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EDUCATION AND WORK EXPERIENCE

Research Scientist, Electrical and Computer Engineering, Purdue University	*2026 - Present*
Postdoctoral Fellow, Electronic Engineering, Chinese University of Hong Kong	*2022 - 2025*
Postdoctoral Fellow, Electrical and Electronic Engineering, The University of Hong Kong	*2022 - 2022*
Ph.D. in Electrical and Electronic Engineering, The University of Hong Kong	*2018 - 2022*

PUBLICATIONS LIST

(∗: *Corresponding author*)

1. **Y. Zhang**, W. C. Xu, A. Antonios, A. Jin, T. Tang, P. F. Ma, L. J. Jiang, and S. Gao,, "A Hybrid Method for Source Direction Finding With Radio Frequency Interference and Gaussian White Noise", *IEEE Internet Things J.*, vol. 12, no. 20, pp. 42011-42020, Oct. 2025.
2. C. Wang, **Y. Zhang**∗, W. Liu, and S. Gao, "Design of Sparse Antenna Arrays Using the Physics-Aware Generative Adversarial Network", *IEEE Trans. Antennas Propag.*, vol. 73, no. 9, pp. 6311-6325, Sept. 2025. (**Monthly Most Popular Paper**)
3. **Y. Zhang**, W. C. Xu, A. Jin, T. Tang, M. Li, P. F. Ma, L. J. Jiang, and S. Gao,, "Enhanced Multidimensional Harmonic Retrieval in MIMO Wireless Channel Sounding", *IEEE Internet Things J.*, vol. 12, no. 11, pp. 16243-16255, June. 2025.
4. **Y. Zhang**, W. C. Xu, A. Jin, M. Li, P. Yuan, L. J. Jiang, and S. Gao, "A Tensor-Based Data-Driven Approach for Multidimensional Harmonic Retrieval and Its Application for MIMO Channel Sounding", *IEEE Internet Things J.*, vol. 12, no. 3, pp. 2854-2865, Feb., 2025.
5. **Y. Zhang**, W. C. Xu, A. Jin, M. Li, P. F. Ma, L. J. Jiang, and S. Gao, "Coupling-Guided Data-Driven Scheme for Joint Angle and Frequency Estimation in Uniform Linear Array with Mutual Coupling Present", *IEEE Trans. Antennas Propag.*, vol. 72, no. 12, pp. 9117-9128, Dec. 2024.
6. **Y. Zhang**, P. F. Ma, L. J. Jiang, and S. Gao, "An Unsupervised Learning Framework for Determining the Excitation Coefficients Using Near-Field Antenna Measurements", *IEEE Trans. Electromag. Compat.*, vol. 66, no. 6, pp. 1939-1946, Dec. 2024.
7. P. Yuan, **Y. Zhang**∗, and L. J. Jiang, "Uncertainty Quantification in PEEC Method: A Physics-Informed Neural Networks-Based Polynomial Chaos Expansion", *IEEE Trans. Electromag. Compat.*, vol. 66, no. 6, pp. 2095-2101, Dec. 2024.
8. P. Yuan, **Y. Zhang**∗, and L. J. Jiang, "Uncertainty quantification for PEEC Based on Wasserstein Generative Adversarial Network", *IEEE Trans. Electromag. Compat.*, vol. 66, no. 6, pp. 2048-2055, Dec. 2024.
9. **Y. Zhang**, and L. J. Jiang, "A Hybrid Model-Based Data-Driven Framework for the Electromagnetic Near-Field Scanning", *IEEE Trans. Electromag. Compat.*, vol. 66, no. 5, pp. 1567-1576, Oct. 2024.
10. **Y. Zhang**, P. F. Ma, L. J. Jiang, and S. Gao, "Time-Resolved Electromagnetic Near-Field Scanning: Dual Sparse Sampling in Time and Space", *IEEE Trans. Electromag. Compat.*, vol. 66, no. 3, pp. 928-938, June 2024.

11. **Y. Zhang**, and L. J. Jiang, "Space-Time-Frequency Characterization in Electromagnetic Near-Field Scanning: A Data-Driven Approach", *IEEE Trans. Electromag. Compat.*, vol. 65, no. 6, pp. 1921-1929, Dec. 2023. (**Monthly Most Popular Paper**)

12. **Y. Zhang**, and L. J. Jiang, "A Direct Data Approach to Joint 2D-DOA and Frequency Estimation with L-shaped Array", *IEEE Trans. Aerosp. Electron. Syst.*, vol. 59, no. 4, pp. 3684-3694, Aug. 2023.

13. **Y. Zhang**, L. J. Jiang, and H. T. Chou "Data-Driven Scheme for Joint Estimation of Direction-of-Arrival and Frequency with Uniform Linear Array", *IEEE Trans. Veh. Technol.*, vol. 72, no. 12, pp. 15706-15718, Dec. 2023.

14. **Y. Zhang** and L. J. Jiang, "Suppressing White-Noise Interference for Orbital Angular Momentum Waves via the Forward-Backward Dynamic Mode Decomposition", *IEEE Trans. Antennas Propag.*, vol. 71, no. 3, pp. 2879-2884, March 2023.

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17. **Y. Zhang**, L. J. Jiang, and H. T. Ewe, "A Novel Data-driven Modelling Method for the Spatial-temporal Correlated Complex Sea Clutter", *IEEE Trans. Geosci. Remote Sens.*, vol. 60, pp. 1-11, 2022.

18. **Y. Zhang**, P. Yuan, L. J. Jiang, and H. T. Ewe, "Novel Data-Driven Spatial-Spectral Correlated Scheme for Compression of Hyperspectral Images", *IEEE J. Sel. Top. Appl. Earth Obs. Remote Sens.*, vol. 15, pp. 3877-3890, 2022.

19. **Y. Zhang**, M. L.N. Chen, and L. J. Jiang, "Extraction of the Characteristics of Vortex Beams with a Partial Receiving Aperture at Arbitrary Locations", *J. Opt.*, 23(8), 085601, 2021.

20. **Y. Zhang** and L. J. Jiang, "A Novel Demultiplexing Scheme for Vortex Beams in Radio Communication Systems", *IEEE Trans. Veh. Technol.*, vol. 70, no. 7, pp. 7243-7248, July 2021.

21. **Y. Zhang** and L. J. Jiang, "A Novel Data-Driven Analysis Method for Electromagnetic Radiations Based on Dynamic Mode Decomposition", *IEEE Trans. Electromag. Compat.*, vol. 62, no. 4, pp. 1443-1450, Aug. 2020.

22. **Y. Zhang**, M. L.N. Chen, and L. J. Jiang, "Analysis of Electromagnetic Vortex Beams using Modified Dynamic Mode Decomposition in Spatial Angular Domain", *Opt. Express*, 27(20), 27702-27711, 2019.

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1. C. Wang, **Y. Zhang**, W. Liu, and S. Gao, "Artificial Intelligence Enhanced Signal Processing for Large-scale Antenna Arrays via Memristor Crossbar Architectures", in *2025 IEEE Workshop on Signal Processing Systems* , Hong Kong, 2025.

2. **Y. Zhang**, S. Gao, and L. J. Jiang, "High-Order Dynamic Mode Decomposition for Multidimensional Harmonic Retrieval", in *2025 Asia-Pacific International Symposium and Exhibition on Electromagnetic Compatibility*, Taipei, Taiwan, 2025. (**Honorable Mention Award**)

3. G. Chrysanidis, A. Argyriou, N. Tram, **Y. Zhang**, and Y. Liu "Power-Efficient Deceptive Wireless Beamforming Against Eavesdroppers", in *IEEE Wireless Communications and Networking Conference*, Milan, Italy, 2025.

4. **Y. Zhang**, S. Gao, and L. J. Jiang, "A Data-Driven Approach to Time-Domain Electromagnetic Modeling Based on Dynamic Mode Decomposition", in *Int. Applied Computational Electromagnetics Society Symposium*, Xi'an, China, 2024. (**Young Scientist Mention Award**)

5. **Y. Zhang**, S. Gao, and L. J. Jiang, "A Hybrid Algorithm to Dual Sparse Sampling Measurement in Time-Resolved Electromagnetic Near-Field Scanning", in *IEEE Int. Symposium on Electromagnetic Compatibility*, Arizona, United States, 2024.

6. **Y. Zhang**, S. Gao, and L. J. Jiang, "Electromagnetic Near-Field Scanning with a Spatially Sparse Sampling Strategy Utilizing Kriging-DMD", in *28th IEEE Workshop on Signal and Power Integrity*, Lisbon, Portugal, 2024.

7. P. Yuan, **Y. Zhang** and L. J. Jiang, "Uncertainty Quantification in PEEC Method: A Physics-Informed Neural Networks-Based Polynomial Chaos Expansion", in *Asia-Pacific Int. Symposium on Electromagnetic Compatibility*, Okinawa, Japan, 2024. (**Honorable Mention Award**)

8. **Y. Zhang** and L. J. Jiang, "A Data-Driven Approach to Multiresolution Analysis of Near-Field Scanning", in *IEEE Int. Symposium on Electromagnetic Compatibility*, Michigan, United States, 2023.

9. **Y. Zhang** and L. J. Jiang, "Partial Arc Sampling Receiving Scheme for Demultiplexing of Orbital Angular Momentum Vortex Beam", in *IEEE Int. Symposium on Antennas and Propagation*, Singapore, 2021.

10. **Y. Zhang** and L. J. Jiang, "Modeling of Spatial-temporal Sea Clutter with I/Q Components Based on the Data-driven Approximation of Koopman Theory", in *Photonics and Electromagnetics Research Symposium*, Hangzhou, China, 2021.

11. **Y. Zhang** and L. J. Jiang, "A Novel Reduced-order Method for Analysis of Hyperspectral Images", in *the Fourth Int. Workshop on Environment and Geoscience*, Hangzhou, China, 2021.

12. **Y. Zhang** and L. J. Jiang, "A Novel Data-driven Approach for Deriving the Governing Equations in the Transmission Lines System", in *IEEE Int. Symposium on Electromagnetic Compatibility*, Virtual, 2021.

13. **Y. Zhang** and L. J. Jiang, "Analysis of Electromagnetic Vortex Wave Based on Modified Dynamic Mode Decomposition", in *the 21st IEEE HK AP/MTT Postgraduate Conference*, Hong Kong, Nov., 2020. (**Merit Prize**)

14. **Y. Zhang**, L. J. Jiang, and H. T. Ewe, "Analysis of Sea Clutter Using Dynamic Mode Decomposition", in *IEEE Int. Geoscience and Remote Sensing Symposium*, pp. 3752-3755, Yokohama, Japan, 2019.

15. **Y. Zhang** and L. J. Jiang, "A Novel Data-Driven Analysis Method For Nonlinear Electromagnetic Radiations Based On Dynamic Mode Decomposition", in *IEEE Int. Symposium on Electromagnetic Compatibility*, pp. 527-531, New Orleans, United States, 2019.

16. **Y. Zhang**, M. L.N. Chen, and L. J. Jiang, "A Novel Analysis Method of Electromagnetic Vortex Wave Based on Modified Dynamic Mode Decomposition", in *Photonics and Electromagnetics Research Symposium*, Xiamen, China, 2019.