

Education

PHD MATERIALS SCIENCE AND ENGINEERING

4.0 GPA - Georgia Institute of Technology - Atlanta, GA (2017)

B.S. MATERIALS SCIENCE AND ENGINEERING

3.9 GPA - Georgia Institute of Technology - Atlanta, GA (2012)

Work Experience

GRADUATE RESEARCH ASSISTANT – Georgia Institute of Technology - Atlanta, GA - Jan 2013 to present

- Designed and conducted novel experiments with high-energy lasers and advanced optical sensors to study material behavior
- Designed and performed complex multi-physics simulations to predict real-world material behavior observed in experiments

NATIONAL SECURITY DIVISION ANALYST – Congressional Budget Office - Washington, DC - June to Aug 2016

- Independently performed a comprehensive risk analysis of the vulnerability of the US electric grid to cyber-attacks
- Organized and summarized analysis methods, results, and conclusions in detailed oral and written reports

ENERGETIC MATERIALS INTERN – Lawrence Livermore National Laboratory - Livermore, CA - May to Aug 2012

- Evaluated and tested an empirical material behavior model by comparing simulation predictions to experimental data
- Identified and corrected an unknown inaccuracy in a material model by mathematically reformulating a key model input

UNDERGRADUATE RESEARCH ASSISTANT – Georgia Institute of Technology - Atlanta, GA - Nov 2010 to Dec 2012

- Characterized the structure and experimentally tested the mechanical behavior of a novel aluminum/steel composite armor
- Performed multi-physics simulations of high speed aluminum extrusion to identify important effects in rail-gun launch systems
- Applied multiple electron microscopy methods to identify chemical reactions in shock-compressed nickel/aluminum nano-foils
- Simulated micrometer scale interactions in granular-type materials to evaluate the effectiveness of microscopic sensors

INTERIOR MATERIALS INTERN – General Motors Corporation - Warren, MI - May to Aug 2011

- Planned, coordinated, and directed a large-scale field inspection of used vehicles to evaluate real-world material performance
- Performed large-scale mechanical wear testing of molded plastic materials to evaluate intrinsic durability of different designs
- Designed and programmed an automated Microsoft Excel spreadsheet to validate material property data in digital databases

Leadership and Service

GRADUATE STUDENT BODY PRESIDENT – Georgia Institute of Technology - May 2016 to present

- Primary representative and advocate for 6,500+ graduate students, working extensively with senior Faculty and Administrators

VOLUNTEER CONSULTANT – Community Consulting Teams (CCT) Atlanta - Atlanta, GA - 2016 to present

- Worked in a diverse team of professionals and students to revise the policy and procedures manual for a non-profit health clinic

STUDENT MENTOR – MSE Student Mentor Program - Georgia Institute of Technology - Atlanta, GA - 2015 to 2016

- Personally mentored multiple undergraduate students, advising on academic issues, professional goals, and career plans

FINANCIAL ACCOUNTANT – Harbour East Asia – 2015 to 2016

- Maintained financial records for 501(c)(3) non-profit organization, advised on long-term program and financial strategies

BOARD MEMBER – MSE Graduate Student Advisory Group - Georgia Institute of Technology - Atlanta, GA - 2014 to 2015

- Advised the Department Administrators on policy changes, and helped organize a poster competition with \$10,000 in awards

Formal Communication - Honors and Awards - Skills

ORAL PRESENTATIONS

3 international conference talks
20+ formal talks at misc. events

AWARDS

ASEE NDSEG Fellowship
Georgia Tech President's Fellowship
Georgia Tech Federal Jackets Fellowship
5 Poster Awards, 3 Student Travel Awards, 10+ Academic Awards

POSTER PRESENTATIONS

4 international conference posters
8+ posters at misc. events

SKILLS

Programming Languages
R, Python, LaTeX, MATLAB, Javascript, HTML/CSS, VBA, Bash, C++, SQL
Communication
Public Speaking, Technical Writing

PAPERS

3 First-author peer-reviewed publications
2 supporting author peer-reviewed publications

Office Productivity

Microsoft Office (Word/Powerpoint/Excel),
Windows 7/8/10, Linux/Unix

Data Analytics Software

RStudio, Excel, Tableau, SAS

