirchstein Imaging Science Fellowship , National Institutes of Health <ul style="list-style-type: none"> • \$27,591 awarded over 1 year 	2021 – 2022
West Texas Fellowship , The University of Texas at Austin <ul style="list-style-type: none"> • \$32,000 awarded over 1 year 	2022 – 2024
Cockrell School Fellowship , The University of Texas at Austin <ul style="list-style-type: none"> • \$20,000 awarded over one year 	2024 – 2025
Thrust Fellowship Supplement , The University of Texas at Austin <ul style="list-style-type: none"> • \$36,000 awarded over four years 	2021 – 2025
Dean's Fellowship Supplement , The University of Texas at Austin <ul style="list-style-type: none"> • \$1,000 awarded over one year 	2021

ACADEMIC APPOINTMENTS

Graduate Student Researcher University of Texas at Austin, Department of Biomedical Engineering	Summer 2021 – Present
Undergraduate Student Researcher UTEP, Department of Engineering Education and Leadership	Fall 2019 – Spring 2020
Undergraduate Student Researcher University of Wisconsin-Madison, Department of Biomedical Engineering	Summer 2018, 2019
Undergraduate Teaching Assistant UTEP, Department of Engineering Education and Leadership	Spring 2018

TEACHING EXPERIENCE

Undergraduate Teaching Assistant , University of Texas at El Paso Department of Engineering Education and Leadership I <i>Design Nature</i> <ul style="list-style-type: none">Coordinated the trainings of students to use a fabrication laboratoryTaught procedures on computer-aided design and simulationDirected the development process to build working prototypes	Spring 2018
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HONORS & AWARDS

Marvin & Ellie Selig Entrepreneurship Award , Texas Innovation Center Awarded \$2,500 to advance an entrepreneur effort by developing prototypes.	2022
Imaging Science Best Poster Award , The University of Texas at Austin	2022
Engineering Leadership Character Award , University of Texas at El Paso Awarded by staff, teachers, and the department chair to one graduating student who exhibits exceptional character.	2020
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

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- Aaron L. Woods; Andrew K. Dunn. **Investigating Neurovascular Angiogenesis through Optical Imaging**. University of Texas at Austin T32 Retreat, Austin, TX, USA, May 10, 2022
 - 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

ACADEMIC SERVICE

Chairman of the Board of Directors , ICC Austin 501(c)(3) Non-Profit <i>ED: Ashleigh R. Lassiter</i>	2022 – Present
<ul style="list-style-type: none"> Facilitated meetings to align groups with the strategic vision and mission. Guided discussions with various stakeholders on property management. Directed the board's initial strategic plan to improve staff retention and housing. 	
Black Graduate Student Agency Director , Graduate Student Assembly The University of Texas at Austin	2022 – Present
<ul style="list-style-type: none"> Built relationships with underrepresented groups committed to equality Plan professional development, advocacy, and social events. Promote the interests of the graduate student population 	
Community Organizer , Sunrise Movement El Paso	2020 – 2021
<ul style="list-style-type: none"> Led local chapter of national youth-led movement Collaborated with other organizations and community leaders Educated and empowered members to act and make a positive impact 	
Social Chair , Green Team (UTEP)	2020
Webmaster , Engineers for a Sustainable World (UTEP)	2017 – 2019
College Recruiter , University of Texas at El Paso	2018
Volunteer Leader , Young Life College (UTEP)	2016 – 2018

PROFESSIONAL EXPERIENCE

Co-founder , <i>Therosafe (Startup)</i> In the field of theranostics, <i>Therosafe</i> seeks to reduce radiation exposure for medical caregivers. My involvement is currently extensive, with an emphasis on operations and marketing.	2021 – Present
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 I Riddle and Bloom	2018 – 2019
Project Engineer , Sonora Bank	2017

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