

Ryan Halli

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Education

UNIVERSITY OF MARYLAND, A. JAMES CLARK SCHOOL OF ENGINEERING

B.S. IN MECHANICAL ENGINEERING, MINOR IN SUSTAINABILITY EXPECTED GRADUATION: MAY 2024

- GPA: 3.9/4.00
- Banneker/Key Scholar
- GEMSTONE Honors Program | Team Marine | 4 Year Team Research Program
 - Quantifying microplastic contamination around the College Park campus and applying engineering principles to determine a standardized analysis method of microplastics samples.
 - Reinforcing understanding of the importance of ethics, methods, and diverse perspectives in research.
 - Creating and maintaining team website as web liaison for team.

RELEVANT COURSEWORK

- Introduction to Circuits, Fluid Dynamics, Statics, Dynamics, Thermodynamics | CAD | MATLAB, C++

ACTIVITIES

- Terps Racing | Baja | Controls Sub-Team
 - Designed and modeled new throttle pedal optimizing for strength and weight reduction. Final design rendered as aluminum skeleton with carbon fiber reinforcement.
- Theta Tau | Service Chair
 - Coordinated cooperative events with 2 teammates involving community outreach, volunteering such as an Anacostia Watershed Repair event.
 - Led planning for event involving multiple positions within organization with self-sustainable budget.

Experience

UNDERGRADUATE RESEARCHER

BIOINSPIRED ADVANCED MANUFACTURING LAB

UNIVERSITY OF MARYLAND | JUN '22 – PRESENT

- Designing fluidic circuitry to control hydraulic flow for soft robotics applications.
- Applying vat polymerization additive manufacturing techniques to produce prototype integrated circuitry elements.
- Coordinating team to unify design standards and integrate diode and transistor elements into completed circuit with various functions.

RESEARCH INTERN

CAHILL GROUP

THE GEORGE WASHINGTON UNIVERSITY | JUN '19 – AUG '19

- Collaborated with mentor to prepare progress updates for team-based feedback and decision making
- Calculated proper stoichiometric ratios for synthesis of indium-halide hybrid materials.
- Prepared precise samples in lab using scales and micrometers and harvested large single crystals.
- Characterized crystals using single crystal x-ray diffraction and luminescence spectroscopy and designed digital figures of studied crystals using CrystalMaker and Mercury.
- Publication: doi:10.1021/acs.jpcc.0c07268

Skills

- CAD (Solidworks, Autodesk) | X-Ray Diffraction & Luminescence Spectroscopy