

# Robert N. Saunders, PhD

[rns294.github.io](https://rns294.github.io)

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Current DOD Secret Clearance

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## EDUCATION

**Doctor of Philosophy**, Industrial & Systems Engineering, Texas A&M University

**Certificate in Applied Statistics**, Statistics, Texas A&M University

**Master of Science**, Aerospace Engineering, Texas A&M University

**Bachelor of Science**, Aerospace Engineering, Virginia Tech

## PROFESSIONAL EXPERIENCE

**Mechanical Engineer**, U.S. Naval Research Laboratory (NRL)

Sept 2016 – Present

**Jr. Biomechanics Engineer**, Leidos Inc. c/o NRL

June 2015 – Sept 2016

- Machine learning to emulate simulations in the metal additive manufacturing process
- Development of strategies to understand, prevent, and protect Warfighters from injuries due to blast, blunt, and directed energy events.
- Finite element modeling of extreme mechanical events such as plasticity, high-rate impact and damage, and biomechanics
- *Naval Research Laboratory Edison Memorial Graduate Training Program Recipient*

**Graduate Research Assistant**, Texas A&M University

Aug 2013 – May 2015

- Design, simulation, and optimization of shape memory alloy-based structures

**Summer Scholar**, U.S. Air Force Research Laboratory

May 2014 – Aug 2014

- Design and construction of a deployable tensioned helical structure using composites

## OTHER EXPERIENCE

**Naval Research Laboratory Student Mentor**

- Served as a technical mentor for 2-4 summer students each year.

**CASMART Design Challenge Advisor**

- Served as an advisor to a group of 5 undergraduates designing a deployable solar array.

**Virginia Tech Microgravity Research Team**

- Investigated a moving mass actuator control system for re-entry vehicles and small satellites as part of NASAs Reduced Gravity Flight Education Program.

## PROFESSIONAL ACTIVITIES

- American Society of Mechanical Engineers, Member
- Reviewer for multiple journals, incl. Journal of DoD Research and Engineering
- Technical conference session/symposium organizer and chair

## SKILLS

- Computer Languages – Fortran, Python, R, Matlab
- Software – Abaqus, COMSOL, ScanIP, Solidworks, Mathematica
- Basic machine shop and mechanical testing experience
- Finite Element Modeling, Mechanics of Materials, Machine Learning, Surrogate Modeling, Time and Personnel Management
- Coursera certificates in project management and machine learning

**PUBLICATIONS** – 1 Book Chapter, 7 Journal Articles, 17 Conference Proceedings, 4 Technical Reports, 28 conference/seminar presentations