

Ruizhe Li

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Biography and Research Interests

I'm now in the department of mathematics at Southern University of Science and Technology. In the first two years of my undergraduate career, I studied pure maths. What I loved most is the finite group theory. And I follow ([Caiheng Li](#) [↗](#)) to study this field. But when I'm taking the convex optimization class(2024 fall), I begin to be interested in optimization gradually. Thanks to this course's teacher([Xuyang Wu](#) [↗](#)), he lead me to the asynchronous optimization field and I really love it.

Education

Southern University of Science and Technology

Sept. 2022 – Present

BS in Mathematics and Applied Mathematics

- GPA: 3.89/4.0
- Fields Honor class, led by the Fields Medal Winner Efim Zelmanov
- *Core course*: Topology(A, 94), Abstract Algebra(H)(A⁺, 97), Complex Analysis(H)(A⁺, 98), Real Analysis(H)(A, 96), Numerical Analysis(A⁺, 98), Probability Theory(A⁺, 100), Ordinary Differential Equations(H)(A, 95)
- Convex Analysis and application in machine learning*(A⁺, 100)

Research Experience

Convergence conditions for asynchronous optimization algorithms

*Shenzhen, China
Sept. 2024 - Present*

Advised by [Xuyang Wu](#) [↗](#)

- Explore a broader scope of conditions in which many asynchronous optimization algorithms converges
- Study the convergence rate and time complexity of asynchronous optimization algorithms and find a more precise bound.

Seminars

Set theory

Mar. 2023 - Jul. 2023

Advised by [Bochen Liu](#) [↗](#)

Fourier Analysis

Sep. 2023 - Jan. 2024

Advised by [Bochen Liu](#) [↗](#)

Harmonic Analysis

Sep. 2024 - Present

Advised by [Bochen Liu](#) [↗](#)

SKILLS & HONORS

Languages:Chinese(native),English(fluent)

Programming Languages: Java, Python

Scholarship: Merit Student Scholarship of SUSTech

Oct. 2023

Outstanding Student of SUSTech

Nov. 2023

Merit Student Scholarship of SUSTech

Oct. 2024

Outstanding Student of SUSTech

Oct. 2024

Competition: National Second prize in China Undergraduate Mathematical Contest in Modeling (As the captain)

Oct. 2023

First prize in China Undergraduate Mathematical Contest

Oct. 2024