# 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+