

Yuan (Charles) Cui ycui@oberlin.edu | 440-669-4300

EDUCATION

Oberlin College
Bachelor of Arts
Major: Mathematics and Computer Science
GPA: 4.14

Expected Graduation: May 2020

Budapest Semesters in Mathematics

January 2019 - May 2019

EXPERIENCE

Student Researcher July 2017 - Present
Oberlin College *Oberlin, OH*

- **Returns on Privacy: Phase Transitions in Repeated Sales** - Collaboration with Samuel Taggart, Ezra Goss, and Rachel Cummings. Submitted to Innovations in Theoretical Computer Science (ITCS 2019) in September. Listed as an author.
- **An Infinite Hidden Markov Model with Similarity-Biased Transitions** - Experimented with replacing a C++ implementation of a Hidden Markov Model with Python and found negligible gains.

Teaching Assistant February 2017 - May 2018
Oberlin College *Oberlin, OH*

- **Grader:** MATH 220: Discrete Mathematics; MATH 232: Linear Algebra; CSCI 150: Introduction to Computer Science
- **OWLS (The Oberlin Workshop and Learning Sessions) Leader:** Served as an OWLS leader for MATH 132 (Calc Ib: Integration and Applications). Drafted worksheets of problems and practice exams, and held problem sessions twice a week.
- **Lab Helper:** Worked in the college computer lab every Saturday to help students with their assignments.

Thematic Program on Geometric Representation Theory and Symplectic Varieties June 2018
University of Notre Dame - Center for Mathematics at Notre Dame *Notre Dame, IN*

- Attended lectures and problem sessions.

Communications Intern December 2017 - January 2018
Bamboo Bicycles Beijing & Beyond *Beijing & Shanghai, China*

- Interviewed six former volunteers, workshop participants, and employees on maker creativity and the environment. Published articles about interviewees in both Chinese and English on my WeChat Official Account.

PROGRAMMING SKILLS

Python, R, Mathematica, C, C++, Java, \LaTeX .

COURSES TAKEN

Mathematics and Statistics

- MATH 232: Linear Algebra
- MATH 301: Foundations of Analysis
- MATH 317: Number Theory
- MATH 327: Algebra I: Group Theory
- MATH 331: Linear Optimization
- MATH 353: Topology
- MATH 550H: Machine Learning Research

- MATH 995H: Primality Testing
- MATH 995H: Numerical Analysis (in progress)
- STAT 339: Probabilistic Modeling and Machine Learning

Computer Science

- CSCI 151: Data Structures
- CSCI 210: Introduction to Computer Architecture (in progress)
- CSCI 241: Systems Programming
- CSCI 280: Algorithms
- CSCI 275: Programming Abstractions (in progress)
- CSCI 385: Economics and Computation (in progress)

Others

- FYSP 074: Cryptography
- CHEM 205: Organic Chemistry
- CHEM 349: Chemical and Statistical Thermodynamics (Official Audit)
- ECON 101: Principles of Economics
- ECON 206: Principles of Finance (in progress)
- JAPN 101: Elementary Japanese I
- JAPN 102: Elementary Japanese II
- EAST 121: Chinese Civilization (in progress)
- ENTR 101: Introduction to Entrepreneurship
- EXCO 808: Intermediate Badminton

AWARDS AND GRANTS

Elbridge P. Vance Scholar of Mathematics

July 2016 - June 2019

Oberlin College

- Received a total of \$22,422 in my first three years at Oberlin College.

Winter Term Individual Project Grant

January 2018

Oberlin College

- Received \$300 to fund my winter term project.

VOLUNTEERING

Translator at Khan Academy

September 2018 - Present

Khan Academy

- Translating materials from English to Mandarin every week.

Teacher and Volunteer

January 2017

Maya Universe Academy

Nepal

- In January 2017, volunteered at Maya Universe Academy, the only tuition-free private school in Nepal, for three weeks. Taught Chinese Language and Culture as well as Logic and Paradox. Also tutored mathematics.