

**MARISSA MACDONALD**  
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## **EDUCATION**

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Old Dominion University, Norfolk, VA GPA 3.96/4.0  
**Doctor of Philosophy, Mechanical Engineering**, 2017  
**Master of Science, Mechanical Engineering**, 2014  
Master's Thesis Title: "Flame Dynamics and Stability Physics-Based Reduced Order Model"  
Course work in Fluid Dynamics, Heat Transfer, Gas Dynamics, Partial Differential Equations, Advanced Thermodynamics, Continuum Mechanics, Power Systems Engineering  
Inducted into Golden Key Honor Society, 2013

University of Connecticut, Storrs, CT GPA 3.46/4.0  
**Bachelor of Science in Physics**, 2011  
Course work in Physics, Astronomy, Statistics, Calculus, Thermodynamics, Materials Science  
Honor Roll 2010, 2011  
Inducted into Sigma Pi Sigma, 2010  
Inducted into International Society of Physics Students, 2011  
Maintained employment, 30 hours per week

Stony Brook University, Stony Brook, NY, 2006 GPA 3.3/4.0  
Course work in Calculus, Physics and Astronomy, Chemical Engineering  
Dean's List 2006-2007, 2007-2008  
Accepted into Women in Science and Engineering (WISE), 2006  
Maintained employment, 20 hours per week

Norwich Free Academy, Norwich, CT GPA 3.6/4.0  
High School Diploma  
Graduated Magna Cum Laude

## **QUALIFICATIONS**

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Extensive experience with Microsoft Word, Excel, PowerPoint and Windows Operating Systems  
Intermediate experience with MATLAB, Cantera and Computational Fluid Dynamics (CFD)  
Beginner experience with Mac and Linux Operating Systems, Mathematica and MathCad  
Outstanding organizational, multitasking and problem-solving skills  
Excellent communication skills and leadership qualities

## **RESEARCH EXPERIENCE**

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**Graduate Research Assistant**, Propulsion and Energy Research Laboratory, Old Dominion University

- Experience with numerical modeling of turbulent bluff-body stabilized reacting flows
- Numerical flame extinction analysis for premixed turbulent combustion
- Experimental research using Schlieren and particle image velocimetry (PIV)

**Undergraduate Student Research Assistant**, Laser Teaching Center, Stony Brook University

- Experience with basic experimentation in a laser and optics lab
- Data analysis using Linux OS and MSDOS
- Modeling of stellar imaging using CCD camera and He-Ne laser
- Mentored high school students, teaching the basics of scientific research and geometric optics
- Participated in the Stony Brook research fair with experimental results