BURLA ECE ONDES

School of Industrial Engineering, Purdue University
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EDUCATION

Purdue University — *West Lafayette, IN*
Ph.D. in Industrial Engineering(Operations Research) — August 2019 - present
Expected graduation: May 2024

Thesis topic: Multi-objective Stochastic Optimization
Advisor: Prof. Dr. Susan R. Hunter

M.S. in Joint Statistics and Computer Science — August 2021 - present
Expected graduation: May 2023

University of Florida — Gainesville, FL
B.S. in Industrial and Systems Engineering — August 2019
Summa Cum Laude

RESEARCH INTEREST

Stochastic optimization, Monte Carlo simulation modeling and analysis, Applied probability and statistics

PUBLICATIONS

Journal Articles
In Preparation

Submitted, Under Review, or Under Revision

1. An upper bound on the Hausdorff distance between a Pareto set and its discretization in bi-objective convex quadratic optimization. **Ondes, B. E.**; and Hunter, S. R. Under Review. 2021. http://www.optimization-online.org/DB_HTML/2021/05/8394.html

TALKS AND SEMINARS

Invited

1. **B. E. Ondes** and S. R. Hunter. June 2021. "On the Hausdorff distance between a Pareto set and its discritization." INFORMS Simulation Society Research Workshop: From Data to Decision-making: Contending with Uncertainty and Non-Stationarity in Simulation Theory, State College, PA; Virtual Meeting.
2. **B. E. Ondes** and S. R. Hunter. July 2021. "On the Hausdorff distance between a Pareto set and its discritization." SIAM Conference on Optimization, Virtual Meeting

RESEARCH EXPERIENCE

Purdue University August 2019 – present
School of Industrial Engineering
Graduate Research Assistant

- Formulated the distance between Efficient set and its Discretized Efficient set, and the distance between Pareto set and its Discretized Pareto set in terms of dispersion for bi-objective quadratic problems
- Working on generalizing the distance for bi-objective convex problems for both decision and objective space and formulating the distance(error) when the deterministic objective is changed with a stochastic oracle

University of Florida January 2019 – August 2019
Department of Industrial and Systems Engineering
Undergraduate Researcher

- Worked on an a project seeks to apply reinforcement learning(RL) to knowledge based Inverse Radiotherapy Treatment Planning(IRTP)
- Modeled a multi-objective optimization problem and converted the problem to single optimization by weighted sum method
- Utilized from a RL algorithm to predict the impact of weighting parameters which determines trade-offs between organs in IRTP

University of Florida January 2018 – May 2018
Department of Industrial and Systems Engineering
Undergraduate Researcher

- Conducted secondary research for robustness, networks and graph theory
- Participated biweekly research sessions and prepared a literature review document

TEACHING EXPERIENCE

Purdue University August 2019 – December 2019
School of Industrial Engineering
Graduate Teaching Assistant for IE 230: Probability and Statistics in Engineering I
class size: $\approx$ 180 students

University of Florida October 2018 – May 2019
Department of Industrial and Systems Engineering
Undergraduate Teaching Assistant for ESI 4313: Operations Research II
class size: $\approx$ 50 students
Undergraduate Teaching Assistant for ESI 4523: Industrial Systems Simulation
class size: $\approx$ 50 students

HONORS AND AWARDS

- Awarded Dr. Theodore J. and Isabel M. Williams Fellowship in Industrial Control Systems in 2020-2021 academic year
- Ranked third team in EBEC(European BEST Engineering Case Study Competition) in 2016
- Ranked in first 0.1 percentile in over 2 millions students in Turkish National University Entrance Exam in 2015
- Ranked in the top six mathematics projects among more than 40 mathematics projects in Scientific and Technological Research Council of Turkey's National High school Mathematics Project Competition in 2013

LEADERSHIP AND TEAMWORK

Purdue University Engineering Academic Career Club July 2021 – present
Mentoring Chair

INFORMS August 2019 – present

- INFORMS Purdue University Student Chapter
  Treasurer
  Chair of Social Activities
- INFORMS Analytics Society
  Member
- INFORMS Women in ORMS Forum
  Member

PU Turkish Student Association August 2019 – present
Member

UF Turkish Student Association August 2017 – August 2019
Member

SERVICE

- Judge at the SURF e-Symposium, Purdue University, 2021
- Tutor for ECE 201: Linear Circuit Analysis I, School of Industrial Engineering, Purdue University, 2020
- Undergraduate learning(volunteer) assistant for MAC 2311: Analytic Geometry and Calculus I Department of Mathematics, UF, 2019

SKILLS AND CERTIFICATES

Computer

- Proficient in programming with MatLab, Python, Julia, SQL and VB.Net
- Proficient in ARENA simulation and GAMS
- Proficient in KeyCreator(CAD) software

Languages

- English: Full professional proficiency
- Turkish: Native or bilingual proficiency
- German: Limited working proficiency
- French: Elementary proficiency

Certificates

- IISE(Institute of Industrial and Systems Engineers) Six Sigma Green Belt Certificate