

Erin Roberts

Emrober2@ncsu.edu | +1 828-776-0020 | Raleigh, NC 27606 | <https://www.linkedin.com/in/erin-roberts-a5718360/>

Professional Experience

MANN+HUMMEL

Raleigh, NC

Advanced Development Intern – R&D and Product Development

Jan. 2017 – Present

- Directed product development projects from inception to launch with an agile project management framework.
- Successfully completed voice-of-the-customers interviews, research on materials/technologies/markets, design of experiments, full production trials, data analysis with JMP, process optimization (six sigma green belt), and written invention disclosures for applications ranging from blood filtration to cabin air filtration.

Qlair

Raleigh, NC

Intern – Green Building A.I. Technical Consultant

Jan. 2019 – Jun. 2019

- Learned to wear many different hats in a start-up environment by supporting the CEO with technical advice, marketing and graphics work for clear air A.I. platform. Gained experience with Scrum, Jira, and Salesforce.

i-2-m (Innovation to Market)

Raleigh, NC

Mechanical Engineer Intern – Industrial Wastewater Filtration Optimization

May. 2017 – Aug. 2017

- Worked in a mechanical engineering role to build and test 2-meter tall pilot skids for ceramic membranes wastewater ultrafiltration.
- Conducted tests, analyzed results, and helped to optimize the flux vs. backwash of the ceramic membranes.

NC State

Raleigh, NC

Academic Tutor – Wilson College of Textiles

Feb. 2015 – Apr. 2017

- Tutored chemistry, calculus, and textile technology courses.

Research Experience

North Carolina State University

Raleigh, NC

Graduate Research Assistant

Aug. 2017 – Present

- Investigating the feasibility of producing submicron structures with the meltblown system.
- Developing statistical models and novel measurement methodologies for nonwoven defects.

Volunteer for Graduate Data Analytics Research Project

Aug. 2016 – May. 2017

- Investigated and created health data visualizations for global child and maternal death rates in a partnership with the United Nations, the World Bank, NC State University, and the Gillings School of Public Health. Helped to raise over 10 million dollars for data visualization centers that share best and worst practices. <https://vimeo.com/282013460>

Undergraduate Research Assistant

Aug. 2016 – May. 2017

- Investigated the growth rate of E. coli on their adhesion to fibrous materials in order to create a groundwater filter for pathogens and improve community health.

Education

Ph.D., Fiber and Polymer Science, NWI Certificate, NC State, GPA: 3.9, Pulcra Chemicals Scholar, expected May.2020

B.S., TT: Medical Textiles; minors in Biological Sciences, Art & Design, NC State, GPA: 4.0, Caldwell Fellow, May. 2017

Skills and Interests

Skills: Six Sigma, material design, filtration engineering, extrusion, nonwoven processing, DSC, SEM, Rheology, JMP.

Languages: English (native), German (beginner), Thai (elementary).

Interests: Intersections between science, social good, and environmental sustainability.

Leadership & Social Entrepreneurship

- Founded and led Greater Good, an environmental sustainability club to foster global change in the textile industry, which received the Model-the-Way award in 2016. Worked to educate students on sustainable textile processes.
- Recruited and led a team of chemists, designers, and engineers to research dye-sensitized-solar-cells. Resulted in a purse produced with Dr. El-Shafei's solar dye NCSU-10 dye that was able to charge a cell phone with solar energy.
- Led a senior design team in collaboration with Medline to win 1st place among projects for an E-textile medical pad.
- Organized the TeachLoop winning Institute for Emerging Issue's \$50,000 Prize for Innovation.
- Awarded for numerous leadership scholarships and trainings such as Caldwell fellows, Creative Center for Leadership Training, ASHOKA-U Student Scholar, AATCC-Pulcra Chemicals, AATCC/NWI Undergraduate Award.