

Weihan Xue

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EDUCATION

Shanghai Jiao Tong University (SJTU), School of Mathematical Sciences09/2021-Present

Major in Mathematics and Applied Mathematics

Overall GPA:88.0/100 (Rank: Top1/50)

Research Interest:PDEs, Computational Mathematics

Programming:Proficient in Python, C++, Latex, Matlab, and Stata

Main Courses and Scores:

Partial Differential Equations	100	Dynamics System	92
Scientific Computation (Python)	91.5	Complex Analysis	90
Graph Theory and Network	89	Probability Theory	90
Mathematical Analysis (Honored)	92	C++ Programming	90
Advanced Algebra (Honored)	93		

Awards & Honors:

National Scholarship, 2023

Outstanding Student Scholarship, twice, 2022 and 2023

Merit Student of SJTU, 2022

1st Prize in National High School Mathematics Competition, 2020

RESEARCH AND PROJECT

Dimension Estimate for Solution Spaces of PDEs on Manifolds		01/2024-Present
Undergraduate Research, Advisor: Prof. Miaomiao Zhu, School of Mathematical Sciences, SJTU		
<ul style="list-style-type: none">Estimated the dimension of the Schrödinger operator solution space on manifolds under three distinct scenarios: potential symmetric, Lipschitz continuously and bounded, and potential bounded only.Applied rigorous mathematical techniques to determine the dimension ranges with precision.		
The Problem of Periodic Module Categories in Finite Dimensional Algebras		04/2023-04/2024
Undergraduate Research, Advisor: Prof. Yuehui Zhang, School of Mathematical Sciences, SJTU		
<ul style="list-style-type: none">Introduced the Period of Modules and the Basic Structure of Categories Composed of Periodic Modules.Calculated the degree to which the periodic module category of finite dimensional algebra determines its structure.Combed Graph Theory to Calculate Periodic Modules of Finite Dimensional Algebra.Identified all finite dimensional algebras where periodic module categories are generating subcategories.		
AI Ethical Assessment Platform (SJTU-BOC Trusted AI Project)		01/2023-01/2024
Undergraduate Research, Advisor: Prof. Chunxiao Li, Antai College of Economics & Management, SJTU		
<ul style="list-style-type: none">Improved the loan success rate of rural and county people based on the credit market data of Zhejiang Province, by using a deep AI neural network.Reduced the bad debt rate of banks and reduced the bad debt rate of banks.Tried to improve the unfair credit AI model, to meet the fairness requirements.		

ACTIVITIES

Member of Micro Theory Reading Group	10/2023-Present
Advisor: Prof. Xizhi Lim, Antai College of Economics & Management, SJTU	
Member of the PDE Seminar	02/2024-Present
Advisor: Prof. Youshan Tao, School of Mathematical Sciences, SJTU	
Member Stray Animal Rescue Organization of SJTU	09/2021-Present
Member of Siyuan Charity Organization of SJTU	09/2021-09/2023