Randall B.D. Schur

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Education

The George Washington University, Washington, DC   **May 2016**

Master of Science, Mechanical Engineering (Robotics, Controls, and Mechatronics)
Thesis: Navigation Algorithms for Energy Harvesting Robots

The Pennsylvania State University, University Park, PA   **May 2013**
Bachelor of Science, Mechanical Engineering
Engineering Design Certificate

Engineering Experience

Naval Research Laboratory, Washington, DC   **May 2015 - Present**
Graduate Student Intern - Exelis, TitanOneZero, NRL - Code 5545
- Design components meeting size, weight, and power requirements for deployed systems
- System integration and prototyping tasks including mechanical, electrical, and programming
- Support experimental and field testing as mechanical design engineer

The George Washington University, Washington, DC   **August 2014 - Present**
Graduate Research Assistant
- Develop energy-focused navigation algorithms for autonomous vehicles to extend mission duration
- Perform MATLAB simulations to compare novel navigation approach to existing methods
- Design and build physical robotic test platform to validate navigation algorithms

ONExia, Inc., West Chester, PA   **October 2013 - July 2014**
Applications Engineer
- Served as technical resource for customers on machine concept development and component selection
- Proposed, evaluated, and implemented solutions for customer-specific requirements
- Selected components for robotics and automation systems, including custom pick and place and vision solutions

Penn State Department of Mechanical Engineering, University Park, PA   **May 2012 - May 2013**
Undergraduate Research Assistant, Control Optimization Laboratory
- Hybridized a gas engine RC car as part of an educational kit in hybrid powertrain design

Penn State Deptartment of Nuclear Engineering, University Park, PA   **May 2012 - May 2013**
Undergraduate Research Assistant, Ultra Intense Laser Laboratory
- Co-authored published journal paper on Laser Induced Breakdown Spectroscopy
- Designed experimental equipment in SolidWorks, implemented working solution for 3 experiments

Technical Skills

Programming

MATLAB, Python, C++, Visual Basic, OpenCV
Experience with Linux, Git, Raspberry Pi, Arduino

Design and Manufacturing

Machine shop operation and manufacturing processes: mill, lathe, laser cutter, various FDM printers
SolidWorks (Certified SolidWorks Associate): modeling, FEA, drafting

US Citizen - DoD Secret Clearance