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*

EXPERIENCE

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

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
- Graded homeworks and exams

Undergraduate Research Assistant — 2019 – 2020
Oberlin College — *Oberlin, OH*
- Conducted research in economic game theory; Two semesters of course credit, one summer of paid research
- 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*
- Planned and led twice-weekly algorithms problem sessions on course topics
- Guided students through practice problems, focusing on proof techniques and problem-solving skills
- 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

Publications

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

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

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*