

Jialin YU

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Education:

SHANGHAI TECH UNIVERSITY, Shanghai, China

Sep. 2020 - Jun. 2024

Bachelor of Science Candidate, Mathematics and Applied Mathematics

- GPA (Comprehensive) 3.87/4.0 | GPA (Major): 4.0/4.0, Rank (Major): 2/15 GPA | (Last 2 semesters): 3.95/4.0
- Convex optimization; Functional analysis; Stochastic processes

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, MA

Sep. 2022 – Jan. 2023

Special Student Program (Nondegree Program)

- GPA 5.0/5.0
- Courses: 6.7210 Introduction to Mathematical Programming; 18.404 Theory of Computation; 6.1220 Design and Analysis of Algorithms

GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, GA

Aug. 2024 – Expected Aug. 2029

PhD candidate in Operations Research

- Advisor: Prof. Moïse Blanchard
- GPA 4.0/4.0
- Courses: Linear, nonlinear and discrete optimization; Theoretical statistics; Information theory

Research interests:

Memory-constrained optimization, online learning.

Research projects:

Information-constrained convex optimization for high-accuracy feasibility problem

We study the fundamental limits of information-constrained algorithms, which is the class of algorithms with limited memory. We show that for high-accuracy feasibility problem, the query complexity of such algorithms can be exponentially larger than algorithms with full memory.

Distribution-free sequential prediction with abstentions

We consider forecasters that predict the labels of a sequence of samples. The forecaster is allowed to abstain from making a prediction whenever it suspects a sample is out-of-distribution. We derive near-tight trade-offs between the prediction error and the abstention error, without any assumption on knowing the distribution of true samples.

Publications:

Distribution-Free Sequential Prediction with Abstentions. COLT2026

Skills and awards:

- Languages: Chinese (Native), English (Fluent), TOEFL: Total: 105: R:29 / L:30 / S:22 / W:24
- Computer Skills: Python, MATLAB, Julia
- **Bronze Medal** in the 36th national Physics Olympiad, as member of finalist team from Liaoning Province, Oct. 2019
- **First-class certification** awarded by Peking University Physics Summer Camp, Aug. 2019
- ISyE Stewart Fellowship, 2024
- Hobbies: Piano, Go enthusiast, jogger