Casey L. Rivera

NC State University | (919) 000-0000 | email@ncsu.edu

Education

North Carolina State University – Master of Science in Mechanical Engineering, Expected May 2025
Thesis Advisor: Dr. Helena Zhou
Thesis: '*Thermal Modeling and Optimization of Heat Exchanger Systems Using Surrogate Techniques*'

University of Florida – Bachelor of Science in Mechanical Engineering, May 2023
Minor: Computer Science
Summa Cum Laude, Tau Beta Pi Engineering Honor Society

Academic Positions

Graduate Research Assistant, Advanced Energy Systems Lab, NCSU, 2023–***Present***

Publications

Rivera, C.L., Zhou, H., & Li, D. (2024). Surrogate Modeling of Coupled Thermal-Fluid Systems in Heat Exchangers. International Journal of Heat and Mass Transfer.

Nguyen, A., **Rivera, C.L.**, & Zhou, H. (2023). Sensitivity Analysis for Design Parameters in Renewable HVAC Systems. Energy and Buildings.

Fellowships and Awards

College of Engineering Graduate Research Fellowship, NCSU, 2023–2024

Outstanding Undergraduate Research Award – UF, 2022

Selected Conference and Invited Presentations

"*Thermal Optimization in HVAC Design*," ASME IMECE, New Orleans, LA, November 2024.

"*Surrogate-Based Modeling of Heat Transfer Devices*," AIAA Energy Forum, Denver, CO, July 2023.

Technical Skills

MATLAB, Python, SolidWorks, ANSYS Fluent, COMSOL, Simulink, LabVIEW, Git

Memberships in Associations and Institutional Affiliations

American Society of Mechanical Engineers (ASME)

Society of Hispanic Professional Engineers (SHPE)

Graduate Peer Mentoring Program – NC State, 2023–***Present***