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 optimization field and I really love it.

Education

Southern University of Science and Technology   *Sept. 2022 – Present*
BS in Mathematics and Applied Mathematics

- GPA: 3.91+/4.0
- Fields Honor class, led by the Fields Medal Winner Efim Zelmanov
- Core course and related course: Topology$(A, 94)$, Abstract Algebra$(H)(A^+, 97)$,
  Complex Analysis$(H)(A^+, 98)$, Real Analysis$(H)(A, 96)$,
  Numerical Analysis$(A^+, 97)$, Probability Theory$(A^+, 100)$, Mathematical Statistics$(A^+, 99)$
  Ordinary Differential Equations$(H)(A, 95)$ Partial Differential Equations$(H)(A^+, 97)$
  Convex Analysis and application in machine learning$(A^+, 100)$ Applied Stochastic Process$(A^+, 100)$
  Numerical methods for PDE solving$(A^+, 98)$
  Introduction to big data$(A^+, 99)$(About statistical learning)

Research Experience

NN for solution mapping   *Hongkong, China*
Advised by Enming Liang 🔗 and Minghua Chen 🔗   *March. 2025 - Present*

- Explore the connection between neural networks,especially GNNs, and solution mapping in problems like LP,QCQP,MILP...
- Leverage the property of equivariance and the symmetry of the problem to design a new neural network architecture for solution mapping.

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*