

# Chutong Yang

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## Research Interests

Learning theory and algorithm design, with a particular focus on the following topics:

Trustworthy machine learning (algorithmic fairness, differential privacy, interpretability), optimization and applications in LLM and discrete diffusion.

## Education

The University of Texas at Austin, Ph.D. in Computer Science	Aug 2023 – Present
• Supported by Amazon AI PhD fellowship	
• Coursework: Continuous Algorithms, Stochastic Processes	
Stanford University, M.S. in Computer Science	Sep 2021 – Jun 2023
• Full financial support for two years.	
• Coursework: Machine Learning Theory, Optimization Algorithms, Deep Generative Models	
University of California, San Diego, B.S. in Computer Science and Math	Sep 2016 – Jun 2020
• Overall GPA 3.944/4.0 CSE Major GPA: 3.98/4.0 Math Major GPA: 4.0/4.0	
• Coursework: Real Analysis series, Abstract Algebra series, Number Theory series, Unsupervised Learning, Algorithms for Big Data, Expander Graphs and High-Dimensional Expanders	

## Publications

(The authors are ordered alphabetically if no \* mentioned)

<b>Spherical Leech Quantization for Visual Tokenization and Generation</b> Yue Zhao*, Hanwen Jiang, Zhenlin Xu, <i>Chutong Yang</i> , Ehsan Adeli, Philipp Krähenbühl <a href="https://arxiv.org/abs/2512.14697">https://arxiv.org/abs/2512.14697</a>	In Submission 2025
<b>Anonymous Proportionality with Incomplete Votes</b> Zhiyi Huang, Gregory Kehne, <i>Chutong Yang</i> EC 2025 Workshop: New Directions in Social Choice	In Submission 2025
<b>Private Geometric Median in Nearly-Linear Time</b> Syamantak Kumar, Daogao Liu, Kevin Tian, <i>Chutong Yang</i> TPDP 2025 Workshop <a href="https://arxiv.org/abs/2505.20189">https://arxiv.org/abs/2505.20189</a>	NeurIPS 2025
<b>Omnipredicting Single-Index Models with Multi-Index Models</b> Lunjia Hu, Kevin Tian, <i>Chutong Yang</i> <a href="https://arxiv.org/abs/2411.13083">https://arxiv.org/abs/2411.13083</a>	STOC 2025
<b>Testing Calibration in Nearly-Linear Time</b> Lunjia Hu, Arun Jambulapati, Kevin Tian, <i>Chutong Yang</i> <a href="https://arxiv.org/abs/2402.13187">https://arxiv.org/abs/2402.13187</a>	NeurIPS 2024
<b>Omnipredictors for Constrained Optimization</b> Lunjia Hu, Inbal Livni-Navon, Omer Reingold, <i>Chutong Yang</i> <a href="https://arxiv.org/abs/2209.07463">https://arxiv.org/abs/2209.07463</a>	ICML 2023
<b>Active Learning Polynomial Threshold Functions</b> Omri Ben-Eliezer, Max Hopkins, <i>Chutong Yang</i> , Hantao Yu <a href="https://arxiv.org/abs/2201.09433">https://arxiv.org/abs/2201.09433</a>	NeurIPS 2022
<b>A Fast Exact Algorithm for Deployment of Sensor Nodes for Internet of Things</b> Qinghua Zheng*, <i>Chutong Yang</i> , Haijun Yang, Jianhe Zhou	ISF 2022

Information Systems Frontiers: <https://link.springer.com/article/10.1007/s10796-018-9890-3>

**Detailed placement for IR drop mitigation by power staple insertion in  
sub-10nm VLSI**

DATE 2019

Sun ik Heo, Andrew B Kahng, Minsoo Kim, Lutong Wang, *Chutong Yang*

<https://ieeexplore.ieee.org/abstract/document/8715096>

## Teaching and Research Experiences

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### Teaching Experience

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|--|--|
| • CS 395T Continuous Algorithms at UT Austin             | <i>Spring 2025</i>                           |
| • CS 353 Theory of Computation at UT Austin              | <i>Spring 2024</i>                           |
| • CS 109 Probability for Computer Scientists at Stanford | <i>Spring 2023</i>                           |
| • CS 161 Design and Analysis of Algorithms at Stanford   | <i>Fall 2021</i>                             |
| • CSE 101 Design and Analysis of Algorithms at UCSD      | <i>Spring 2020, Winter 2021, Spring 2021</i> |
| • CSE 12 Basic Data Structure at UCSD                    | <i>Fall 2017</i>                             |

### Research Experience

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|---|--------------------------------|
| • Visit Northeastern University hosted by Prof. <b>Jonathan Ullman</b> and Prof. <b>Lunjia Hu</b> | <i>Summer 2025</i>             |
| • Research Assistantship with funding from Prof. <b>Omer Reingold</b>                             | <i>Winter 2022-Winter 2023</i> |
| • Research Assistantship with funding from Prof. <b>Aaron Sidford</b>                             | <i>Summer 2022</i>             |

## PROFESSIONAL SERVICE

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Conference reviewer: NeurIPS 2024, ICLR 2025, ICML 2025, ITCS 2026

## SKILLS

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**Languages and Tools:**  $\text{\LaTeX}$ , Python, Java, C, C++, Matlab, Pytorch, Linux