

Yang Yuan

FIT 4-6007
Tsinghua University
Haidian, Beijing, 100084

Phone: +86-13581688475
E-mail: yuanyang@tsinghua.edu.cn
<http://people.iis.tsinghua.edu.cn/~yuanyang/>

Research Interests AI for healthcare, machine learning theory and algorithm design.

Work Experience TSINGHUA UNIVERSITY July, 2019 – Now
Assistant Professor at Institute for Interdisciplinary Information Sciences (IIIS)

MASSACHUSETTS INSTITUTE OF TECHNOLOGY July, 2018 – June, 2019
Postdoctoral Associate at Institute for Foundations of Data Science.
Advisor: Prof. Piotr Indyk and Prof. Aleksander Madry.

Education CORNELL UNIVERSITY Aug, 2012 – May, 2018
Ph.D. in Computer Science.
Advisor: Prof. Robert Kleinberg.
Visiting student at Princeton University, advisor: Prof. Elad Hazan Sep, 2016 – Dec, 2016
Visiting student at Microsoft Research New England Sep, 2014 – June, 2015

PEKING UNIVERSITY Sep, 2008 – Jun, 2012
B.S. *summa cum laude* in Computer Science (honors track). GPA: 3.77/4.0, Rank: 2/138.
Thesis advisor: Prof. Yao Guo. With Distinguished Dissertation Award (top 3%).

Publications (α - β) denotes alphabetical ordering. * denotes equal contribution.

A Stratified Approach to Robustness for Randomly Smoothed Classifiers,
Guang-He Lee, Yang Yuan, Shiyu Chang, Tommi S. Jaakkola,
NeurIPS 2019.

Learning-Based Low-Rank Approximations,
Piotr Indyk, Ali Vakilian, Yang Yuan, (α - β)
NeurIPS 2019.

Asymmetric Valleys: Beyond Sharp and Flat Local Minima,
Haowei He, Gao Huang, Yang Yuan,
NeurIPS 2019 (spotlight).

Expanding Holographic Embeddings for Knowledge Completion,
Yexiang Xue, Yang Yuan, Ashish Sabharwal,
NIPS 2018.

An Alternative View: When Does SGD Escape Local Minima?
Robert Kleinberg, Yuanzhi Li and Yang Yuan, (α - β)
ICML 2018.

YATES: Rapid Prototyping for Traffic Engineering Systems,
Praveen Kumar, Chris Yu, Yang Yuan, Nate Foster, Robert Kleinberg, Robert Soulé,
SOSR 2018.

Semi-Oblivious Traffic Engineering: The Road Not Taken,
Praveen Kumar, Yang Yuan, Chris Yu, Nate Foster, Robert Kleinberg, Petr Lapukhov, Chiun
Lin Lim and Robert Soulé,
NSDI 2018.

Hyperparameter Optimization: A Spectral Approach,
Elad Hazan, Adam Klivans and Yang Yuan, (α - β)
ICLR 2018. Previously appeared in NIPS DLTP Workshop 2017 (oral).

Convergence Analysis of Two-layer Neural Networks with ReLU Activation,
Yuanzhi Li and Yang Yuan, (α - β)
NIPS 2017.

Exploiting the Structure: Stochastic Gradient Methods Using Raw Clusters,
Zeyuan Allen-Zhu*, Yang Yuan* and Karthik Sridharan,
NIPS 2016.

Even Faster Accelerated Coordinate Descent Using Non-Uniform Sampling,
Zeyuan Allen-Zhu, Zheng Qu, Peter Richtárik and Yang Yuan, (α - β)
ICML 2016.

Improved SVRG for Non-Strongly-Convex or Sum-of-Non-Convex Objectives,
Zeyuan Allen-Zhu and Yang Yuan, (α - β)
ICML 2016.

Optimization Algorithms for Computational Geometry,
Zeyuan Allen-Zhu, Zhenyu Liao and Yang Yuan, (α - β)
ICALP 2016.

Simultaneous Nearest Neighbor Search,
Piotr Indyk, Robert Kleinberg, Sepideh Mahabadi and Yang Yuan, (α - β)
SoCG 2016.

Combinatorial Multi-Armed Bandit and Its Extension to Probabilistically Triggered Arms,
Wei Chen, Yajun Wang, Yang Yuan and Qinshi Wang, (α - β)
JMLR 2016.

(Conference version:)

Combinatorial Multi-Armed Bandit: General Framework, Results and Applications,
Wei Chen, Yajun Wang and Yang Yuan, (α - β)
ICML 2013.

Escaping From Saddle Points – Online Stochastic Gradient for Tensor Decomposition,
Rong Ge, Furong Huang, Chi Jin and Yang Yuan, (α - β)
COLT 2015.

Optimal Auctions vs. Anonymous Pricing,
Saeed Alaei, Jason Hartline, Rad Niazadeh, Emmanouil Pountourakis and Yang Yuan, (α - β)
FOCS 2015.

Simple and Near-Optimal Mechanisms for Market Intermediation,
Rad Niazadeh, Yang Yuan and Robert Kleinberg,
WINE 2014.

On the Ratio of Revenue to Welfare in Single-Parameter Mechanism Design,
Robert Kleinberg and Yang Yuan, (α - β)
EC 2013.

Boreas: An Accurate and Scalable Token-based Approach to Code Clone Detection,
Yang Yuan and Yao Guo,
ASE 2012.

A Fast Parallel Branch and Bound Algorithm for Treewidth,
Yang Yuan,
ICTAI 2011.

Teaching

Machine Learning
Fall 2019

Introduction to Artificial Intelligence
Fall 2019

Awards

Beijing Zhiyuan Scholar	2020
Forbes China 30 Under 30 (Science)	2019
Amazon AWS Research Award	2017
Microsoft Azure Research Award	2017
Jeff Hawkins & Janet Strauss Fellowship	2012
Pivot of Merit Student	2011
Tung OOCL Scholarship	2010
Kwang-Hua Scholarship	2009
Huaying Scholarship	2007 – 2008