Alan V. Williams

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EDUCATION:

MS in Marine Estuarine Environmental Science, Earth and Ocean Sciences,
Expected May 2025 – University of Maryland Center for Environmental Science, GPA TBD

BS in Mechanical Engineering, Minor in Mathematics and Marine Science,
May 2020 – University of Arizona, GPA 3.233

RESEARCH AND PROFESSIONAL EXPERIENCE

Marine Estuarine Environmental Science, UMCES **April 2021 – Present**

Masters Student

- Studying the effects of sediment plume dynamics created by dredging equipment on the eastern oyster (*Crassostrea virginica*) in relation to submersible, remote operated vehicles.

SAIL Lab Assistant

- Conducted daily lab keeping practices, ranging from the recording of the physical properties of tank water and the feeding of eastern oyster broodstock.
- Preformed algae culture maintenance involving the prepping of proper nutrients and media and the inoculation of small- and large-scale vessels.
- Fabricated various equipment designed to maintain eastern oysters during growing stages, including: a downweller/upweller system, banjo sieves and carbon filters

MMT Observatory, Tucson, Arizona **June 2017 – August 2020**

R&D Mech Engineer I

- Designed over 50 parts and assemblies using SolidWorks 2016/2020 software, based off archived AutoCAD drawings and measurements.
- Designed a cart system to transport newly purchased jack system.
- Designed a mount for a new jack system, which is designed lift a malfunctioning hydraulics.
- Designed a new trailer system to transport vacuum blower equipment for the telescopes mirror.
- Located, organized, and archived over 1000 AutoCAD drawings of parts, assemblies, and components using Microsoft Excel.

Maryland Sea Grant REU, **May 2019 – August 2019**

Chesapeake Biological Lab, Maryland,
Research Experience for Undergraduates Fellow

- Assisted Dr Dong Liang and Dr Chris Rowe on their collaborative research on the impact of climate change on diamondback terrapin, *Malaclemys terrapin*, individuals and populations.
- Developed an algorithm with Dr Liang using R Studio that used a Regression Spline Mixed Model to relate 2018 diamondback terrapin nest temperatures to the air temperature of the nesting site and make predictions for 2019 nest temperatures using known air temperatures.
- Conducted field research with Dr Rowe on the beaches of NAS PAX involving the catching of diamondback terrapin females after their nests were laid and the measuring of the eggs within those nests.
- Develop a proposal, research paper, presentation, and conference poster in relation to my research.

Toys R Us, **June 2014 – July 2017**

Glendale and Tucson, Arizona,
Sales Associate and Team Member

- Worked with a team of up to 8 other coworkers to reorganize the store as well as maintain guest satisfaction, conduct sales, and preform common back-of-house tasks.
- Conducted numerous sales transactions every week in electronics while maintaining guest satisfaction by providing extensive product knowledge and awareness within the store.
- Trained new associates on basic and often advanced tasks that occur daily in an efficient and friendly manner.

EXTRACURRICULAR EXPERIENCE:

UA Biosystems Engineering Club **September 2017 – March 2021**

Senior Student Advisor / President / Communications Officer

- As Senior Student Advisor: assist newly elected officers integrate into the BEC and the Biosystems Engineering Department as well fulfill their roles as President, Vice-President, Project Manager, and Communications Officer.
- As President: preside and speak at all general body meetings, delegate task among officers and committees, upkeep the BEC's membership with various campus organizations, act as public relations between the BEC and student/faculty body.
- Current/previous member of the Aquaponics, ROV, Girl Scout's Garden, Biosphere 2 Quarantine Tank and Water-shed Committees.

Marine Awareness and Conservation Society **January 2018 – May 2020**

Active Member

- Volunteered in over 5 outreach events a semester which both inform the public about ocean ecosystems and raise money for various conservation efforts.
- Advocate for the effects of ocean pollution, overfishing and other harmful actions which negatively affect ocean ecosystems.

Wildcat Archery Club **August 2018 – May 2020**

Vice-President / Rec Captain

- As Vice-President: attend all official practices, maintain good relations between club members and practice site officials, assist other officers in their duties, make executive decisions when the club President is unable to, and ensure cooperation and accountability with the competition team.
- As Rec Captain: attend all campus rec practice sessions, maintain relations between Wildcat Archery and UA Club Sports, provide resources and opportunities of Club Sports to club members.

PRESENTATION EXPERIENCE:

Williams A, Liang D, Rowe C. The Temperatures inside the Nest of Diamondback Terrapins, *Malaclemys terrapin*, and its Relationship with the Air Temperature of the Nesting Site, Ocean Sciences 2020, San Diego, California, February 20, 2020

Williams A, Brinkerhoff O, Schlecht A, Schraven K, Wright D. Smart EMILY Transmitter, Senior Design Day 2019, University of Arizona, Tucson, Arizona, April 29, 2019.

REFERENCES:

Brian Little
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Biosystems Engineering Department, University of Arizona
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