# WEIMING HUANG

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## EDUCATION

**Shanghai University** **Shanghai, China**
*B.Eng in Intelligence Science and Technology (GPA: 3.69/4.00)* *Sept. 2020 – Jun. 2024*

## PUBLICATIONS

- **Weiming Huang**, Junting Chen*, “RadioFormer: One Physics-Guided Transformer to Unify 2D and 3D Radio Map Construction," manuscript in preparation.
- Hao Sun, **Weiming Huang**, Junting Chen*, “A Support Vector Approach in Segmented Regression for Map-assisted Non-cooperative Source Localization," under review at *ICASSP 2026*. [paper]

## RESEARCH EXPERIENCE

**WISE Lab** **CUHK, Shenzhen**
*Research Assistant, LLM for Wireless Sensing.* *Jul. 2024 – Present*

- Engineered the full lifecycle of a physics-guided VLM, encompassing high-fidelity data synthesis, VQ-based latent representation learning, and lightweight model optimization.
- Proposed a physics-guided transformer to unify 2D and 3D field estimation, incorporating a generative mechanism that aligns with wave propagation causality to ensure physical consistency.
- Validated physical propagation outperforms geometric scanning, achieving a **2500× speedup** over diffusion baselines and surpassing sparse-measurement methods via sample-free generation.

**Information Science Lab** **KAUST, Saudi Arabia**
*Summer Intern, GenAI for Physical Layer Security.* *Jun. 2025 – Aug. 2025*

- Developed GenAI-driven defensive mechanisms against localization attacks by simulating adversarial strategies within high-fidelity digital twins of complex wireless environments.

**Digital Signal Processing Lab** **Shanghai University, Shanghai**
*Research Student, Sound Event Localization and Detection.* *Nov. 2022 – Mar. 2024*

- Pioneered the first application of GCNs for simultaneous sound identification and localization, proposing a method to transform audio signals into graph structures to efficiently extract spatial-temporal features.
- Designed a plug-and-play attention module that dynamically captures spatial correlations and temporal contexts across various resolutions, achieving SOTA performance in complex acoustic environments.

## WORK EXPERIENCE

**AI Rudder** **Shanghai**
*LLM Intern, RAG for Indonesian Financial Legislation Q&A.* *Mar. 2024 – Jun. 2024*

* Evaluated whether LLM responses exhibited hallucinations, using objective METEOR scores and a fidelity-focused evaluation bot, which first prompted the model to provide reasoning before scoring. [project]

## AWARDS

ICASSP-25 SPGC first indoor pathloss radio map prediction challenge: ranked **6th** *2024 - 2025*
Outstanding bachelor’s thesis award, Shanghai University **(top 3%)** *2023 - 2024*
National encouragement scholarship, China **(top 10%)** *2021 - 2022*
Mathematical contest in modeling Honorable Mention ×2 **(top 20%)** *2021 - 2023*
First-class and second-class academic scholarships, Shanghai University **(top 5%, 10%)** *2020 - 2022*

## SKILLS

Skilled in Python, PyTorch, Matlab, Docker, Wireless inSite and UAV operation.