EMILY WILLIAMS

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EDUCATION

University of Illinois at Urbana-Champaign May 2021
Bachelor of Science in Aerospace Engineering · Minor in Atmospheric Sciences GPA: **3.95**/4.00
Dean's List, James Scholar, Tau Beta Pi, Alpha Omega Epsilon, Order of Omega

WORK EXPERIENCE

The Boeing Company, El Segundo, CA (Remote) Summer 2020
Space Electronics Engineering Intern

- Working virtually for the Boeing Satellite Development Center under Boeing Defense, Space & Security (BDS) headquartered in El Segundo, CA
- Hired through the Engineering Accelerated Hiring Initiative (EAHI) program

GE Aviation, Cincinnati, OH Summer 2018
Product Operations Intern

- Reallocated 300+ GEnx 1B booster fan blades in spares inventory to usable parts kitted for application on the assembly line, expediting the development of 20 affected engines
- Implemented program for tracking forecasted commits across multiple product lines to proactively address maintenance repair and overhaul (MRO) issues with executive team

University of Illinois Grainger College of Engineering, Champaign, IL Fall 2017 - Present
Instructor & Course Developer

- Average rate of 4.8/5 on Instructor & Course Evaluation System (ICES) form and ranked "Outstanding" on "List of Teachers Ranked as Excellent By Their Students" by the Center for Innovation in Teaching and Learning for ENG 100
- Creating and teaching new engineering course AE 199 SAT: Intro to CubeSats to introduce 25+ underclassmen to satellite development research opportunities on campus
- Optimizing and teaching ENG 177: GFX Leadership Scholars to introduce 25+ first-year students to leadership opportunities on campus

RESEARCH EXPERIENCE

Numerics and Unsteady Flows Group (NUF) Summer 2020 - Present
Advisor: Andres Goza, PhD

- Developing robust and efficient computational tools for simulating and analyzing fluid-structure interaction systems
- Working towards optimizing current time stepping algorithm into a higher order method

Center for Hypersonics & Entry Systems Studies (CHESS) Spring 2020 - Present
Advisor: Marco Panesi, PhD

- Fitting the kinetics data of hypersonic reentry flight using sparse regression techniques to obtain an expression for the state-to-state dissociation rates in terms of the position of the centrifugal barrier
- Modeling the reactions that take place in the flow by selecting a large basis set of functions that include exponentials and polynomials motivated by derivations from transition state theory

Laboratory for Advanced Space Systems at Illinois (LASSI) Fall 2017 - Present
Advisor: Michael Lembeck, PhD

- Managed and directed software development progress for Steven R. Nagel Mission Operations Center
- Oversaw and monitored all satellite mission progress across entire laboratory program through collaboration with mission coordinators and subteam leads
- Implemented robust scheduling system adaptable for tracking mission deliverables and responsibilities for five active satellite programs

CAMPUS INVOLVEMENT

Women in Aerospace Fall 2017 - Present
President (2019 - 2021), Secretary (2018 - 2019), External Representative (2017 - 2018)

- Collaborated with Aerospace Undergraduate Advisory Board and other aerospace organizations to execute social mixers and other department-wide fundraising events while overseeing 5 standing committees
- Planned and executed week-long professional development trips and conferences for executive board members and overall membership of 40+

Satellite Development Organization Fall 2017 - Present
Senior Advisor (2020 - 2021), President (2019 - 2020)

- Designed and developed new website and other media to rebrand and market towards recruitingtalent to work in the Laboratory for Advanced Space Systems at Illinois
- Introduced various interest groups with mentors to help facilitate learning and development of technical skills for membership of 300+