

PAUL LAWRENCE

PhD Student ◊ Department of Industrial Economics and Technology Management ◊ Norwegian University of Science and Technology
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EDUCATION

PhD Candidate, Department of Industrial Economics and Technology Management *April 2024-Present*
Norwegian University of Science and Technology, Trondheim, Norway
Supervisors: Kjetil Fagerholt, Kenneth Røthvoss

Masters of Mathematics, Combinatorics and Optimization *September 2021-May 2022*
University of Waterloo, Waterloo, ON
Supervisor: Levent Tunçel
Thesis: *Algorithmic and Linear Programming-Based Techniques for the Price Setting Problem*

Bachelor of Arts, Mathematics *September 2016-May 2020*
Oberlin College, Oberlin, OH
Minor in Computer Science

Budapest Semesters in Mathematics *February 2019-June 2019*
Renyi Institute, Budapest, Hungary
Study Abroad

PROJECTS

Predicting and Recognizing Pitches Using Pre-Event and Post-Event Data *Fall 2022*

- Collected and cleaned large samples of baseball pitch data using python's Pybaseball module
- Tested and trained data related to pitch prediction and pitch recognition using SVM and Linear Regression models
- Achieved 32% and 98% accuracy for prediction and recognition, respectively; summarized results in 6-page report

Smoothness-Based Price of Anarchy Lower Bounds in Auctions *September 2019-September 2020*

- Conducted original undergraduate research in algorithmic game theory; joint work with Professor Samuel P. Taggart of Oberlin College and Robin Bowers of U.C. Boulder
- Proved revenue-covering-based lower bounds on the social efficiency of single-minded combinatorial auctions

Number Theory Memes for Multiplicative Tweens *Fall 2018*

- Compiled comprehensive Number Theory textbook on advanced topics such as Gaussian algebra and Polynomial Rings

SKILLS

Languages/Software	Python, Pandas, Pytorch, Gurobi, Git, L ^A T _E X
Spoken Languages	English, Norwegian

RELEVANT COURSEWORK

Graduate Coursework

Machine Learning, Combinatorial Optimization, Induced Subgraphs, Mathematical Programming

Undergraduate Coursework

Linear Optimization, Advanced Algorithms, Theory of Computing, Harmonic Analysis, Group Theory, Game Theory

SCHOLARSHIPS AND AWARDS

International Masters Award for Student Excellence	<i>September 2021-May 2023</i>
<i>University of Waterloo</i>	<i>Waterloo, ON</i>

Fulbright Malaysia English Teaching Assistant Alternate Finalist

April 2021

*Fulbright Student Program***Honors**

May 2019

*Budapest Semesters in Mathematics**Budapest, Hungary***John Frederick Oberlin Scholarship**

2016-2020

*Oberlin College**Oberlin, OH***TEACHING EXPERIENCE**

Graduate Teaching Assistant

2021

*University of Waterloo**Waterloo, ON*

- Held office hours and graded assignments/exams for the following courses:

- * MATH 118 - Calculus II

- * CO 351 - Network Flows

- * CO 353 - Discrete Optimization

- * CO 454 - Scheduling

- * CO 456 - Game Theory

Undergraduate Teaching Assistant

2019-2020

*Oberlin College**Oberlin, OH*

- Held weekly workshops, office hours, and graded for the following courses:

- * CSCI 280 - Algorithms

- * MATH 331 - Linear Optimization

Pedagogy

- Derkovits School Math Club Instructor

Spring 2019, Budapest, Hungary

- Teen Leadership Counselor

Summer 2018, Vashon, WA

- Oberlin Student-Teacher Partnership

Fall 2017, Oberlin, OH