Hossam Elnaggar

Raleigh, NC hhelnagg@ncsu.edu +1 (919) 520 8271 hossam-elnaggar-6a54a9187

Profile

- Dedicated PhD student in the Department of Mechanical and Aerospace Engineering at NC State University, focusing on non-woven, high-speed imaging microscopy, and fiber spinning. My current research on "Single Shot Polarization Imaging of Defects in Fiber Spinning" aims to enhance the understanding of fiber properties and optimize production techniques.
- I have a strong background in Energy and Environmental Engineering, with hands-on experience in designing and building prototypes, including a sustainable house in the desert, a vertical axis wind turbine (VAWT), and a solar tracking system. I excel in collaborative environments, effectively communicating complex concepts and fostering teamwork to drive innovative solutions.
- Passionate about sustainable technologies and engineering excellence, I am eager to expand my skills in advanced imaging techniques, finite element analysis, and software tools to contribute meaningfully to the field.

Education

North Carolina State University *Aug 2023 – Present*
Ph.D. in Mechanical and Aerospace Engineering
- Conducting research on "Single Shot Polarization Imaging of Defects in Fiber Spinning."

The British University in Egypt *Sept 2018 – July 2023*
Bachelor of science in Energy and Environmental Engineering
- Graduated with Honors, 4.0 GPA

Relevant Experience

Teaching Assistant *Raleigh, NC*
North Carolina State University *Aug 2023 – May 2024*
- Assisted in the instruction of MAE 305 Mechanical Engineering Laboratory I and MAE 306 Mechanical Engineering Laboratory II.
- Supported students in understanding laboratory principles, conducting experiments, and analyzing results.
- Collaborated with faculty to develop lab materials and enhance the learning experience.

Founder and President *Cairo, Egypt*
Society of Energy and Environment *sept 2019 – May 2021*
- Led the Society of Energy and Environment (SEE) at BUE with the mission of educating students about the potential of renewable energy sources, including solar and wind. Organized various training sessions and events to promote awareness and engagement in sustainable practices.

Skills

Languages: Strong reading, writing and speaking competencies for English, Arabic

Technologies: MATLAB, Maple, PCC Software, Python, LaTeX, Microsoft Office Suite, Inkscape, PVsyst