

Jiaming Pei

Google Scholar

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School of Computer Science, The University of Sydney

EDUCATION

- The University of Sydney** Sydney, Australia
Ph.D. in Computer Science 2022 – 2026
 - **Supervisors:** Prof. Albert Y. Zomaya (Fellow of the Australian Academy of Science, IEEE/AAAS/IET/NAAI Fellow) and Dr. Wei Li
 - **PhD Thesis:** Towards High Efficient Federated Learning Systems
- Southwestern University of Finance and Economics** Chengdu, China
Visiting Scholar in Computer Science 2021 – 2022
- Taizhou University** Taizhou, China
Bachelor of Information Systems 2017 – 2021

RESEARCH INTERESTS

- **Federated Learning and Distributed AI:** Develop communication-efficient federated learning algorithms under heterogeneous data, network constraints, and resource limitations.
- **Trustworthy Artificial Intelligence:** Investigate robust, privacy-preserving, and reliable AI systems under uncertain environments.
- **Large-scale Intelligent Systems:** Optimize communication, computation, and decision-making mechanisms for distributed intelligent systems.

SELECTED PUBLICATIONS

- [S1] **Jiaming Pei**, Valerio Frasca, Anwer Al-Dulaimi, Wei Liu, Theyazn H.H Aldhyani, Ali Kashif Bashir, and Shahid Mumtaz. “Distributed Large Models Training Optimization with Real-Time Wireless Channel Feedback”. In: *IEEE Journal on Selected Areas in Communications* (2026). [ESI Highly Cited Paper, CCF A, IF 16.8].
- [S2] **Jiaming Pei**, Xiaoqing Xu, Lukun Wang, Saba Al-Rubaye, Sun Zhang, and Anwer Al-Dulaimi. “Adaptive Federated Learning for Future IoV-Oriented IoT End-to-End Network Planning”. In: *IEEE Internet of Things Journal* (2026), pp. 1–14. [—☒ TOP, IF 8.7].
- [S3] **Jiaming Pei**, Jinhai Li, Zhenyu Song, Maryam Mohamed Al Dabel, Mohammed JF Alenazi, Sun Zhang, and Ali Kashif Bashir. “Neuro-vae-symbolic dynamic traffic management”. In: *IEEE Transactions on Intelligent Transportation Systems* (2025). [ESI Highly Cited Paper, —☒ TOP, IF 9.1].
- [S4] **Jiaming Pei***. “F3: Fair federated learning framework with adaptive regularization”. In: *Knowledge-Based Systems* 316 (2025), p. 113392. [ESI Highly Cited Paper, —☒ TOP, IF 8].
- [S5] Lukun Wang, Xiaoqing Xu, and **Jiaming Pei***. “Communication-Efficient Federated Learning via Dynamic Sparsity: An Adaptive Pruning Ratio Based on Weight Importance”. In: *IEEE Transactions on Cognitive Communications and Networking* (2025). [ESI Highly Cited Paper, —☒ TOP, IF 8].
- [S6] **Jiaming Pei**, Wenxuan Liu, Jinhai Li, Lukun Wang, and Chao Liu. “A review of federated learning methods in heterogeneous scenarios”. In: *IEEE Transactions on Consumer Electronics* 70.3 (2024), pp. 5983–5999. [ESI Highly Cited Paper, —☒ TOP, IF 9.9].
- [S7] **Jiaming Pei** and Wei Li. “Unveiling the effects of slightly skewed labels on traffic data analysis”. In: *IEEE Transactions on Intelligent Transportation Systems* (2024). [—☒ TOP, IF 9.1].
- [S8] Kaiyang Zhong, Yifan Wang, **Jiaming Pei***, Shimeng Tang, and Zonglin Han. “Super efficiency SBM-DEA and neural network for performance evaluation”. In: *Information Processing & Management* 58.6 (2021), p. 102728. [ESI Highly Cited Paper, IF 8.1, —☒ TOP].

- [S9] **Jiaming Pei**, Zhi Yu, Jinhai Li, Mian Ahmad Jan, and Kuruva Lakshman. “TKAGFL: A Federated Communication Framework Under Data heterogeneity”. In: *IEEE Transactions on Network Science and Engineering* (2022). [ESI Highly Cited Paper, 二区 TOP].
- [S10] **Jiaming Pei**, Kaiyang Zhong, Jinhai Li, Jiyuan Xu, and Xinyi Wang. “ECNN: evaluating a cluster-neural network model for city innovation capability”. In: *Neural Computing and Applications* 34.15 (2022), pp. 12331–12343. [ESI Highly Cited Paper].
- [S11] **Jiaming Pei**, Kaiyang Zhong, Jinhai Li, and Zhi Yu. “PAC: partial area clustering for re-adjusting the layout of traffic stations in city’s public transport”. In: *IEEE Transactions on Intelligent Transportation Systems* 24.1 (2022), pp. 1251–1260. [ESI Highly Cited Paper, 一区 TOP, IF 9.9].
- [S12] **Jiaming Pei** and Haotian Wu. “Entropy-aided prompt Federated learning”. In: *The Second Tiny Papers Track at ICLR 2024*. 2024. [CCF A].
- [S13] **Jiaming Pei** and Wei Li. “Clustered Federated Learning with Slightly Skewed Labels”. In: *International Conference on Learning Representations*. 2023. [CCF A].

HONORS AND AWARDS

- **Senior Research Fellow**: National Academy of Artificial Intelligence (NAAI), 2026
- **Fellow**: The Royal Society for Arts, Manufactures and Commerce (FRSA), UK, 2026
- **World Top 2% Scientist**: 2025
- **ESI Highly Cited Papers**: 9 ESI Highly Cited Papers and 4 Hot Papers
- **Engineering Research Scholarship**: Australian Government Research Training Program Scholarship, University of Sydney, 2022–2025
- **Outstanding Graduate (2021)**: Taizhou University
- **Excellent Undergraduate Thesis Award (2021)**: Taizhou University; Graduation Thesis: *Research and Application of Intelligent Optimization Algorithm for Urban Public Transportation*
- **First-class Scholarship (2020)**: Taizhou University
- **National Inspirational Scholarship (2019)**: Ministry of Education of the People’s Republic of China
- **First-class Scholarship (2019)**: Taizhou University

ACADEMIC SERVICE

- **Associate Editor**: Engineering Reports; Journal of Advanced Digital Communications
- **Guest Editor**: Computers, Materials & Continua; Frontiers in Blockchain
- **Reviewer**: IEEE JSAC, IEEE TITS, IEEE TWC, IEEE TMC, IEEE TNSE, IEEE TIFS, AAAI, CVPR, ICLR, IJCAI, ICC.

PROFESSIONAL MEMBERSHIP

- **IEEE**: Member
- **ACM**: Member

BOOKS

- [B1] **Jiaming Pei**, Lukun Wang, and Minghui Dai. *Federated Learning for Smart Mobility: Towards Secure, Efficient, and Sustainable Transportation System*. 2026.

JOURNAL ARTICLES

- [J65] Ali Kashif Bashir, Khalid Yahya, Haotian Wu, and **Jiaming Pei***. “Secure Semantic Consensus as the Control Plane of Federated Agentic Networks”. In: *IEEE Communications Standards Magazine* (2026), pp. 1–9. DOI: 10.1109/MCOMSTD.2026.3714674.
- [J64] Minghui Dai, Xin Li, Tianlei Song, Jin Jiang, **Jiaming Pei***, and Ahmed Farouk. “Edge Intelligence-Driven Low-Altitude IoT via Digital Twin: Requirements, Challenges and Solutions”. In: *IEEE Communications Standards Magazine* (2026).

- [J63] Minghui Dai, Yixuan Wang, Shan Chang, Ling Lyu, Shahid Mumtaz, and **Jiaming Pei***. “Digital Twin-Oriented Integrated Terrestrial and Nonterrestrial Networks: New Perspectives, Challenges, and Enabling Technologies”. In: *IEEE Vehicular Technology Magazine* (2026).
- [J62] Minxi Feng, Nada Alzaben, Yonis Gulzar, and **Jiaming Pei***. “Intent-Based Multi-Agent Allocation with Nature-Inspired Online Algorithm”. In: *IEEE Transactions on Consumer Electronics* (2026). [~~—~~ **TOP**, **IF 9.9**].
- [J61] Minxi Feng, Haotian Wu, Shahid Mumtaz, and **Jiaming Pei***. “Intent-based network in online resource allocation with machine-learned prediction”. In: *IEEE Transactions on Network and Service Management* (2026). [~~—~~ **IF 5.7**].
- [J60] Weili Kong, Baisen Liu, Xiaojun Bi, Shahid Mumtaz, and **Jiaming Pei**. “Efficient Foundation Model Adaptation for Hyperspectral Image Classification under Label Scarce Conditions”. In: *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* (2026), pp. 1–18. DOI: 10.1109/JSTARS.2026.3719030.
- [J59] Wei Liu, Xuhan Wang, Lihui Wang, Nadia Dahmani, and **Jiaming Pei**. “Privacy-Preserving Federated Early Warning of Memory Poisoning for Consumer AI Agents”. In: *IEEE Transactions on Consumer Electronics* (2026).
- [J58] **Jiaming Pei** and Minxi Feng. “Explainable federated clustering via visual embedding and boundary interpretation”. In: *Neurocomputing* (2026), p. 134236. [~~—~~ **TOP**, **IF 6.7**].
- [J57] **Jiaming Pei**, Minxi Feng, and Anwer Al-Dulaimi. “Resource Allocation Using Reinforcement Learning in Industrial Cyber-Physical Systems”. In: *IEEE Transactions on Industrial Cyber-Physical Systems* 4 (2026), pp. 181–189.
- [J56] **Jiaming Pei**, Minxi Feng, Pounambal Muthukumar, Venkata Krishna Parimala, and Minghui Dai. “Generative AI-Native Edge Sensors: Collaborative Data Reconstruction via Lightweight Federated Learning”. In: *IEEE Journal of Selected Areas in Sensors* (2026).
- [J55] **Jiaming Pei**, Minxi Feng, Yue Xiu, Yonis Gulzar, Rayan Hamza Alsisi, and Minghui Dai. “A Multi-Stage Neuro-Symbolic Framework for Trustworthy Agentic Intelligence in ICE Systems”. In: *IEEE Transactions on Consumer Electronics* 99 (2026), pp. 1–1. [~~—~~ **TOP**, **IF 9.9**].
- [J54] **Jiaming Pei**, Valerio Frasca, Anwer Al-Dulaimi, Wei Liu, Theyazn H.H Aldhyani, Ali Kashif Bashir, and Shahid Mumtaz. “Distributed Large Models Training Optimization with Real-Time Wireless Channel Feedback”. In: *IEEE Journal on Selected Areas in Communications* (2026). [**ESI Highly Cited Paper**, **CCF A**, **IF 16.8**].
- [J53] **Jiaming Pei**, Xiaoqing Xu, Lukun Wang, Saba Al-Rubaye, Sun Zhang, and Anwer Al-Dulaimi. “Adaptive Federated Learning for Future IoV-Oriented IoT End-to-End Network Planning”. In: *IEEE Internet of Things Journal* (2026), pp. 1–14. [~~—~~ **TOP**, **IF 8.7**].
- [J52] Huixiang Wen, Shan Chang, Luo Zhou, Wei Liu, **Jiaming Pei**, and Shengqun Jiang. “MAGIC: Multi-Grained Conditional Diffusion for High-Fidelity PPG-to-ECG Translation”. In: *IEEE Journal of Biomedical and Health Informatics* (2026).
- [J51] Haotian Wu, Jiwei Zhang, Minxi Feng, Minghui Dai, Samra Mohiuddin, Ali Kashif Bashir, Shahid Mumtaz, and **Jiaming Pei***. “Swarm Smarts: Enabling Real-Time Self-Healing With TinyML at the Edge”. In: *IEEE Communications Standards Magazine* (2026), pp. 1–8.
- [J50] Ruteng Yu, Mengwei Li, Lukun Wang, and **Jiaming Pei**. “CSIF-CD: A Unified Cross-Stage Interactive Feedback Framework for Remote Sensing Image Change Detection”. In: *IEEE Geoscience and Remote Sensing Letters* (2026).

- [J49] Luo Zhou, Jiusong Luo, Xueying Gong, **Jiaming Pei**, Wei Liu, and Huixiang Wen. “AirSpy: An Air-pinch Keystroke Inference Attack on Virtual Keyboards in VR Systems”. In: *IEEE Transactions on Consumer Electronics* (2026).
- [J48] Minghui Dai, Xin Li, Shan Chang, Anwer Al-Dulaimi, Shahid Mumtaz, and **Jiaming Pei***. “Integrated AI and Metaverse Rendering for 6G Vehicular Networks: New Perspectives and Technical Solutions”. In: *IEEE Network* (2025).
- [J47] Minxi Feng, Theyazn HH Aldhyani, Rayan Hamza Alsisi, Asma Hassan Alshehri, and **Jiaming Pei***. “Intent-Driven Online Privacy Budget Allocation Under Adversarial AI Attacks”. In: *IEEE Transactions on Consumer Electronics* (2025). [[—](#) [ESI TOP](#), [IF 9.9](#)].
- [J46] Wancheng Feng, Yingchao Liu, **Jiaming Pei**, Guangliang Cheng, and Lukun Wang. “Local Consistency Guidance: Personalized stylization method of face video”. In: *Computer Vision and Image Understanding* (2025).
- [J45] Xin Li, Minghui Dai, Shan Chang, Liang Zhang, Tianshun Wang, **Jiaming Pei**, and Shahid Mumtaz. “Latency-Aware Metaverse Rendering in Vehicular Edge Networks: A Secrecy-Oriented Resource Allocation Approach”. In: *IEEE Transactions on Vehicular Technology* (2025).
- [J44] Baisen Liu, Longfei Hou, Weiming Zheng, Nazik Alturki, Jamel Baili, Weili Kong, and **Jiaming Pei**. “Endmember-Free Hyperspectral Unmixing”. In: *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* (2025).
- [J43] **Jiaming Pei***. “F3: Fair federated learning framework with adaptive regularization”. In: *Knowledge-Based Systems* 316 (2025), p. 113392. [[ESI Highly Cited Paper](#), [—](#) [ESI TOP](#), [IF 8](#)].
- [J42] **Jiaming Pei**, Minghui Dai, Al-Dulaimi Anwer, Al-Rubaye Saba, and Shahid Mumtaz. “Task-Oriented Communication and Optimization Framework for 6G Non-Terrestrial Networks: Challenges and Solutions”. In: *IEEE Communication Magazine* (2025). [[—](#) [ESI TOP](#), [IF 8.3](#)].
- [J41] **Jiaming Pei**, Minghui Dai, R. R. Venkatesha Prasad, Norah Saleh Alghamdi, Yasser D. Al-Otaibi, and Ali Kashif Bashir. “FL Meets LLM: A Hybrid Security Framework for the Internet of Energy”. In: *IEEE Network* (2025).
- [J40] **Jiaming Pei**, Jinhai Li, Zhenyu Song, Maryam Mohamed Al Dabel, Mohammed JF Alenazi, Sun Zhang, and Ali Kashif Bashir. “Neuro-vae-symbolic dynamic traffic management”. In: *IEEE Transactions on Intelligent Transportation Systems* (2025). [[ESI Highly Cited Paper](#), [—](#) [ESI TOP](#), [IF 9.1](#)].
- [J39] **Jiaming Pei**, Marwan Omar, Maryam Mohamed Al Dabel, Shahid Mumtaz, and Wei Liu. “Federated few-shot learning with intelligent transportation cross-regional adaptation”. In: *IEEE Transactions on Intelligent Transportation Systems* (2025). [[—](#) [ESI TOP](#), [IF 9.1](#)].
- [J38] **Jiaming Pei**, Lukun Wang, Nabeela Awan, and Ryan Alturki. “Advancing federated learning privacy with quantum communication techniques: a robust scalable framework”. In: *IEEE Systems, Man, and Cybernetics Magazine* 11.2 (2025), pp. 51–58.
- [J37] Huifang Sun, **Jiaming Pei**, Xiaoqing Xu, Rubing Xue, Lingyun Zhao, Qihang Sun, Longfei Li, and Lukun Wang. “Fedmkd: multi-teacher knowledge distillation for communication-efficient federated learning”. In: *Cluster Computing* 28.10 (2025), p. 638.
- [J36] Lukun Wang, Qihang Sun, **Jiaming Pei**, Muhammad Attique Khan, Maryam M Al Dabel, Yasser D Al-Otaibi, and Ali Kashif Bashir. “Bi-temporal remote sensing change detection with state space models”. In: *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* (2025).

- [J35] Lukun Wang, Xiaoqing Xu, and **Jiaming Pei***. “Communication-Efficient Federated Learning via Dynamic Sparsity: An Adaptive Pruning Ratio Based on Weight Importance”. In: *IEEE Transactions on Cognitive Communications and Networking* (2025). [\[ESI Highly Cited Paper, —~~区~~ TOP, IF 8\]](#).
- [J34] Huixiang Wen, Xuan Wu, Chaojie Ma, Bo Shi, **Jiaming Pei**, Ali Kashif Bashir, and Wei Liu. “ST-AuthNet: A spatiotemporal attention-driven lightweight ECG biometric authentication system”. In: *IEEE Internet of Things Journal* (2025).
- [J33] Haotian Wu, **Jiaming Pei**, and Jinhai Li. “FedCW: Client Selection with Adaptive Weight in Heterogeneous Federated Learning”. In: *Computers, Materials & Continua* (2025).
- [J32] Zhi Yu, Zhiyong Huang, Mingyang Hou, **Jiaming Pei**, and Daming Sun. “Inter-block ladder-style transformer model with multi-subspace feature adjustment for object re-identification”. In: *Applied Soft Computing* 174 (2025), p. 112961.
- [J31] Zhi Yu, Zhiyong Huang, Mingyang Hou, **Jiaming Pei**, Yan Yan, Yushi Liu, and Daming Sun. “Feature-Tuning Hierarchical Transformer via token communication and sample aggregation constraint for object re-identification”. In: *Neural Networks* 187 (2025), p. 107394.
- [J30] Zhi Yu, **Jiaming Pei**, and Mingpeng Zhu. “Adaptive Multi-Scale Window Segmentation and Attention Interaction Transformer for Intrusion Detection in Industrial Internet of Things”. In: *IEEE Transactions on Industrial Informatics* (2025).
- [J29] Weitao Zou, Wei Li, Zeyu Wang, **Jiaming Pei**, Tongtong Lou, Guangsheng Chen, Weipeng Jing, and Albert Y Zomaya. “Efficient distributed matrix for resolving computational intensity in remote sensing”. In: *Future Generation Computer Systems* 166 (2025), p. 107644.
- [J28] **Jiaming Pei** and John Feng. “Federated Cognitive Learning for Next Generation Recommendation Systems”. In: *IEEE Consumer Electronics Magazine* 14.2 (2024), pp. 35–41.
- [J27] **Jiaming Pei** and Wei Li. “Dual model pruning enables efficient federated learning in intelligent transportation systems”. In: *IEEE Transactions on Intelligent Transportation Systems* (2024). [\[—~~区~~ TOP, IF 9.1\]](#).
- [J26] **Jiaming Pei** and Wei Li. “Unveiling the effects of slightly skewed labels on traffic data analysis”. In: *IEEE Transactions on Intelligent Transportation Systems* (2024). [\[—~~区~~ TOP, IF 9.1\]](#).
- [J25] **Jiaming Pei**, Wei Li, and Shahid Mumtaz. “From routine to reflection: Pruning neural networks in communication-efficient federated learning”. In: *IEEE Transactions on Artificial Intelligence* (2024).
- [J24] **Jiaming Pei**, Wenxuan Liu, Jinhai Li, Lukun Wang, and Chao Liu. “A review of federated learning methods in heterogeneous scenarios”. In: *IEEE Transactions on Consumer Electronics* 70.3 (2024), pp. 5983–5999. [\[ESI Highly Cited Paper, —~~区~~ TOP, IF 9.9\]](#).
- [J23] **Jiaming Pei**, Rubing Xue, Chao Liu, and Lukun Wang. “Toward byzantine-resilient secure ai: a federated learning communication framework for 6g consumer electronics”. In: *IEEE Transactions on Consumer Electronics* 70.3 (2024), pp. 5719–5728. [\[—~~区~~ TOP, IF 9.9\]](#).
- [J22] Zhi Yu, Zhiyong Huang, Mingyang Hou, **Jiaming Pei**, Yan Yan, Yushi Liu, and Daming Sun. “Representation selective coupling via token sparsification for multi-spectral object re-identification”. In: *IEEE Transactions on Circuits and Systems for Video Technology* 35.4 (2024), pp. 3633–3648.
- [J21] Weili Kong, Baisen Liu, Xiaojun Bi, **Jiaming Pei**, and Zheng Chen. “Instructional mask autoencoder: A scalable learner for hyperspectral image classification”. In: *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* 17 (2023), pp. 1348–1362.

- [J20] Shike Li, Jianbin Li, **Jiaming Pei**, Sixing Wu, Shen Wang, and Long Cheng. “Eco-CSAS: A safe and eco-friendly speed advisory system for autonomous vehicle platoon using consortium blockchain”. In: *IEEE Transactions on Intelligent Transportation Systems* 24.7 (2023), pp. 7802–7812.
- [J19] **Jiaming Pei**, Shike Li, Zhi Yu, Laishan Ho, Wenxuan Liu, and Lukun Wang. “Federated learning encounters 6g wireless communication in the scenario of internet of things”. In: *IEEE Communications Standards Magazine* 7.1 (2023), pp. 94–100.
- [J18] **Jiaming Pei**, Wenxuan Liu, Lukun Wang, Chao Liu, Ali Kashif Bashir, and Yue Wang. “Fed-IoUT: Opportunities and challenges of federated learning in the Internet of Underwater Things”. In: *IEEE Internet of Things Magazine* 6.1 (2023), pp. 108–112.
- [J17] **Jiaming Pei**, Shuo Xu, Rui Zhang, Zhi Yu, Weitao Zou, Lukun Wang, and Chao Liu. “Fedme 2: Memory evaluation & erase promoting federated unlearning in dtmn”. In: *IEEE Journal on Selected Areas in Communications* 41.11 (2023), pp. 3573–3588. [\[CCF A, IF 16.8\]](#).
- [J16] Yaning Shi, Lukun Wang, Chunpeng Tian, Rujia Wang, **Jiaming Pei**, Amir Hussian, and Ali Kashif Bashir. “A Chinese Short Text Classification Method for Tax Audit Reports based on Word Importance and Syntactic Enhancement BERT”. In: *ACM Transactions on Asian and Low-Resource Language Information Processing* (2023).
- [J15] Lukun Wang, Wancheng Feng, Chunpeng Tian, Liquan Chen, and **Jiaming Pei**. “3D-unified spatial-temporal graph for group activity recognition”. In: *Neurocomputing* 556 (2023), p. 126646.
- [J14] Lukun Wang, Pu Sun, Yunjie Liu, **Jiaming Pei**, Yaning Shi, Wenxuan Liu, and Chunpeng Tian. “A DC arc fault sensor with leftover gated recurrent neural network in consumer electronics”. In: *IEEE Transactions on Consumer Electronics* 70.1 (2023), pp. 1310–1317.
- [J13] Zhi Yu, Zhiyong Huang, **Jiaming Pei**, Lamia Tahsin, and Daming Sun. “Semantic-oriented feature coupling transformer for vehicle re-identification in intelligent transportation system”. In: *IEEE Transactions on Intelligent Transportation Systems* 25.3 (2023), pp. 2803–2813.
- [J12] Haotian Zhang, Lukun Wang, **Jiaming Pei**, Feng Lyu, Minglu Li, and Chao Liu. “RF-sign: Position-independent sign language recognition using passive RFID tags”. In: *IEEE Internet of Things Journal* 11.5 (2023), pp. 9056–9071.
- [J11] Naeem Jan, Jeonghwan Gwak, **Jiaming Pei**, Rabia Maqsood, and Abdul Nasir. “Analysis of networks and digital systems by using the novel technique based on complex fuzzy soft information”. In: *IEEE Transactions on Consumer Electronics* 69.2 (2022), pp. 183–193.
- [J10] Jianbin Li, Shike Li, Long Cheng, Qingzhi Liu, **Jiaming Pei**, and Shen Wang. “BSAS: a blockchain-based trustworthy and privacy-preserving speed advisory system”. In: *IEEE Transactions on Vehicular Technology* 71.11 (2022), pp. 11421–11430.
- [J9] Jinhai Li, Yunlei Ma, Xinglong Xu, **Jiaming Pei**, and Youshi He. “A study on epidemic information screening, prevention and control of public opinion based on health and medical big data: a case study of COVID-19”. In: *International Journal of Environmental Research and Public Health* 19.16 (2022), p. 9819.
- [J8] **Jiaming Pei**, Zhi Yu, Jinhai Li, Mian Ahmad Jan, and Kuruva Lakshman. “TKAGFL: A Federated Communication Framework Under Data heterogeneity”. In: *IEEE Transactions on Network Science and Engineering* (2022). [\[ESI Highly Cited Paper, 二区 TOP\]](#).
- [J7] **Jiaming Pei**, Kaiyang Zhong, Jinhai Li, Jiayuan Xu, and Xinyi Wang. “ECNN: evaluating a cluster-neural network model for city innovation capability”. In: *Neural Computing and Applications* 34.15 (2022), pp. 12331–12343. [\[ESI Highly Cited Paper\]](#).

- [J6] **Jiaming Pei**, Kaiyang Zhong, Jinhai Li, and Zhi Yu. “PAC: partial area clustering for re-adjusting the layout of traffic stations in city’s public transport”. In: *IEEE Transactions on Intelligent Transportation Systems* 24.1 (2022), pp. 1251–1260. [\[ESI Highly Cited Paper, —~~区~~ TOP, IF 9.9\]](#).
- [J5] **Jiaming Pei**, Kaiyang Zhong, Zhi Yu, Lukun Wang, and Kuruva Lakshmana. “Scene graph semantic inference for image and text matching”. In: *ACM Transactions on Asian and Low-Resource Language Information Processing* (2022).
- [J4] Zhi Yu, **Jiaming Pei**, Mingpeng Zhu, Jiwei Zhang, and Jinhai Li. “Multi-attribute adaptive aggregation transformer for vehicle re-identification”. In: *Information Processing & Management* 59.2 (2022), p. 102868. [\[IF 8.1, —~~区~~ TOP\]](#).
- [J3] Jinhai Li, Yunlei Ma, Xiang Zhan, and **Jiaming Pei**. “Research of contextual semantic reasoning model based on domain ontology”. In: *Scientific Programming* 2021.1 (2021), p. 4011190.
- [J2] Kaiyang Zhong, Ping Wang, **Jiaming Pei**^{*}, Jiyuan Xu, Zonglin Han, and Jiawen Xu. “Multiobjective optimization regarding vehicles and power grids”. In: *Wireless communications and mobile computing* 2021.1 (2021), p. 5552626.
- [J1] Kaiyang Zhong, Yifan Wang, **Jiaming Pei**^{*}, Shimeng Tang, and Zonglin Han. “Super efficiency SBM-DEA and neural network for performance evaluation”. In: *Information Processing & Management* 58.6 (2021), p. 102728. [\[ESI Highly Cited Paper, IF 8.1, —~~区~~ TOP\]](#).

CONFERENCE PAPERS

- [C19] Rubing Xue, Lukun Wang, Shahid Mumtaz, and **Jiaming Pei**. “FedSDA: A Multi-Domain Federated Learning Method Based on Similarity Dynamic Aggregation”. In: *IEEE Global Communications Conference (GLOBECOM), 2025*. 2026.
- [C18] Ruteng Yu, Lukun Wang, and **Jiaming Pei**. “GSAG-CDGAN: A Generalizable Small-Sample Attention-Guided GAN for Remote Sensing Change Detection (Student Abstract)”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. Vol. 40. 48. 2026, pp. 41452–41454. [\[CCF A\]](#).
- [C17] Huifang Sun, **Jiaming Pei**, and Lukun Wang. “Efficient federated learning via clients-to-server knowledge distillation (student abstract)”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. Vol. 39. 28. 2025, pp. 29504–29505. [\[CCF A\]](#).
- [C16] Xiaoqing Xu, **Jiaming Pei**, and Lukun Wang. “A high-efficiency federated learning method using complementary pruning for D2D communication (student abstract)”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. Vol. 39. 28. 2025, pp. 29541–29542. [\[CCF A\]](#).
- [C15] Wancheng Feng, Yingchao Liu, **Jiaming Pei**, Wenxuan Liu, Chunpeng Tian, and Lukun Wang. “Local Consistency Guidance: Personalized Stylization Method of Face Video (Student Abstract)”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. Vol. 38. 21. 2024, pp. 23486–23487. [\[CCF A\]](#).
- [C14] Weili Kong, Baisen Liu, Xiaojun Bi, and **Jiaming Pei**. “A Shared Encoder for Multi-Source Hyperspectral Images”. In: *The Second Tiny Papers Track at ICLR 2024*. 2024. [\[CCF A\]](#).
- [C13] **Jiaming Pei**, Wei Li, and Lukun Wang. “Knowledge transfer via compact model in federated learning (student abstract)”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. Vol. 38. 21. 2024, pp. 23621–23622. [\[CCF A\]](#).
- [C12] **Jiaming Pei** and Haotian Wu. “Entropy-aided prompt Federated learning”. In: *The Second Tiny Papers Track at ICLR 2024*. 2024. [\[CCF A\]](#).
- [C11] Rubing Xue, **Jiaming Pei**, and Lukun Wang. “Federated Learning on Small Batch Sizes via Batch Renormalization”. In: *The Second Tiny Papers Track at ICLR 2024*. 2024. [\[CCF A\]](#).

- [C10] Weili Kong, Lin Qi, Baisen Liu, and **Jiaming Pei**. “A Scalable Pretrained Model for Hyperspectral Image Classification”. In: *International Conference on Learning Representations*. 2023. [CCF A].
- [C9] Hui Li, Tongao Ge, Ruidi Ma, Ying Guo, Guowei Zhao, **Jiaming Pei**, Lukun Wang, and Lingwei Xu. “Drone-Assisted Behavior Recognition via Key Frame Extraction for Efficient 5G Communication”. In: *IEEE INFOCOM 2023-IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS)*. IEEE. 2023, pp. 1–7. [CCF A].
- [C8] Wenxuan Liu, **Jiaming Pei**, and Lukun Wang. “When will federated learning change from generalization to personalization?” In: *International Conference on Learning Representations*. 2023. [CCF A].
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