

Songbin Liu

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Education

Guangdong University of Technology	09 2020 – 07 2023 (expected)
<i>Master of Control Science and Engineering</i>	<i>Guangzhou</i>
Guangdong University of Technology	09 2016 – 07 2020
<i>Bachelor of Automation Control</i>	<i>Guangzhou</i>

Research Experience

Masters degree research project

Supervisor: Haochuan Zhang

- 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.
- Design a messages passing based algorithms for quadratic systems and bilinear problems, and try to analysis the spectral initialization in quadratic systems
- 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(<http://bioinfo-sysu.com/reia/>)

Other Experience

Visiting Student	07 – 09, 2022 and 02, 2023 – now
<i>Academy of Mathematics and Systems Science, Chinese Academy of Sciences</i>	<i>Beijing</i>
<i>Supervisor: Junjie Ma</i>	
<ul style="list-style-type: none">• Working with Professor Junjie Ma on machine learning theory• Design and analysis AMP type algorithms for precoding problems in communications• Design a messages passing based algorithms for quadratic systems	

Research Presentations

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.

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.

Awards & Honors

National scholarship for Postgraduates	2022
The First Prize Scholarship	2020-2022

Specialized Skills

Programming Languages: R, Matlab, JavaScript