

# Jinjian LIU

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Homepage: <https://austin-liujinjian.github.io/>

## Education

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<b>Sichuan University</b>	<b>Chengdu, China</b>
B. S. E. in Software Engineering <b>GPA (overall): 3.76/4.00</b>	Sep. 2021 - Jun. 2025
<b>Chengdu Foreign Language School</b>	<b>Chengdu, China</b>
Secondary School	Sep. 2015 - Jun. 2021

## Research Experiences

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<b>Cylindrical Array Design to Optimize Polar-Azimuthal Direction-Finding Resolution</b>	Sichuan University
Advisor: K. T. Wong and Y. I. Wu	Nov. 2023 - Mar. 2024

- This project targets cylindrical uniform arrays, proposing a closed-form design method by analyzing the trade-off between array volume and localization resolution.
- As a research member, I was primarily responsible for the derivation of Cramer-Rao bound expressions, plotting and writing. Additionally, I proposed the closed-form design method, which was a novel aspect of this project.

<b>How Incident Source Influence Acoustic Sensor Direction-Finding Accuracy</b>	Sichuan University
Advisor: K. T. Wong	Mar. 2024 - Present

- This project primarily investigated the impact of incident source angle deviation on direction-finding accuracy for three superimposed figure-8 sensors and a pressure sensor under different placement methods.
- As a research member, I was responsible for deriving the Fisher Information Matrix and Cramer-Rao Bound for three different sensor array geometries. Additionally, I conducted simulations, plotted graphs, and contributed to the writing.

<b>Range-Direction Transmit Beamforming for Wireless Power Transfer</b>	Sichuan University
Advisor: Y. I. Wu, K. T. Wong and H. S. Mir	Oct. 2022 - Present

- This project aims to achieve wireless power transfer by using global optimization algorithms to adjust the weights and frequency offsets of multiple transmission antennas, concentrating the transmitted energy in a specific spatial region.
- As a research member, I was responsible for conducting optimization simulations by analyzing and utilizing various algorithms, including genetic algorithm and interior-point algorithm, among which cloud computing is used to address large-scale computing issues.

## Publications

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1. **J. J. LIU**, K. T. Wong, and Y. I. Wu, "Cylindrical Array Design to Optimize Polar-Azimuthal Direction-Finding Resolution", under review by the *SIGNAL PROCESSING*.

## Awards & Honors (Selected)

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<b>"Zili-Zhidong" Comprehensive Scholarship (Top 0.5%)</b>	Dec. 2023
<b>Comprehensive Scholarship of Sichuan University (Top 15%)</b>	Nov. 2022 & Nov. 2023
<b>Excellent Student of Sichuan University (Top 5%)</b>	Nov. 2023
<b>Excellent Student Leader of Sichuan University (Top 5%)</b>	Nov. 2022

## Internship & Workshop

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**2023 NUS SoC Summer Workshop**

May. 2023 - Jul. 2023, Singapore

Fully funded by Sichuan University

**Internship at IT Company Suncaper**

Feb. 2024 - May. 2024, Chengdu

**Extracurricular Activities**

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Sep. 2021-present, Core leader of the class, College of Computer Science, Sichuan University

Sep. 2021-Jun. 2022, Member in Student Union, Sichuan University

Sep. 2022-Jun. 2023, Associate President of “Cheng” Union, Department of Philosophy, Sichuan University

**Skills**

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**Languages:** Native in Chinese, Fluent in English, with an **IELTS score of 7.5 overall** and 8.5 in Reading

**Programming Language:** MATLAB, Python, Java, LaTeX