

Ashley Peper

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Education

PhD in Industrial and Systems Engineering

Anticipated May 2025

University of Wisconsin – Madison

Bachelor of Science

May 2020

University of Wisconsin – Stevens Point

Major: Mathematics with an Actuarial Emphasis

Minors: Economics and Computer Information Systems

Research Experience

Research Assistant

September 2020-Present

University of Wisconsin-Madison

“Scheduling Cybersecurity Mitigations with Resource Constraints”

Research Experience for Undergraduates

Summer 2019

Grand Valley State University

“Extremal Numbrix Puzzles”

Work Experience

Modeler

November 2018 – May 2021

UWSP Center for Athletic Scheduling

I worked with clients to create schedules for their athletic programs. I did this by solving mathematical models using mixed integer linear programming to generate optimal schedules given various requirements.

Lead Math Tutor

January 2019 – May 2020

University of Wisconsin – Stevens Point

I was in charge of logistical Mathroom concerns such as developing the schedule and keeping logs of Mathroom use. I also acted as a mentor for other tutors and was in charge of new tutor training and recruiting.

Teaching Experience

Teaching Assistant

Fall 2024

UW-Madison – ISyE 323 “Operations Research – Deterministic Modeling”

Grader

Spring 2024

UW-Madison – ISyE 603: “Special Topics in Engineering”

Math Tutor

January 2018 – May 2020

UWSP Mathroom and Public Math Lab

Publications

1. DuBois, E., **Peper, A.**, & Albert, L. A. (2023). Interdicting Attack Plans with Boundedly Rational Players and Multiple Attackers: An Adversarial Risk Analysis Approach. *Decision Analysis*, 20(3), 202-219.
2. **Peper, A.**, Albert, L. A., & Luedtke, J. Selecting and Scheduling Mitigations to Protect Critical Infrastructure under Resource Constraints. *In review at Naval Research Logistics*. (Submitted 8/21/2024).
3. **Peper, A.**, Albert, L. A., & Luedtke, J. Scheduling Mitigations to Delay Attacker Projects. (Working Paper)

Presentations

* Indicates Presenting Author(s)

1. **Peper, A.***, Albert, L. A., & Luedtke, J. Scheduling Cybersecurity Mitigations to Delay Attacker Projects. *INFORMS Annual Meeting 2024*. Oct. 20-23, 2024. Seattle, Washington. (Upcoming)
2. **Peper, A.***, Albert, L. A., & Luedtke, J. Scheduling Cybersecurity Mitigations to Delay Attacker Projects. *25th International Symposium of Mathematical Programming*. July 21-26, 2024. Montreal, Canada.
3. **Peper, A.***, Albert, L. A., & Luedtke, J. Selecting and Scheduling Cybersecurity Mitigations with Resource Constraints. *INFORMS Annual Meeting 2023*. Oct. 15-18, 2023. Phoenix, AZ.
4. DuBois, E., **Peper, A.***, & Albert, L. A. Interdicting Attack Plans with Boundedly Rational Players and Multiple Attackers: An Adversarial Risk Analysis Approach. *INFORMS Annual Meeting 2022*. Oct. 16-19, 2022. Indianapolis, IN.
5. **Peper, A.***, Hensley, F., & Keough L. Extremal Numbrix Puzzles. *Pi Mu Epsilon Undergraduate Regional Conference*. Nov. 2019. De Pere, WI.
6. **Peper, A.***, Hensley, F.*, & Keough L. Extremal Numbrix Puzzles. *MathFest*. Aug. 2019. Cincinnati, OH.
7. **Peper, A.***, Hensley, F.*, & Keough L. Extremal Numbrix Puzzles. *Summer Undergraduate Michigan Mathematics Research Conference*. Jul. 2019. Dearborn, MI.

Poster Presentations

1. **Peper, A.***, Albert, L. A., & Luedtke, J. Selecting and Scheduling Cybersecurity Mitigations with Resource Constraints. *Mixed Integer Programming Workshop 2024*. Jun. 3-6, 2024. Lexington, KY.
2. **Peper, A.***, Albert, L. A., & Luedtke, J. Selecting and Scheduling Cybersecurity Mitigations with Resource Constraints. *IPCO 2023*. Jun. 21-23, 2023. Madison, WI.
3. **Peper, A.***, Hensley, F.*, & Keough L. Extremal Numbrix Puzzles. *22nd Annual Nebraska Conference for Undergraduate Women in Mathematics*. Jan. 31 – Feb. 2, 2020. Lincoln, NE.
4. **Peper, A.***, Hensley, F.*, & Keough L. Extremal Numbrix Puzzles. *Joint Mathematics Meeting 2020*. Jan. 15-18, 2020. Denver CO.

Service and Involvement

Session Chair – “Applications of Integer Programming” <i>INFORMS Annual Meeting 2023 – Pheonix, AZ</i>	October 2023
INFORMS Student Chapter Communications Officer <i>University of Wisconsin – Madison</i>	June 2021 – May 2022
INFORMS Member	September 2020 – Present
Math Club Treasurer <i>University of Wisconsin – Stevens Point</i>	August 2018 – May 2020
Math Club Member <i>University of Wisconsin – Stevens Point</i>	September 2016 – May 2020

Awards and Achievements

University of Wisconsin – Stevens Point

Awards

Academy of Letters and Science Distinguished Achievement Award A continuing and graduating student from each department in the College of Letters and Science received this award. I was chosen as the continuing student from the Mathematics Department.	Spring 2018
Dean’s List	Fall 2016 – Spring 2020
William Lowell Putnam Competition Award Award for achieving the highest score at UWSP on the 2018 and 2019 Putnam Exams.	Spring 2019, Spring 2020

Undergraduate Scholarships

From UWSP Departments of Mathematical Sciences and Computing and New Media Technologies

Charles H. Johnson Scholarship in Actuarial Mathematics	Spring 2019
Skyward Computing Scholarship	Spring 2018
Center for Athletic Scheduling Scholarship	Spring 2018
Wayne G. Wild Scholarship	Spring 2018
Stan and Ann Carlson Mathematics Scholarship	Spring 2017
Howard Thoyre First Year Scholarship	Spring 2016

Certifications

Passed Society of Actuaries Exam P

May 2018

Job Interest Statement

I am from Central Wisconsin looking for a career opportunity in Wisconsin or remote. I research in the area of operations research, using integer programming to model optimization problems, as well as developing heuristic methods to solve such problems. I come from a mathematics background in my undergraduate education, and am interested in both academic and non-academic careers involving mathematics, operations research or related fields.