

REBECCA MARY SCHMITT

Atlanta, Georgia

EDUCATION

Mechanical Engineering

Mechanical Engineering & Mathematics

Relevant Coursework: Mathematical Finance, Financial Derivatives, Multivariable Calculus, Abstract Algebra, Differential Equations, Probability, Control Systems, Thermodynamics, Fluid Mechanics

Duke University

M.S May 2022

B.S.E & B.S May 2021

EXPERIENCE

Deloitte Consulting LLP *Government & Public Services Summer Scholar* June 2021-August 2021

- Facilitated collaboration between IRS IT and Business stakeholders to implement the Advance Child Tax Credit, impacting millions of taxpayers, by tracking milestones and status updates
- Gathered information through Integrated Project Team sessions, Rapid Requirement Elicitations, and ad hoc meetings to identify potential impediments and report project health to executive leadership

Duke Smart Home *President*

August 2018-May 2021

- Facilitates connections between faculty, staff, clubs and other organizations.
- Gives tours, promotes club activities, and increased 600 subscriber listserv interactivity by 14%

Earthquake Early Warning in Nepal *Independent Researcher* February 2020-December 2020

- Designed, modeled, and assessed the sensor components for a system of networked smart seismic sensors with analysis and synthesis of micro-electro-mechanical elements.
- Used linear time-invariant theory to derive dynamical equations in state space for geophone accelerometer and circuit, then modeled these responses for various ground motion inputs.

Center for Transportation & the Environment *Engineering Intern*

May 2020-August 2020

- Data modeling on cost and feasibility of operational routes for Laketran battery electric busses.
- Research & development analysis on heavy/medium duty vehicle life-cycle cost based on fuel type, national electric school bus database, and zero-emission vehicle grant funding.

Humans & Autonomy Lab *Research Assistant*

October 2018-July 2019

- Under Dr. Missy Cummings, researched human and computer interactions. This includes drone training methods, operator success in cognitive training models, how to prevent overconfidence in semi-autonomous systems, and road infrastructure accommodations for driverless cars.

Air & Water Quality in Kunshan *Project Leader*

January 2018-May 2018

- Under Dr. Mike Bergin, researched the effects of particulate matter concentration ($PM_{2.5}$) on respiratory health by using the biomarker, exhale nitric oxide (eNO).
- Conducted field tests to compare $PM_{2.5}$ levels in Durham, NC and Kunshan, China and documented fluctuations within the regions.

Energy & the Environment: Design & Innovation *Research Member*

August 2018-May 2019

- Designed and developed a low-cost, wind-borne prototype that harnesses wind energy.
- Analyzed target market, environmental, social, and economic viability of the system.

ACTIVITIES

Greenhouse Scholar, Ron Brown Scholar, Green Devils, Duke in Rome & Australia, SWE, NSBE, AWM, Future is Now Programming Director, Duke Splash Teacher, Global Education Ambassador

SKILLS

MATLAB, Latex, CAD, FEA, Soldering, Arduino, Prototyping, Data Analysis, Technical Writing, Event Planning, Project Management, Fundraising, Presenting