Paul S. Schulman
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Portfolio: SchulmanAstro.com Linkedin.com/in/pschulman

Education

Ph.D. Student, Electrical and Computer Engineering, Michigan State University (2022 - Present)
- GPA: 4.0
- Distinguished Engineering Scholar
- Advisor: Dr. Xiaobo Tan, Smart Microsystems Lab
- Current area of research: exploration rotorcraft
- Serving as the graduate student representative in collaboration with a team from Jet Propulsion Labs groups 147C, 347C, and 347D to build an academic partnership with MSU, including proposals submitted to and in progress for CAP, SRTD, and Blue Skies.

M.S. Aeronautical and Astronautical Engineering, Purdue University (2019 - 2020)
- GPA: 3.6
- Major area of study: Astrodynamics and Space Applications
- Minor area of study: Aerospace Systems
- Curriculum included several term-long literature review and research projects including in-part:
  - *Spaceborn Receivers for use in Space Debris Tracking with GNSS Radar*
  - *Gravimetry in Space*
  - *Simplification of Intersatellite Range for Low-Low Spacecraft-to-Spacecraft Gravimetry*

B.S. Mechanical Engineering, Michigan State University (2014 - 2019)
- GPA: 3.7
- Concentration: Aerospace Engineering
- Minor: Computer Science (Python, C/C++, ARM Assembly)
- Professional Certification in Geospatial Technology

U.S. Army

Michigan Army National Guard, Grand Ledge, MI (2015 - Present)
- C Company MEDEVAC, 3-238th General Support Aviation Brigade (2022 - Present)
  - HH-60M/UH-60M Black Hawk medical evacuation pilot.
  - Platoon leader responsible for overseeing approximately 20 pilots, crew chiefs, and flight medics.
  - Duties include piloting, organizing MEDEVAC training flights, and managing Soldiers.
- C Company Air Assault, 1-147th Assault Helicopter Brigade (2018 - 2020)
  - Platoon Leader responsible for managing approximately 20 UH-60M maintainers and pilots.
- 1433rd Engineering Company (SAPPER), 507th Engineering Battalion (2015 - 2018)
  - Assigned as a Cadet shadowing Combat Engineer Platoon Leaders.

U.S. Army Aviation Center of Excellence, Fort Rucker, AL (2020 - 2022)
- Active duty UH-72A Lakota and UH-60M Black Hawk flight student.
- Academic instruction included hydraulics and control systems, automatic flight control and stability systems, engine and rotor systems, avionics, and rotorcraft aerodynamics.
- Class leader in UH-72A course and team leader in Survival-Evasion-Resistance-Escape course.

Michigan State University Army ROTC, East Lansing, MI (2015 - 2019)
- Cadet S3 Battalion Operations Officer in charge of planning and coordinating training for over 200 cadets.
- Ranger 1 team Recruit Training Officer responsible for leading training in high-stress leadership tactics.

Select Awards
- NIU Unmanned Systems Award
- German Armed Forces Proficiency Badge
- Norwegian Foot March Badge
- Distinguished Military Graduate

Schools and Course
- Medical Doctrine Course (2022)
- Space Force Capstone Publication Course (2022)
- NSSI Introduction to Space Course (2022)
- UH-60M Qualification Course (2022)
- Initial Entry Rotary Wing Training, UH-72A (2021)
- Survival-Evasion-Resistance-Escape (2021)
- Sapper Leader Course (2018)
- Air Assault School (2017)

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Employment

GE Aviation Systems - Electrical Tester and Analyzer, Grand Rapids, MI (2019 - 2020)
- Responsible for testing, analyzing, debugging, and certifying production avionics under various environmental conditions.
- Position required regular use of test equipment including temperature cycle chambers, X-ray microscopes, thermal imaging cameras, and oscilloscopes.

MSU Smart Microsystems Laboratory - Research Assistant, East Lansing, MI (2016 - 2019)
- Assisted in research and development of robotic systems with unique control methodologies, particularly in the fields of soft robotics, bio-inspired robotics, and aquatic robotics.
- Involved projects included a soft robotic glove and an autonomous active river drifter, motorboat, sailboat, and ROV.

Fraunhofer-MSU Center for Coatings and Diamonds - Research Intern, East Lansing, MI (2016)
- Designed and modeled research equipment, products, and facilities for MSU and Fraunhofer faculty and customers conducting research in plasma-applied diamond coatings.

General Motors - Manufacturing Intern, Delta Township, MI (2016)
- Studied paint defects to define systematic issues in and explore solutions for a 76-unit robotic arm paint system.

Extra Curriculurs

MSU Rocketry Team - Founding Member (2017 - 2019)
- Lead investigator in development of an oxidizer injector plate produced with titanium additive manufacturing.
- Lead design, simulation, and construction of carbon fiber fins on a Class I rocket.
- Assisted in design and build of a Class I rocket which placed 12th overall out of 129 Teams at the 2018 Spaceport America Cup.

MSU Unmanned Systems Team - Co-Captain (2014 - 2019)
- Assisted in the development of a hybrid fixed wing UAV with VTOL capabilities and an autonomous air-dropped ground vehicle.
- Assisted in development of an autonomous quadcopter which competed in the AUVSI SUAS competition.

MSU Formula Race Team - Chassis Team Member (2014 - 2015)
- Assisted in design, simulation, and construction of the carbon fiber vehicle chassis and aerokit.

Licenses and Certifications

Certified IPC Specialist w/ J-STD-001 (electrical manufacturing) and IPC A-610 (electrical inspection)

FAA Commercial Pilot License (Rotorcraft with S-70 type rating, R-22 type rating in progress)

FAA Private Pilot License (Airplane Single Engine Land)

FAA Remote Pilot License

FCC Amateur Extra Class Radio License

SSI Open Water Diver

Publications

No relevant publications.