Rendong PI

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Personal Website

Education

2023 – 2026 **Ph.D. Mechanical Engineering, The Hong Kong Polytechnic University**.
Thesis title: *Audio-Visual Localization Based on Mobile Robots.*

2019 – 2022 **M.Sc. Civil Engineering, Shandong University**.
Thesis title: *Research on Object Tracking Method Based on Fusion of Roadside LiDAR and Camera.*

2014 – 2018 **B.Eng. Civil Engineering, Harbin Institute of Technology.**
Thesis title: *Study on Self-Healing Methods of Asphalt Mixtures.*

Research Publications

Journal Articles

1. **R. Pi** and X. Yu, "Modal expansion-based data generation approach for deep learning-enabled sound source localization in a small enclosure," *Applied Acoustics*, vol. 241, p. 111 023, 2026, ISSN: 0003-682X. DOI: https://doi.org/10.1016/j.apacoust.2025.111023.
2. **R. Pi** and X. Yu, "Uncertainty estimation for sound source localization with deep learning," *IEEE Transactions on Instrumentation and Measurement*, vol. 74, pp. 1–12, 2025. DOI: 10.1109/TIM.2024.3522632.
3. K.-W. Tse, **R. Pi**, W. Yang, X. Yu, and C.-Y. Wen, "Advancing uav-based inspection system: The ussa-net segmentation approach to crack quantification," *IEEE Transactions on Instrumentation and Measurement*, vol. 73, pp. 1–14, 2024.
4. K.-W. Tse, **R. Pi**, Y. Sun, C.-Y. Wen, and Y. Feng, "A novel real-time autonomous crack inspection system based on unmanned aerial vehicles," *Sensors*, vol. 23, no. 7, p. 3418, 2023.
5. S. Wang, **R. Pi**, J. Li, *et al.*, "Object tracking based on the fusion of roadside lidar and camera data," *IEEE Transactions on Instrumentation and Measurement*, vol. 71, pp. 1–14, 2022.

Conference Proceedings

1. **R. Pi**, Y. Song, L. Li, X. Yu, and L. Cheng, "Tssl: Trusted sound source localization," in *INTER-NOISE and NOISE-CON Congress and Conference Proceedings*, Institute of Noise Control Engineering, vol. 270, 2024, pp. 941–949.

Miscellaneous Experience

Awards and Achievements

2025 **Outstanding Research Postgraduate Student of the ME Department**, Hong Kong Polytechnic University.

2024 **Merit Award recipient of the ME Department Research Presentation Competition,** Hong Kong Polytechnic University.