Demetrios V. Papazaharias

433 Bell Hall
Industrial & Systems Engineering
University at Buffalo
Buffalo, NY 14228

phone: (631) 867-6976
email: dvpapaza[at]buffalo.edu
GitHub: dpapazaharias1
Website: dpapazaharias1.github.io

Education

State University of New York at Buffalo, Buffalo NY
Doctor of Philosophy, Operations Research — August 2017 - Present
Master of Science, Operations Research — May 2019
Department of Industrial & Systems Engineering

State University of New York at Geneseo, Geneseo NY
Bachelor of Science, Applied Physics *cum laude* — May 2016

Work Experience

State University of New York at Buffalo, Buffalo NY — May 2020 - Present
Graduate Research Assistant; Advisors: Jose L. Walteros, Moises Sudit

- Project: Managing Exponential Decision Spaces (MEDS)
- Utilized networks to model the decision making process between two agents and developed mixed-integer programming models and heuristics for optimizing the decisions of each agent

State University of New York at Buffalo, Buffalo NY — August 2017 - May 2020
Graduate Teaching Assistant

- Created instructional content and workshops for undergraduate and graduate courses
- Prepared and led weekly recitations for undergraduate courses
- Courses:
  - IE373: Introduction to Operations Research I
  - IE306: Statistics for Engineers
  - IE500: Advanced Data Analytics & Predictive Modeling (*Interim Course Instructor*)
  - IE504: Facilities Design
  - IE573: Discrete Optimization

Sentient Science, Buffalo NY — June 2019 - August 2019
Predictive Analytics Intern

- Incorporated physical models to understand damage signatures related to faults in wind turbines
- Utilized SCADA and customer operational data to assess the condition of wind turbines
- Applied survival analysis techniques to estimate risk of failure for wind turbine components

Technical Experience

Programming Languages	Python, C++, R, Java
Data Analysis & Optimization	Gurobi, CPLEX, SQL
Software & Tools	LaTeX, Git, AWS (S3, EC2), OpenMP, MPI, Spark

Research Interests

Integer programming, polyhedral study and dynamic programming for graph partitioning and network interdiction problems.

Presentations

Extended Formulations for Simple Graph Partitioning on Sparse Graphs
INFORMS 2019 Annual Meeting, Seattle WA, United States (*invited*) October 2019

Disconnecting Networks via Edge Deletions: An Integer Programming Approach
INFORMS 2018 Annual Meeting, Phoenix AZ, United States (*invited*) November 2018

Papers in Preparation

Graph Partitioning on Sparse Graphs: Projections and Formulations
Papazaharias, D.V., Walteros, J.L. Anticipated: May 2021

Optimal Task Planning in Adversarial Settings: An Integer Programming Approach
Papazaharias, D.V., Walteros, J.L., Sudit, M. Anticipated: July 2021

Selected Coursework

- Linear Programming
- Discrete Optimization
- Logistics Optimization
- Heuristic Optimization
- Design and Analysis of Algorithms
- Nonlinear Optimization
- Network Optimization
- Parallel and Distributed Processing
- Stochastic Methods
- Applied Stochastic Processes
- Data Mining I (Supervised Learning)
- Data Mining II (Unsupervised Learning)
- Data Analytics & Predictive Modeling
- Decision Making with Advanced Simulation
- Urban Transportation Systems