**Aaron Lorenzo Woods**

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

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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**  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

**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**

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| **Graduate Student Researcher,** University of Texas at Austin Department of Biomedical Engineering| *Advisor: Dr. Andrew Dunn* | | 2021 – Present  Summer 2021 |
| • | Developing microvasculature optical imaging techniques |
| • | Investigating digital image processing and quantification |
| • | Training on surgical craniotomies for neurovascular imaging |
| • | Conducted experiments, simulations, and data analysis |
| **Graduate Rotation Student,** University of Texas at Austin | |

Department of Biomedical Engineering| *Advisor: Dr. Mia Markey*

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| • | Design of decision support system for breast cancer patients | Fall 2021 |
| • | Collaborated with researchers and clinicians |
| • | Investigated the role of emotions, biases, and heuristics in decision making. |
| **Graduate Rotation Student,** University of Texas at Austin | |

Department of Biomedical Engineering| *Advisor: Dr. Evan Wang*

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| • • • | Conducted EEG data acquisition and analysis  Created SOP for fabricating dry electrodes for long recordings Assisted with the design and testing of novel electrode materials |

A.L. Woods, 1

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| **Undergraduate Student Researcher,** University of Texas at El Paso CREaTE Lab| *Advisor: Dr. Peter Golding* | | 2019 – 2020  Summer 2019  Summer 2018 |
| • | 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 |
| **Undergraduate Student Researcher,** University of Wisconsin-Madison 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 | |

Biomedical Optics Lab | *Advisor: Dr. Jeremy Rogers*

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| • • • | Constructed an interferometer to measure phase delay  Programmed an automated calibration software for optical equipment Inspected laboratory standards and practices for maintaining lab |

**RESEARCH FUNDING**

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| **Ruth Kirchstein Imaging Science Fellowship,** National Institutes of Health | | 2021 – 2022  2022 – 2024  2024 – 2025  2021 – 2025  2021 |
| • | $27,591 awarded over 1 year |
| **West Texas Fellowship,** The University of Texas at Austin | |
| • | $32,000 awarded over 1 year |
| **Cockrell School Fellowship**, The University of Texas at Austin | |
| • | $20,000 awarded over one year |
| **Thrust Fellowship Supplement,** The University of Texas at Austin | |
| • | $36,000 awarded over four years |
| **Dean’s Fellowship Supplement,** The University of Texas at Austin | |
| • | $1,000 awarded over one year |

**ACADEMIC APPOINTMENTS**

**Graduate Student Researcher**  Summer 2021 – Present

University of Texas at Austin, Department of Biomedical Engineering

**Undergraduate Student Researcher**  Fall 2019 – Spring 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

A.L. Woods, 2

**TEACHING EXPERIENCE**

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| **Undergraduate Teaching Assistant,** University of Texas at El Paso Department of Engineering Education and Leadership | *Design Nature* | | Spring 2018 |
| • | 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 |

**HONORS & AWARDS**

**Marvin & Ellie Selig Entrepreneurship Award,** Texas Innovation Center 2022

Awarded $2,500 to advance an entrepreneur effort by developing prototypes.

**Imaging Science Best Poster Award,** The University of Texas at Austin 2022

**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**

• 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

A.L. Woods, 3

**ACADEMIC SERVICE**

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| **Chairman of the Board of Directors,** ICC Austin 501(c)(3) Non-Profit | *ED: Ashleigh R. Lassiter* | | 2022 – Present  2022 – Present |
| • | 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

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| • | Built relationships with underrepresented groups committed to equality | 2020 – 2021  2020  2017 – 2019 2018  2016 – 2018 |
| • | Plan professional development, advocacy, and social events. |
| • | Promote the interests of the graduate student population |
| **Community Organizer,** Sunrise Movement El Paso | |
| • | 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)  **Webmaster,** Engineers for a Sustainable World (UTEP) **College Recruiter,** University of Texas at El Paso  **Volunteer Leader,** Young Life College (UTEP) | |

**PROFESSIONAL EXPERIENCE**

**Co-founder,** *Therosafe (Startup)*  2021 – Present In the field of theranostics, *Therosafe* seeks to reduce radiation exposure for   
medical caregivers. My involvement is currently extensive, with an emphasis on   
operations and marketing.

**Community Outreach Specialist,** University of Texas at El Paso 2020 2018 – 2019 **Project Analyst,** University of Texas at El Paso   
**Sound Engineer,** Beacon Hill Recording Studios, LLC 2018 – 2019 **Student Ambassador,** Amazon | 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

A.L. Woods, 4