Allison E. Grimsted
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EDUCATION

University of Michigan, College of Engineering, Ann Arbor, MI   **August 2024 – Present**
PhD, Industrial and Operations Engineering (IOE)   GPA: 3.95
Advisor: Professor Brian Denton

Cornell University, College of Engineering, Ithaca, NY   **August 2017 – May 2021**
Bachelor of Science, Operations Research and Engineering (ORIE), *Magna Cum Laude*   GPA: 3.97
Minors: Mathematics; Biometry and Statistics
Research Advisor: Professor Shane Henderson

PROFESSIONAL EXPERIENCE

Johns Hopkins University Applied Physics Laboratory (JHU/APL)   **Laurel, MD**
Associate Operations Research Analyst I   August 2021 – July 2024
- In four sponsored research efforts, frequently briefed government sponsor to introduce research questions, demonstrate prototypes, and display results.
- As technical lead on two internal research efforts, developed plan to advance prototypes for detecting vulnerabilities. Mentored intern on implementation of graph database for prototype.

AWARDS

Coin Award, JHU/APL   *2022, 2023, 2024*
- Awarded three times for leadership in research and development as an early career scientist.
- 5% of JHU/APL technical staff win a coin award annually.

Building Leaders, Accelerating Science and Technology Grant, JHU/APL   *2022*
- Awarded $10,000 to fund portion of "Hybrid Bistatic Radar for In-Situ Debris Sensing."

Nominee for Excellence in Quantitative Sciences, CDC   *2022*
- Nominated for this award based on models and data analytics developed for the federal COVID-19 response in education.

Omega Rho, Cornell University   *2021*
- Awarded to undergraduates in the top 15% of the ORIE major.

Engineering Learning Initiatives Undergraduate Research Grant, Cornell University   *2020*
- Awarded $4,500 to fund summer research, "Dispatch Policies for Urgent/Emergent Calls in Air and Land Ambulance Operations."

Tau Beta Pi, Cornell University   *2020*
- Awarded to undergraduates in the top 12% of the engineering school.

WORKING PAPERS

1. **Grimsted, A.**, Orfanoudaki, A., Denton, B. (2025) *Sample-Path Clustering for Context-Sensitive Markov Decision Processes*.

TECHNICAL REPORTS

1. McGarity, M., Swan, B., Calloway, R., Baker, J., McShea, M., Beatty, P., **Grimsted, A.**, Hill, D., Howe, D., Jones, D., Matthew, K., Camacho, E., Brown, G., Llera Ortiz, J., Mekonnen, Y., Helmer, D. (2023). *Aeromedical Evacuation Human Performance Medical Mission Model Under Agile Combat Employment Environment – Summary Final Report*, JHU/APL Technical Communications, AOS-23-1509.

2. McGarity, M., Swan, B., Calloway, R., Baker, J., McShea, M., Beatty, P., **Grimsted, A.**, Hill, D., Howe, D., Jones, D., Matthew, K., Camacho, E., Brown, G., Llera Ortiz, J., Mekonnen, Y., Helmer, D. (2023). *Aeromedical Evacuation Human Performance Medical Mission Model Under Agile Combat Employment Environment – Analysis and Capability Gaps Assessment Report*, JHU/APL Technical Communications, AOS-23-1468.

3. **Grimsted, A.**, Frey, C. (2022). *Graph Based Analytic Model for Resilience Analysis*, JHU/APL Technical Communications, AOS-22-1208.

4. **Grimsted, A.**, Henderson, S. (2020). *Dispatch Policies for Urgent/Emergent Calls in Air and Land Ambulance Operations*, Engineering Learning Initiatives Report, Cornell University.

TALKS

1. **Grimsted, A.**, Orfanoudaki, A., Denton, B. (October 2025). *Sample-Path Clustering for Context-Sensitive Markov Decision Processes*, INFORMS Annual Meeting.

2. **Grimsted, A.**, Swan Hovey, B. (2024). *Modeling Human Performance during a Simulated Aeromedical Evacuation Mission*, Modeling and Simulation Seminar, JHU/APL.

3. **Grimsted, A.** (2023). *Graph Based Analytic Model for Resilience Analysis*, Supply Chain Seminar, JHU/APL.

4. Flaherty, M., **Grimsted, A.**, Hingorani, R., Eddowes, D. (2022). *Hybrid Bistatic Radar for In-Situ Debris Sensing*, Building Leaders, Accelerating Science and Technology Capstone, JHU/APL.

5. **Grimsted, A.**, Maszkiewicz, L., Nichols, M., Raible, E., Gallagher, M. (2022). *National COVID-19 Response at JHU/APL*, Women in Technology Showcase, JHU/APL.

6. **Grimsted, A.**, Henderson, S. (2020). *Dispatch Policies for Urgent/Emergent Calls in Air and Land Ambulance Operations*, Engineering Learning Initiatives Summer Presentation, Cornell University.

INTELLECTUAL PROPERTY DISCLOSURES

1. Shin, L., **Grimsted, A.**, Behrendt, A. (2024). *Logistics Aid for Sustainment and Expeditionary Readiness*, PO7830.

2. McGarity, M., Swan, B., Calloway, R., Baker, J., McShea, M., Beatty, P., **Grimsted, A.**, Hill, D., Howe, D., Jones, D., Matthew, K., Camacho, E., Brown, G., Llera Ortiz, J., Mekonnen, Y., Helmer, D. (2023). *Human Performance Medical Mission Model (HPMx3)*, 7435-6400.

TEACHING

Teaching Assistant, ORIE 4741, Learning with Big Messy Data (Cornell University)   Fall 2020
- Held weekly office hours to explain course content.
- Wrote solutions and grading guidelines for exams and homework.
- Managed a team of graders and resolved grade disputes.

Debate Coach (Evanston Township High School)   Fall 2020 – Spring 2021
- Designed congressional debate curriculum for novice and experienced high school students during biweekly practices. Developed students' research skills.
- Judged at nation-wide tournaments and provided individualized feedback on students' speeches.

Grader, ORIE 3500/5500, Engineering Probability and Statistics II (Cornell University)   Fall 2019
- Graded exams and homework for two sections.

SERVICE

Graduate Society of Women Engineers   **Ann Arbor, Michigan**
Leadership Board Member, Activities Committee   May 2025 – Present

- Organize social events for women in engineering graduate programs twice per month.

Engage Detroit   **Detroit, Michigan**
Volunteer, Optimization Team   June 2025 – July 2025
- Supported multi-day outreach workshops introducing optimization to Detroit high school students through real-world examples and interactive games.

IOE Graduate Application Mentoring Program   **Ann Arbor, Michigan**
Mentor   September 2024 – Present
- Provide application guidance and answer questions about the department graduate program for prospective students to the IOE PhD program.

Alpha Phi Omega – National Community Service Fraternity   **Ithaca, NY**
Treasurer   December 2018 – December 2019
Executive Board Member   May 2018 – May 2021
- Managed finances for an organization with an $80K+ annual budget and 550+ members.
- Created and began implementation of 2-year plan to decrease dues by more than 20%.
- Collected and analyzed survey data to improve chapter outcomes. Utilizing 10+ years of chapter data, deployed predictive analytics to target members at risk of not completing service hours to increase retention.
- Volunteered with Prisoner Express, an organization dedicated to addressing the isolation of incarcerated individuals by implementing educational initiatives for self expression such as creative writing classes and book curation.