

Demetrios V. Papazaharias

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EDUCATION

Doctor of Philosophy, Operations Research

January 2022

Master of Science, Operations Research

May 2019

State University of New York at Buffalo, Buffalo, NY

GPA: 4.0/4.0

Bachelor of Science, Applied Physics

May 2016

State University of New York at Geneseo, Geneseo, NY

GPA: 3.6/4.0

RELEVANT EXPERIENCE

Graduate Research Assistant

May 2020 – Present

State University of New York at Buffalo, Buffalo, NY. Advisors: Jose L. Walteros, Moises Sudit.

- Project: Managing Exponential Decision Spaces (MEDS), funded by the Office of Naval Research
- Conducted research for modeling the decision-making process in an adversarial setting as an attacker-defender game on networks
- Developed and implemented integer programming and heuristic techniques for finding exact and approximate solutions.
- Technical Tools: Gurobi, Python, C++

Graduate Teaching Assistant

May 2017 – May 2020

State University of New York at Buffalo, Buffalo, NY

- Created instructional content and software tutorials for courses at the undergraduate and graduate level
- Prepared and led weekly lecture as a teaching assistant and interim instructor when necessary
- Technical Tools: Python, R, Gurobi, LaTeX

Predictive Analytics Intern

June 2019 – August 2019

Sentient Science, Buffalo, NY

- Incorporated physical models to understand damage signatures in wind turbines
- Utilize SCADA and customer operational data to estimate failure risk in wind turbine components
- Applied survival analysis technique to estimate time until failure for wind turbine components
- Technical Tools: Python (numpy, pandas, scikit-learn, lifelines), Git, AWS

WORKING PAPERS

- Papazaharias, D.V., Walteros, J.L., Sudit M., 2021. Optimal Task Planning in Adversarial Settings: An Integer Programming Approach. Working Paper. Anticipated submission September 2021.
- Papazaharias, D.V., Walteros, J.L., 2021. Graph Partitioning on Sparse Graphs: Projections and Extended Formulations. Working Paper. Anticipated Submission July 2021. To be submitted to *Mathematical Programming Computation*.

PRESENTATIONS

Optimal Task Planning in Adversarial Settings: An Integer Programming Approach.

- INFORMS Annual Meeting 2021, Anaheim, CA, United States.

Scalable Branch-and-Price Implementation for Vehicle Routing for the CVRP with SCoOL.

- UBCSE Demo Days 2021, Buffalo, NY, United States

Extended Formulations for Simple Graph Partitioning on Sparse Graphs.

- INFORMS 2020 Annual Meeting, Remote, United States (invited).

Gurobi Seminar Series

- Fall 2019 Semester. Series of Workshops for the University at Buffalo INFORMS Student Chapter.

SKILLS

Programming Languages: Python, C++

Optimization & Data Analysis: Gurobi, CPLEX, R, SQL

Software & Tools: Git, AWS (S3, EC2), OpenMP, MPI, Spark, LaTeX, Slurm Workload Manager, Unix