

# Zepeng Zhang

School of Information Science and Technology  
ShanghaiTech University

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## EDUCATION

M.S. Information and Communication Engineering, ShanghaiTech University, 2020-present  
Supervisor: [Ziping Zhao](#)

B.Eng. Measuring & Control Technology and Instrumentations, Wuhan University, 2016-2020

## EXPERIENCES

2019.12–2020.09 Visiting Student, [ShanghaiTech University](#)

2019.07–2019.09 Visiting Student, [City University of HongKong](#)

2018.01–2020.06 Member, [WHUAI \(ZhuYing Team\)](#)

## CURRENT RESEARCH INTERESTS

Machine Learning, Graph Neural Network, and Optimization

## PUBLICATIONS

- 2022 [1] Demystifying Graph Neural Networks: An Algorithm Unrolling Perspective  
**Zepeng Zhang**, and Ziping Zhao  
Submitted.
- [2] Rate Maximizations for Reconfigurable Intelligent Surface-Aided Wireless Networks: A Unified Framework via Block Minorization-Maximization  
**Zepeng Zhang**, and Ziping Zhao  
Submitted. [[paper](#)]
- 2021 [3] Weighted Sum-Rate Maximization for Multi-Hop RIS-Aided Multi-User Communications: A Minorization-Maximization Approach.  
**Zepeng Zhang** and Ziping Zhao  
*22<sup>nd</sup> IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*. [[paper](#)|[video](#)]
- [4] Vast Portfolio Selection With Submodular Norm Regularizations.  
**Zepeng Zhang**, and Ziping Zhao  
*29<sup>th</sup> European Signal Processing Conference (EUSIPCO)*. [[paper](#)|[video](#)]
- [5] Scalable Financial Index Tracking With Graph Neural Networks.  
**Zepeng Zhang**, and Ziping Zhao  
*21<sup>st</sup> IEEE Statistical Signal Processing Workshop (SSP)*. [[paper](#)|[video](#)]
- [6] Multi-Period Portfolio Optimization for Financial Index Tracking.  
Xiuyuan Huang, **Zepeng Zhang**, and Ziping Zhao

- 55<sup>th</sup> Annual Asilomar Conference on Signals, Systems, and Computers (ACSSC/Asilomar).  
[paper]
- 2020 [7] A Deep Learning-Aided Approach to Portfolio Design for Financial Index Tracking.  
**Zepeng Zhang**, and Ziping Zhao  
54<sup>th</sup> Annual Asilomar Conference on Signals, Systems, and Computers (ACSSC/Asilomar).  
[paper|video]

## AWARDS AND HONORS

- 2019 Yu Gang Scholarship (Top 1%, Rank 1st out of the department), WHU  
The First Prize Scholarship (Top 5%), WHU
- 2018 SAMSUNG Scholarship (Top 1%, Rank 1st out of the department), WHU  
The First Prize Scholarship (Top 5%), WHU  
1<sup>st</sup> prize of [RoboCup China Open](#)  
1<sup>st</sup> prize of [Asia and Pacific Mathematical Contest in Modeling](#)  
3<sup>rd</sup> prize of [The Chinese Robot Skills Competitions](#)
- 2017 The Second Prize Scholarship (Top 15%), WHU  
1<sup>st</sup> prize of [The Chinese Mathematics Competitions, Hubei Prov.](#)

## TEACHING ASSISTANT

### ShanghaiTech University

[CS182](#): Introduction to Machine Learning 2021-22 Fall

[SI 231](#): Matrix Analysis and Computations 2020-21 Spring, 2021-22 Spring

Updated March 2022