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Employment History

2024.03 – Present **Assistant Professor.** Great Bay University, Dongguan, China

2022.07 – Present **Chief Engineer.** Honor Device Co., Ltd.

2020.09 – 2022.06 **Postdoctoral researcher.** College of Computer Science and Software Engineering, Shenzhen University.

2014.03 – 2016.09 **GIS developer.** Chinese Academy of Surveying and mapping, Beijing, China.

Education

2016.08 – 2020.03 **Ph.D. Electronic Engineering, Queen Mary University of London** in London, UK.
Thesis title: *Human activity classification using micro-Doppler signatures and ranging techniques.*

2013.09 – 2016.06 **M.Sc. Surveying and Mapping, Wuhan University** in Wuhan, China.
Thesis title: *Simulation of emergency evacuation of mall crowds based on multi-agent and GIS.*

2008.09 – 2012.06 **Bachelor. Geographic information system, JiangXi University of Science and Technology** in Ganzhou, China.

Research Publications (* denotes the first author, # denotes the corresponding author)

Journal Articles

1. **F. Luo**, A. Li, J. He, *et al.*, "Improved multi-task radar sensing via attention-based feature distillation and contrastive learning," *IEEE Transactions on Information Forensics and Security*, 2025.
2. **F. Luo**, A. Li, B. Jiang, S. Khan, K. Wu, and L. Wang, "Activitymamba: A cnn-mamba hybrid neural network for efficient human activity recognition," *IEEE Transactions on Mobile Computing*, 2025.
3. **F. Luo**, A. Li, S. Khan, K. Wu, and L. Wang, "Bi-deepvit: Binarized transformer for efficient sensor-based human activity recognition," *IEEE Transactions on Mobile Computing*, 2025.
4. **F. Luo**, S. Khan, B. Jiang, and K. Wu, "Vision transformers for human activity recognition using wifi channel state information," *IEEE Internet of Things Journal*, 2024.
5. **F. Luo***, A. Li, S. Khan, Y. Huang, and K. Wu, "Edgeactnet: Edge intelligence enabled human activity recognition using radar point cloud," *IEEE Transactions on Mobile Computing*, 2023 (CCF A, IF 7.9).
6. **F. Luo***, S. Khan, Y. Huang, and K. Wu, "Binarized neural network for edge intelligence of sensor-based human activity recognition," *IEEE Transactions on Mobile Computing*, 2021 (CCF A, IF 7.9).
7. **F. Luo***, E. Bodanese, S. Khan, and K. Wu, "Spectro-temporal modelling for human activity recognition using a radar sensor network," *IEEE Transactions on Geoscience and Remote Sensing*, 2023 (, IF 8.3).
8. **F. Luo***, S. Khan, Y. Huang, and K. Wu, "Activity-based person identification using multimodal wearable sensor data," *IEEE Internet of Things Journal*, 2022 (, IF 10).

9. **F. Luo***, S. Poslad, and E. Bodanese, "Human activity detection and coarse localization outdoors using micro-doppler signatures," *IEEE Sensors Journal*, vol. 19, no. 18, pp. 8079–8094, 2019 (, IF 4.3).

10. **F. Luo***, S. Poslad, and E. Bodanese, "Temporal convolutional networks for multiperson activity recognition using a 2-d lidar," *IEEE Internet of Things Journal*, vol. 7, no. 8, pp. 7432–7442, 2020 (, IF 10).

11. A. Li, E. Bodanese, S. Poslad, T. Hou, K. Wu, and **F. Luo#**, "A trajectory-based gesture recognition in smart homes based on the ultrawideband communication system," *IEEE Internet of Things Journal*, vol. 9, no. 22, pp. 22 861–22 873, 2022 (, IF 10).

12. B. Jiang, R. Zhou, **F. Luo#**, X. Cui, Y. Liu, and H. Song, "Hybrid trust model for identifying malicious attacks in underwater acoustic sensor network," *IEEE Sensors Journal*, 2024.

13. A. Li, **F. Luo#**, E. Bodanese, *et al.*, "An integrated sensing and communication system for fall detection and recognition using ultra-wideband signals," *IEEE Internet of Things Journal*, 2023 (, IF 10).

14. B. Jiang, B. Zhao, **F. Luo#**, H. H. Wang, and H. H. Song, "Decentralized federated learning in metacomputing based on directed acyclic graph with optimized tip selector," *IEEE Internet of Things Journal*, vol. 12, no. 10, pp. 13 723–13 733, 2025. DOI: 10.1109/JIOT.2025.3527740.

15. S. Khan, **F. Luo**, Z. Zhang, M. A. Rahim, M. Ahmad, and K. Wu, "Survey on issues and recent advances in vehicular public-key infrastructure (vpki)," *IEEE Communications Surveys & Tutorials*, 2022 (, IF 35.6).

16. S. Khan, **F. Luo**, Z. Zhang, *et al.*, "A privacy-preserving and transparent identity management scheme for vehicular social networking," *IEEE Transactions on Vehicular Technology*, vol. 71, no. 11, pp. 11 555–11 570, 2022 (, IF 6.8).

17. B. Jiang, L. Cai, G. Yue, **F. Luo**, S. Li, and J. Wang, "Energy-efficient wireless resource allocation for heterogeneous federated multitask networks based on evolutionary learning," *IEEE Transactions on Industrial Informatics*, 2025.

18. B. Jiang, R. Zhou, **F. Luo**, X. Cui, H. H. Wang, and H. H. Song, "Attack detection and optimal deployment for underwater constrained wireless sensor networks via hybrid trust evidence," *IEEE Transactions on Network Science and Engineering*, 2025.

19. B. Jiang, G. Wang, X. Cui, **F. Luo**, and J. Wang, "Lightweight anomaly detection in federated learning via separable convolution and convergence acceleration," *Internet of Things*, p. 101 518, 2025.

20. S. Khan, **F. Luo**, K. Wu, L. Wang, and M. A. Khan, "Pbatch: Pseudonym certificate batch authentication with generative ai-based cache for cooperative intelligent transportation systems," *IEEE Transactions on Intelligent Transportation Systems*, pp. 1–16, 2025. DOI: 10.1109/TITS.2025.3558366.

Conference Proceedings

1. H. Zhou, **F. Luo#**, X. Yang, *et al.*, "Three-dimensional trajectory prediction with 3dmotraj dataset," in *2025 International Conference on Machine Learning*, ICML, 2025, 0–0 (CCF A).

2. G. Liao, J. Ma, and **F. Luo#**, "Human activity recognition by using enhanced radar point cloud 2d histograms and doppler feature fusion," in *2025 IEEE International Conference on Robotics and Automation (ICRA)*, ICRA, 2025, 0–0 (CCF B).

3. **F. Luo***, S. Poslad, and E. Bodanese, "Kitchen activity detection for healthcare using a low-power radar-enabled sensor network," in *ICC 2019-2019 IEEE International Conference on Communications (ICC)*, IEEE, 2019, 1–7 (CCF C).

4. **F. Luo**, "Applications and challenges of radar-based human activity recognition," in *2024 IEEE International Conference on Smart Internet of Things (SmartIoT)*, IEEE, 2024, pp. 218–225.

5. A. Li, E. Bodanese, **F. Luo#**, T. Hou, and K. Wu, "The ultra-wideband communication system: A human gesture recognition approach," in *2021 IEEE 23rd Int Conf on High Performance Computing & Communications; 7th Int Conf on Data Science & Systems; 19th Int Conf on Smart City; 7th Int Conf on*

Dependability in Sensor, Cloud & Big Data Systems & Application (HPCC/DSS/SmartCity/DependSys), IEEE, 2021, 825–830 (CCF C).

6 A. Li, E. Bodanese, S. Poslad, T. Hou, **F. Luo#**, and K. Wu, "Trajectory-based fall detection and recognition using ultra-wideband signals," in *GLOBECOM 2022-2022 IEEE Global Communications Conference*, IEEE, 2022, 2260–2265 (CCF C).

Grants &Patents

Patent
- **Fei Luo**, Haikun Xu. A method and electronic device for personnel detection. Chinese Patent, Patent No. 202211535319.5 (2023).

Grant
- **Edge intelligence-oriented human activity recognition based on radar feature fusion**, January 2023–December 2025, National Natural Science Foundation of China, Youth Program, PI, 300K, Grant No. 62202308.
- **Guangdong Overseas Postdoctoral Talent Support Program**, Guangdong Provincial Postdoctoral Management Office, 2020.
- **Full PhD Scholarship**, China Scholarship Council, 2016.

Membership

Deputy Director	Dongguan Key Laboratory of Intelligent Emergency Rescue Equipment and Information Technology,
Researcher	Dongguan Key Laboratory for Intelligence and Information Technology
CCF	CCF Pervasive Computing Committee Member
CAAI	Member of Chinese Association for Artificial Intelligence