

Reece Whatmore

rwhatmor@andrew.cmu.edu | (941) 960-5475 | www.linkedin.com/in/reece-whatmore2003

EDUCATION

Carnegie Mellon University, Pittsburgh, PA | May 2025

Bachelor of Science in Materials Science and Engineering, GPA: 3.95/4.0

Minor: Soft Technology

RESEARCH & WORK EXPERIENCE

Research Intern – Soft Materials Laboratory, EPFL, Lausanne, Switzerland | May - August 2023

- developed production methods to harness the protein-polysaccharide phase separation of a K-Carrageenan-Casein system to create porous microgels
- conducted analysis on microgels including composition (FTIR, SEM), mechanical (swelling, compression) and rheological properties

Research Assistant – Morphing Matter Lab, HCI Carnegie Mellon University | March 2022 – Present

- first author, *Bioderived Hygromorphic Twisted Actuator for Untethered Sustainable Systems*, published in the Living Machines conference proceedings 2023
- conceptualized and executed a bioderived design approach utilizing the natural twisted body of the seed, *Hesperostipa Spartea*, to create a sustainable and biodegradable hygromorphic twisting actuator with soft robotic application

Chief Technology Officer – STEMania, Sarasota, FL | June 2019 – Present

- Lead development of national launch infrastructure and web services
- Developed over 50 hours of technology-based curriculum teaching elementary and middle school students subjects such as coding, circuitry, and robotics
- Administered and led teaching of STEM lessons to groups of 25 students during summer camp sessions

Research and Development Intern – Earth Echo International | May 2021 – June 2021

- Conducted field research on a range of low to high end tools and supplies available to build accessible citizen science water testing kits
- Collaborated with third-party vendors and distributors to analyze company supply chain

Independent Research– Sarasota, FL | August 2019 – March 2020

- development of 3D printed reef structures to combat Red Tide algal blooms through increasing oyster growth rates

TECHNICAL SKILLS

Instruments: Wet lab skills, Rheometer, FTIR Spectroscopy, XRD Crystallography, Microscopy (Optical, Confocal), Universal testing machine (UTM), Bend Testing, 3D-Printer, Laser Cutter, Arduino

Software: MATLAB, OriginLab, CAD (Solidworks & Fusion360), MS Office, Adobe (Photoshop & Illustrator)

HONORS & ACTIVITIES

Dean's List, College of Engineering: Fall 2021, Spring 2022, Fall 2022, Spring 2023

Varsity Swimming, Carnegie Mellon University: 2021 - Present

Materials Science and Engineering Student Advisory Committee DIE Chair: 2023- Present

PUBLICATIONS

"Bioderived Hygromorphic Twisted Actuator for Untethered Sustainable Systems", *Biomimetic and Biohybrid Systems*. Living Machines 2023 https://doi.org/10.1007/978-3-031-38857-6_17