

EDUCATION

- Guangdong University of Technology** Guangzhou
Master of Control Science and Engineering, GPA: 86.2/100 2020–2023
- Supervisor: Prof. Haochuan Zhang
 - Thesis: “Theory and Application of Nonlinear Distortion High-dimensional Signal Estimation”
- Guangdong University of Technology** Guangzhou
Bachelor of Automation Control, GPA: 86.1/100 2016–2020

EXPERIENCE

- Academy of Mathematics and Systems Science, Chinese Academy of Sciences** Beijing
Research Assistant, Supervisor: Prof. Junjie Ma 07,2023-
- Working with Professor Junjie Ma on machine learning theory
 - Design and analysis AMP type algorithms for low rank matrix factorization.
- Academy of Mathematics and Systems Science, Chinese Academy of Sciences** Beijing
Visiting Student , Supervisor: Prof. Junjie Ma 02,2023-05,2023
- Guangdong University of Technology** Guangzhou
Supervisor: Prof. Haochuan Zhang 09,2020-06,2023
- Follow professor Zhang to learn statistical signal processing, messages passing algorithms and replica method.
 - Design a EP-type algorithm to implement channel estimation and active user detection in massive machine-type communications.
 - Build an RNA database analysis website together with the researchers in Life Sciences, and was responsible for the development of the website and data processing.
- National College Students’ innovation and entrepreneurship training program** Guangzhou
Project name: Design, simulation and implementation of SCARA robots (Principal Investigator) 04,2018-04,2020
- The project aims to develop an independently designed scara robot system. The research includes mathematical modeling and simulation of the SCARA robot, design and simulation of the path planner, design of the SCARA mechanical arm, and implementation of the control system.

PUBLICATIONS

- Dudeja, R., **Liu, S.**, Ma, J., (2024). Optimality of Approximate Message Passing Algorithms for Spiked Matrix Models with Rotationally Invariant Noise. arXiv preprint arXiv:2405.18081.(alphabetically ordered)
- Zhu, H., Huang, L., **Liu, S.**, et al. (2022). REIA: A database for cancer A-to-I RNA editing with interactive analysis. International Journal of Biological Sciences, 18(6), 2472.(Co-first Author)
- Liu, S.**, Zhang, H., et al. (2021). Decentralized channel estimation for the uplink of grant-free massive machine-type communications. IEEE Transactions on Communications, 70(2), 967-979.

SKILLS

- **Programming Languages:** R, Matlab, Java, Labview

SCHOLARSHIPS AND AWARDS

- National scholarship for Graduate Students (Top 1%). 2022
- The First Prize Scholarship (3 times) 2020-2022
- Top Innovative Talent Program Scholarship, GDUT. 2021
- Outstanding undergraduate thesis 2020
- National Encouragement scholarship 2019
- The First Prize Scholarship 2019

REFERENCES

- Name: Haochuan Zhang
Email: haochuan.zhang@gdut.edu.cn
Professor, Vice Dean
School of Automation, Guangdong University of Technology
- Name: Junjie Ma
Email: majunjie@lsec.cc.ac.cn
Associate Professor,
Academy of Mathematics and Systems Sciences, Chinese Academy of Sciences