

Hanah Naushad

Local Address: 2207-101 Champagne Ave South, Ottawa, ON K1S 4P3

Permanent Address: 2403-10 Queen's Quay, Toronto, ON

Phone: (647) 548-5092

E-mail: hanah.naushad17@gmail.com

Education

The Pennsylvania State University, University Park, PA
Bachelor of Science in Materials Science and Engineering
Minor in Engineering Entrepreneurship

August 2012 - December 2016

Carleton University, Ottawa, ON
Master of Engineering in Materials for Aerospace Applications

September 2017 - December 2018

Professional Experience

Composite Materials Testing for Rotorcrafts

April 2018-December 2018

Graduate Research Assistant

- Conducted and designed hygrothermal testing plan on carbon fibre composite material in accordance with ASTM standards to emulate conditions for components on naval rotorcraft in collaboration with General Dynamics Missions Systems - Canada
- Characterized environmental corrosion and damage to material using methods including scanning electron microscopy, x-ray diffraction, micro-computed tomography, etc.
- Evaluated barely visible impact damage on laminate and sandwich areas of composite components to establish threshold for safety inspection personnel
- Consulted Federal Aviation Administration (FAA) and Transport Canada guidelines

Lockheed Martin Best in Design Award

August 2015 - December 2015

Materials Expert – Maximus V LLC.

- Designed, tested, and manufactured micro-loaded compression garment prototype with 3D-printed thermoplastic polyurethane inserts for stroke victims in collaboration with Maximus V. LLC. and their industry partners
- Considered affordability, initial capital expenditure, environmental impact of production, and evaluated the current medical device market space in a comprehensive report for the Maximus V. Executive Board as they sought investor funding
- Created an additive manufacturing plan to scale up production following FDA approval

Nano-Particle Toxicity Research

May 2015-December 2016

Undergraduate Researcher

- Conducted research involving heavy metal nanoparticle inhalation toxicity of various workplace and household aerosols
- Contributed to ongoing research paper concerning updating workplace safety practices where nano-scale particulate may be present

NAE Grand Challenge Competition

January 2015 – April 2015

Team Leader

- Designed a research proposal for reduction of carbon emissions, one of the National Academy of Engineering's 14 Grand Challenges in the U.S.
- Led a research team and presented findings and solution for evaluation by External Advisory

Wind Turbine Development Competition

November 2013

Captain of Winning Team

- Designed mini turbines to generate energy for everyday tasks and recorded efficiency

PayCommerce, Inc.*June 2013 – August 2013***Paid Intern**

- Participated in business-to-business startup venture involving new banking software technology
- Organized and distributed pertinent financial reports and supporting documents
- Performed administrative tasks in a timely manner for the financial and research and development departments

Leadership**President**, Spectrum Special Interest THON Organization*April 2014 – May 2015***Vice President**, Sigma Sigma Sigma Sorority – Beta Upsilon Chapter*September 2013-December 2013***Skills**

- Trained to perform various material characterization techniques and methods including SEM, TEM, XRD, DSC, TGA, tensile/compression, impact, and toughness testing
- Certified to handle radioactive and hazardous materials
- Proficient in C++ and MatLab coding, MDI – JADE, Abaqus, SolidWorks, NASTRAN and PATRAN Finite Element Analysis, Microsoft Office, Technical Communication, Group Communications
- Worked extensively in leadership, consulting, team-based, and business-oriented roles

Affiliations

Volunteer, UNICEF

Volunteer, Raritan Bay Medical Center

Executive Board Member, Spectrum Special Interest THON Organization

Alumni, Sigma Sigma Sigma Sorority – Beta Upsilon Chapter

Affiliate, Society of Women Engineers – Penn State Chapter

Member, Engineers Without Borders- Penn State Chapter, USA

Member, Student Space Programs Lab – Penn State Chapter

Member, Astronomy Club – Penn State Chapter