

Ziying (Zoey) Huang

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EDUCATION

Southern University of Science and Technology, Shenzhen, China , BS in ECE	Sept. 2022 – Jun. 2026
• GPA: 3.84/4.0 (92.2/100) Rank: 2/186	
Southern University of Science and Technology, Shenzhen, China , Minor in FIN	Sept. 2023 – Jun. 2026
• GPA: 3.91/4.0 (95/100)	
Nanyang Technological University, Singapore , Summer Exchange	Jun. 2024 – Jul. 2024
• GPA: 5.0/5.0	

PROJECTS

Amphibious Robot Design - Project leader	Oct. 2024 – Present
• Design and implement a lightweight, high-performance amphibious robotic dog	
• Develop algorithms for gait, balance, and movement on land and water	
Table Tennis Stroke Evaluation System Design - Project member	Feb. 2024 – Oct. 2024
• Implemented real-time ping-pong ball detection using YOLOv5	
• Used physical modeling to predict the ball's trajectory and landing point accurately, closely matching the actual trajectory and position	
• Synchronized dual-camera capture via STM32, ensuring spatial and temporal consistency in trajectory tracking	
Quantitative Investment Competition at SUSTech - Project member	Mar. 2023 – May. 2023
• Aimed to develop and apply effective trading strategies	
• Identified market trends and generated buy/sell signals using dual moving average approach	
• Applied a latent factor model to uncover hidden factors influencing stock prices	

RESEARCH EXPERIENCE

Physical Layer Security for Large-Scale Arrays	May. 2024 - Present
• Noted that eavesdropping is more likely to occur in the near field targeting far field communications	
• Designed physical layer security techniques for mixed-field scenarios	
• Utilized the interference caused by signal spectrum differences in mixed-field environments	
• Reallocated power under the new model and optimized model to obtain the optimal solution	
Hybrid Beamforming Design for Near-field Beam Patterns	Jan. 2024 - Present
• Investigated the impact of discrete phase shifters on near-field beam focusing	
• Proposed a new FSE method to characterize near-field beams under discrete phase shifters	
• Results show that discrete phase shifters maintain beam focusing in the main lobe	

ACTIVITIES & AWARDS

First-Class Student Scholarship, SUSTech	Oct. 2024
Second-Class Student Scholarship, SUSTech	Oct. 2023
University-Level "Outstanding Volunteer" Honor	Jan. 2024
Head of department, Student Union, SUSTech	2022-2024
Peer Mentor, SUSTech, Zhiren College	2023-2024

TECHNICAL SKILLS

Languages: Python, Java, MATLAB, C++
Software & Tool: Linux, PyTorch, LabVIEW, ADS, LaTeX