Antares Chen

Graduate Student at the University of Chicago

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Education

Ph.D. in Computer Science — Expected May 2026
University of Chicago
Advised by: Lorenzo Orecchia

B.A. in Computer Science and Mathematics — May 2020
University of California Berkeley

Academic Experience

Research Assistant — Bocconi University — 2019 – 2019
Advised by Prof. Luca Trevisan

- Study spectral sparsification lower bounds, cut sparsifier constructions for dense graphs, and tools from statistical physics to analyze cuts of random graphs.

Research Assistant — University of California Berkeley — 2016 – 2019
Advised by Aaron Schild

- Study electrical flows, graph sparsification, and applications towards constructing fast Laplacian solvers.
- Develop algorithms for efficiently simulating the abelian sandpile model on undirected graphs.

Advised by Prof. Satish Rao

- Studied experts, bandits, and online local learning.
- Studied using online optimization frameworks to recover planted structure.

Research Assistant — Berkeley Institute of Design — 2015 – 2016
Advised by Prof. Armando Fox

- Studied methods for clustering student code.
- Developed AutoStyle, an application that provides students automated coding style feedback.
- Deployed AutoStyle to classroom settings with +1500 students.

Research Assistant — Stanford University Computational Geometry Group — 2014 – 2014
Advised by Jonathan Huang

- Studied methods for clustering Fitch style proofs.

Research Assistant — University of Maryland College Park — 2013 – 2015
Advised by Prof. Aravind Srinivasan and David G. Harris

- Studied the probabilistic method and the algorithmic Lovász Local Lemma.
- Developed dependent rounding algorithms for solving covering integer linear programs.

Industry Experience

Student Researcher	Google Member of the Data Commons project (link).	2018 – 2019

- Help curate an open source knowledge graph of public data sets.
- Implemented the Python API (Github) for querying the knowledge graph.
- Lead the DataCommons pilot in UC Berkeley's DS100 (blog post).

Publications

Refereed Conferences

1. "Teaching students to recognize and implement good coding style." Eliane S. Wiese, Michael Yen, Antares Chen, Lucas A. Santos, Armando Fox in *Proceedings of the ACM Conference on Learning at Scale 2017*, pp. 41-50.
2. "Partial resampling to approximate covering integer programs." Antares Chen, David G. Harris and Aravind Srinivasan in *Proceedings of the ACM-SIAM Symposium on Discrete Algorithms 2016*, pp. 1984-2003.

Invited Talks and Abstracts

1. "Preliminary evidence for learning good coding style with Autostyle." Antares Chen, Eliane S. Wiese, Hezheng Yin, Armando Fox presented at *Learning with MOOCs 2016*

Teaching Experience

Sp2019	*CS170 Efficient Algorithms and Intractable Problems* Undergraduate Student Instructor	University of California Berkeley
Su2017	*CS375 Teaching Techniques for Computer Science* Undergraduate Student Instructor	University of California Berkeley
Su2016 – Sp2018	*CS61B(L) Data Structures and Programming* (Head) Undergraduate Student Instructor	University of California Berkeley

Honors & Awards

2014	*Best Technical Presentation* Doolittle Institute's Mini-Urban Challenge
2014	*Governor's Citation for Promoting STEM Inclusiveness Through FIRST Robotics* Office of Governor Martin O'Malley
2013	*Honorable Mention for Paper "Utilizing CNTFETs for Computer Design"* Toshiba NSTA ExploraVision Essay Writing Contest

Community Activities

Founder — Undergraduate Theoretical Computer Science @ Berkeley (link) — 2018 – 2019

- Organized reading groups: *Convex Optimization and Maximum Flows*, *A Theorist's Toolkit*, *Approximation Algorithms*, and *Algorithmic Analysis Beyond the Worst-Case*

Skills

Programming — Python, Java, C, C++, Matlab, Mathematica, HTML/CSS, LaTeX