Robin Bowers

they/them
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Education

University of Colorado Boulder — Boulder, CO
PhD Student, Computer Science — *2021 – present*

Oberlin College — Oberlin, OH
Bachelor of Arts, Computer Science and Mathematics — *2016 – 2020*

University of Edinburgh — Edinburgh, UK
IFSA-Butler Study Abroad, course credits issued via Butler University — *Spring 2019*

Publications

High-Welfare Matching Markets via Descending Price.
Robin Bowers, Bo Waggoner, *Conference on Web and Internet Economics (WINE), 2023.*

Loom Pedals: Retooling Jacquard Weaving for Improvisational Design Workflows.
Shanel Wu, Xavier A Corr, Xi Gao, Sasha De Koninck, **Robin Bowers**, Laura Devendorf, *Conference on Tangible and Embedded Interaction (TEI), 2024.*

Machine Learning Based MIMO Equalizer for High Frequency (HF) Communications.
S. Spillane, K. H. Jung, **Bowers**, T. Peken, M. H. Marefat and T. Bose, *2020 International Joint Conference on Neural Networks (IJCNN 2020).*

Posters & Talks

High-Welfare Matching Markets via Descending Price
Robin Bowers, Bo Waggoner, Poster presented at Marketplace Innovation Workshop, 2023; Simons Institute Workshop on Societal Considerations and Applications, 2022; ACM Conference on Economics and Computation, 2022. Talk presented at WINE 2023.

Awards

Outstanding Teaching Assistant Award — 2022
University of Colorado Boulder — *Boulder, CO*

Annual CS Department Research Expo – Work In Progress Award — 2022
University of Colorado Boulder — *Boulder, CO*

2020 R.J. Thomas Computer Science Teaching Assistant Award — May 2020
Oberlin College — *Oberlin, OH*

John F. Oberlin Scholarship — 2016 – 2020
Oberlin College — *Oberlin, OH*

Experience

Teaching Assistant – Principles of Programming Languages — Fall 2023
University of Colorado Boulder — *Boulder, CO*
- Led weekly practice sessions on functional programming and programming language construction

Founder/Coordinator – Algorithmic Fairness Reading Group — Fall 2023 – present
University of Colorado Boulder — *Boulder, CO*
- Planned and scheduled reading group meetings across multiple departments

Coordinator – Algorithmic Economics Reading Group — 2022 – 2023
University of Colorado Boulder — *Boulder, CO*
- Planned and scheduled reading group meetings

- Created a guide for future group coordinators

Teaching Assistant – Algorithms Spring 2022
University of Colorado Boulder *Boulder, CO*

- Led weekly practice sessions on course topics
- Wrote weekly problem sets and solutions presented in all TA sections

Undergraduate Research Assistant 2019 – 2020
Oberlin College *Oberlin, OH*

- Conducted research in economic game theory
- Proved setting-specifc performance lower-bounds for several auction algorithms
- Obtained complexity results on computing lower bounds for performance of auctions in specific settings

Teaching Assistant – Algorithms 2019 – 2020
Oberlin College *Oberlin, OH*

- Led weekly practice sessions on course topics
- Transferred problem session material online for distance learning

Research Internship – NSF REU Summer 2019
University of Arizona Department of Electrical and Computer Engineering *Tucson, AZ*

- Conducted study on "Machine Learning Based MIMO Equalizer for High Frequency (HF) Communications"
- Created mathematical models of long-range radio systems in MATLAB
- Implemented machine-learning algorithms to dynamically adjust system behavior for best performance
- Communicated professionally with other students to coordinate project and goals

Grader – Discrete Math Fall 2018, Spring 2020
Oberlin College *Oberlin, OH*

- Graded homework and quizzes weekly for class size of 30-80 students for in-person and distance learning classes
- Provided written feedback to students on mathematical reasoning and clarity

Software Internship Summer 2018
Blendid *Sunnyvale, CA*

- Worked with Universal Robots robotic arm designing and optimizing movement paths in automated food kiosk
- Handled emergency kiosk malfunctions and daily prototype operations