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出生日期: 1997-11-24, 性别: 男, 籍贯: 福建泉州

预计毕业时间: 2027 年, 正在寻找教职或博后机会



研究方向

人工智能 (如生成式人工智能、强化学习) 及其在通信网络资源管理中的应用。研究的网络和应用包括: 语义通信, 物联网, 沉浸式通信, 虚实交互, 数字孪生, 移动边缘计算, 智能超表面。

目前已经在相关领域发表或接收 SCI 期刊论文共计 15 篇 (其中 6 篇为第一作者, 含 SCI 一区一作 3 篇、共一第二 1 篇, SCI 二区一作 2 篇), 会议论文共计 12 篇 (其中 4 篇为第一作者, 含通信领域旗舰会议一作 3 篇, CCFA 会议分论坛一作 1 篇), 专利共计 4 项 (其中以第一发明人授权 1 项及公开 1 项, 其他授权 2 项), 参与科研项目共计 6 项 (其中独立主持 1 项, 参与 5 项)。

教育经历

- 博士 (2023.4-2027.3)
南京航空航天大学, 计算机科学与技术专业
导师: [易畅言教授](#) (计算机科学与工程系副主任, 国家级青年人才)
- 硕士 (2020.9-2023.3)
南京航空航天大学, 计算机科学与技术专业
导师: [易畅言教授](#) (计算机科学与工程系副主任, 国家级青年人才)
- 本科 (2016.9-2020.6)
华侨大学, 物联网工程专业

工作经历

- 助教
 - 嵌入式系统原理及应用 (国家一流本科课程/江苏省一流本科课程), 南京航空航天大学
 - 最优化理论及其应用, 南京航空航天大学

获奖情况

- 国内
 - 2026 年博士生国际学术交流基金资助, 南京航空航天大学
 - 2025 年度研究生国家奖学金, 国家教育部、财政部
 - 2025 年博士生国际学术交流基金资助, 南京航空航天大学
 - 2024 年度“浦芯精英”奖学金, 南京市浦口区工业和信息化局 (全校 10 人获奖)
 - 2024 年校优秀硕士论文奖, 南京航空航天大学
 - 2023 届优秀毕业研究生, 南京航空航天大学
 - 2021-2022 学年三好研究生, 南京航空航天大学
 - 2020-2022 学年优秀研究生干部, 南京航空航天大学 (连续两年获奖)
- 国际
 - 2025 年度模范审稿人奖, IEEE Transactions on Mobile Computing

- 2023 年度 A3 Foresight Program 最佳汇报奖, 国家自然科学基金委员会、日本学术振兴会、韩国国家研究基金会

科研成果

期刊论文:

- [15] Fang Zhu, **Jiayuan Chen** (共一), Junjie Wen, Yuye Yang, Changyan Yi, Yun Tie, Peng Zhang, Jun Cai, Dusit Niyato and Mohsen Guizani, "From Data Mirror to Smart Copilot: A Survey on NextG Semantic Communication for Propelling Digital Twin World into Cognitive Stage," IEEE Communications Surveys and Tutorials, vol. 28, pp. 4915-4947, 2026. (JCR Q1, SCI Q1 Top, IF:46.7)
- [14] **Jiayuan Chen**, Changyan Yi, Shimin Gong, Hongyang Du, Wen Wu, Jiawen Kang and Dusit Niyato, "Generative AI-Aided QoE-Aware Resource Allocations for RIS-Assisted Digital Twin Interaction with Uncertain Evolution," IEEE Transactions on Mobile Computing, Early Access. (JCR Q1, SCI Q1 Top, CCF-A, IF:9.2)
- [13] **Jiayuan Chen**, Changyan Yi, Samuel D. Okegbile, Jun Cai and Xuemin (Sherman) Shen, "Networking Architecture and Key Supporting Technologies for Human Digital Twin in Personalized Healthcare: A Comprehensive Survey," IEEE Communications Surveys and Tutorials, vol. 26, no. 1, pp. 706-746, Firstquarter 2024. (入选 ESI 高被引论文) (JCR Q1, SCI Q1 Top, IF:46.7)
- [12] **Jiayuan Chen**, Changyan Yi, Ran Wang, Kun Zhu and Jun Cai, "Learning Aided Joint Sensor Activation and Mobile Charging Vehicle Scheduling for Energy-Efficient WRSN-Based Industrial IoT," IEEE Transactions on Vehicular Technology, vol. 72, no. 4, pp. 5064-5078, Apr. 2023. (JCR Q1, SCI Q2, IF:7.1)
- [11] **Jiayuan Chen**, You Shi, Changyan Yi, Hongyang Du, Jiawen Kang and Dusit Niyato, "Generative AI-Driven Human Digital Twin in IoT-Healthcare: A Comprehensive Survey," IEEE Internet of Things Journal, vol. 11, no. 21, pp. 34749-34773, Nov. 2024. (JCR Q1, SCI Q1, IF:8.9)
- [10] **Jiayuan Chen**, Changyan Yi, Hongyang Du, Dusit Niyato, Jiawen Kang, Jun Cai and Xuemin (Sherman) Shen, "A Revolution of Personalized Healthcare: Enabling Human Digital Twin with Mobile AIGC," IEEE Network, vol. 38, no. 6, pp. 234-242, Nov. 2024. (JCR Q1, SCI Q2, IF:6.3)
- [9] Liping Nong, Guifa Zhu, Jie Peng, Jinling Liu, **Jiayuan Chen** and Junyi Wang, "High-order Feature Guided Efficient Semantic Communication System for Point Cloud Transmission," IEEE Transactions on Vehicular Technology, accepted, 2026. (JCR Q1, SCI Q2, IF:7.1)
- [8] Kun Wu, **Jiayuan Chen**, Lucheng Chen, Zili Liu, Changyan Yi, Shuai Xu, Junyi Wang and Jiawen Kang, "QoE-Aware Joint Visual and Haptic Signal Transmission with Adaptive Data Compression for Immersive Interactions in Human Digital Twin," IEEE Transactions on Network and Service Management, vol. 22, no. 3, pp. 2780-2794, Jun. 2025. (JCR Q1, SCI Q2, IF:5.4)
- [7] Samuel D. Okegbile, Jun Cai, Hao Zheng, **Jiayuan Chen** and Changyan Yi, "Differentially Private Federated Multi-Task Learning Framework for Enhancing Human-to-Virtual Connectivity in Human Digital Twin," IEEE Journal on Selected Areas in Communications, vol. 41, no. 11, pp. 3533-3547, Nov. 2023. (CCF A, JCR Q1, SCI Q1 Top, IF:17.2)
- [6] Samuel D. Okegbile, Jun Cai, Junjie Wu, **Jiayuan Chen** and Changyan Yi, "A Prediction-Enhanced Physical-to-Virtual Twin Connectivity Framework for Human Digital Twin," IEEE Transactions on Cognitive Communications and Networking, vol. 11, no. 4, pp. 2440-2455, Aug. 2025. (JCR Q1, SCI Q1, IF:7.0)
- [5] Samuel D. Okegbile, Jun Cai, **Jiayuan Chen** and Changyan Yi, "A Reputation-Enhanced Shard-Based Byzantine Fault-Tolerant Scheme for Secure Data Sharing in Zero Trust Human Digital Twin Systems," IEEE Internet of Things Journal, vol. 11, no. 12, pp. 22726-22741, Jun. 2024. (JCR Q1, SCI Q2, IF:8.9)
- [4] Jialiuyuan Li, Changyan Yi, **Jiayuan Chen**, Kun Zhu and Jun Cai, "Joint Trajectory Planning, Application Placement and Energy Renewal for UAV-Assisted MEC: A Triple-Learner Based Approach," IEEE Internet of Things Journal, vol. 10, no. 15, pp. 13622-13636, Aug. 2023. (JCR Q1, SCI Q2, IF:8.9)
- [3] Jialiuyuan Li, Changyan Yi, **Jiayuan Chen**, You Shi, Tong Zhang, Xiaolong Li, Ran Wang and Kun Zhu, "A Reinforcement Learning Based Stochastic Game for Energy-Efficient UAV Swarm Assisted MEC with Dynamic Clustering and Scheduling," IEEE Transactions on Green Communications and Networking, vol. 9, no. 1, pp. 255-270, Mar. 2025. (入选 ESI 高被引论文) (JCR Q1, SCI Q2, IF:7.0)
- [2] Hao Xiang, Changyan Yi, Kun Wu, **Jiayuan Chen**, Jun Cai, Dusit Niyato and Xuemin (Sherman) Shen, "Realizing Immersive

Communications in Human Digital Twin by Edge Computing Empowered Tactile Internet: Visions and Case Study,” IEEE Network, 2025. (JCR Q1, SCI Q3, IF:6.3)

[1] Xiaolong Li, Ruiting Deng, Jianhao Wei, Xin Wu, **Jiayuan Chen**, Changyan Yi, Jun Cai, Dusit Niyato and Xuemin (Sherman) Shen, “AIGC-Driven Real-Time Interactive 4D Traffic Scene Generation in Vehicular Networks,” IEEE Network, accepted. (JCR Q1, SCI Q3, IF:6.3)

会议论文:

[12] **Jiayuan Chen**, Chen Dai, Haotong Cao, Bintao Hu, Kun Wu, Changyan Yi, “Continual Reinforcement Learning-Based Social-Aware Resource Allocation for Uncertain Multi-Modal Virtual-Physical Interaction,” IEEE International Conference on Communications (ICC), Glasgow, United Kingdom, May 24-28, 2026. (通信领域旗舰会议)

[11] **Jiayuan Chen**, Yuxiang Li, Changyan Yi and Shimin Gong, “Generative AI-Aided QoE Maximization for RIS-Assisted Digital Twin Interaction,” IEEE International Conference on Computer Communications Workshops (INFOCOM WKSHPs), London, United Kingdom, May 19-22, 2025. (CCF A 会议分论坛)

[10] **Jiayuan Chen**, Changyan Yi, Jialiuyuan Li, Kun Zhu and Jun Cai, “A Triple Learner Based Energy Efficient Scheduling for Multi-UAV Assisted Mobile Edge Computing,” IEEE International Conference on Communications (ICC), Rome, Italy, May 28-Jun. 1, 2023. (通信领域旗舰会议)

[9] **Jiayuan Chen**, Changyan Yi, Ran Wang, Kun Zhu and Jun Cai, “A Joint Optimization of Sensor Activation and Mobile Charging Scheduling in Industrial Wireless Rechargeable Sensor Networks,” IEEE International Conference on Communications (ICC), Seoul, Korea, May 16-20, 2022. (通信领域旗舰会议)

[8] Yuxiang Li, **Jiayuan Chen** and Changyan Yi, “Distributionally Robust Optimization for Digital Twin Service Provisioning over Edge Computing,” IEEE International Conference on Computer Communications Workshops (INFOCOM WKSHPs), London, United Kingdom, May 19-22, 2025. (CCF A 会议分论坛)

[7] Hao Xiang, Tong Zhang, **Jiayuan Chen** and Changyan Yi, “Multi-Objective Bayesian Approach for Optimizing Subjective-Objective Performance of Tactile Internet,” IEEE Global Communication Conference (GLOBECOM), Taipei, Taiwan, Dec. 8-12, 2025. (通信领域旗舰会议)

[6] Hao Xiang, Tong Zhang, **Jiayuan Chen** and Changyan Yi, “Joint Optimization of Feedback Signal Transmission and Reconstruction in Tactile Internet,” IEEE Global Communication Conference (GLOBECOM), Taipei, Taiwan, Dec. 8-12, 2025. (通信领域旗舰会议)

[5] Hao Wu, Haifeng Zhu, **Jiayuan Chen**, Hao Zheng and Changyan Yi, “Edge-Cloud Collaborative Multi-Axis Servo Coordination Control: A Reinforcement Q-Knapsack Approach,” IEEE International Conference on Systems, Man, and Cybernetics (SMC), Vienna, Austria, Oct. 5-8, 2025.

[4] Jialiuyuan Li, You Shi, **Jiayuan Chen** and Changyan Yi, “A Two-Timescale DRL-Based Stochastic Game for Energy-Efficient Hierarchical Aerial Computing,” IEEE Vehicular Technology Conference (VTC2025-Fall), Chengdu, China, Oct. 19-22, 2025.

[3] Jialiuyuan Li, **Jiayuan Chen**, Changyan Yi, Tong Zhang, Kun Zhu and Jun Cai, “Energy-Efficient UAV Swarm Assisted MEC with Dynamic Clustering and Scheduling,” IEEE Wireless Communications and Networking Conference (WCNC), Dubai, UAE, Apr. 21-24, 2024.

[2] Kun Wu, **Jiayuan Chen**, Changyan Yi, Zili Liu, Xiaoping Lu, Junyi Wang and Jun Cai, “Joint Visual and Haptic Signal Transmission for Immersive Interactions in Human Digital Twin,” International Conference on Ubiquitous Communication (UCOM), Xi'an, China, Jul. 5-7, 2024.

[1] Xiang Chen, Wenjie Zhu, **Jiayuan Chen**, Tong Zhang, Changyan Yi and Jun Cai, “Edge Computing Enabled Real-Time Video Analysis via Adaptive Spatial-Temporal Semantic Filtering,” IEEE International Conference on Internet of Things (iThings), Ocean Flower Island, Hainan, China, Dec. 17-21, 2023.

书籍/章节:

- [B1] Changyan Yi, Ruoyang Chen, **Jiayuan Chen**, Xiaolong Li and Jun Cai, "Self-Evolving Digital Twin over Wireless Networks: Dynamic Twin Construction and Service Interaction," Springer Wireless Network Series, Springer press, 2026 (ISBN:978-3-032-08119-3).
- [BC2] Yuye Yang, **Jiayuan Chen**, Ruoyang Chen and Changyan Yi, "Digital Twin Networks," Foundations of Digital Twins, Elsevier press, 2026. (ISBN: 978-0-443-43896-7).
- [BC1] Samuel D. Okegbile, Jun Cai, **Jiayuan Chen** and Changyan Yi, "Blockchain for Secure Data Sharing in Zero-Trust Human Digital Twin Systems," Blockchain and Digital Twin for Smart Hospitals, Elsevier press, 2025. (ISBN: 978-0-443-34226-4).

专利:

- [4] **陈嘉源**, 易畅言, 王然, 朱琨, "一种面向工业无线可充电传感网络的能源优化方法", 专利号: ZL 2022 1 0355670.X (已授权)
- [3] **陈嘉源**, 易畅言, 李小龙, "一种基于生成式人工智能算法的数字孪生交互体验优化方法", 公布号: CN120371124A (已公开)
- [2] 易畅言, 陈翔, 朱文杰, **陈嘉源**, 张彤, "基于时空语义过滤的端边协同实时视频分析方法", 专利号: ZL 2023 1 0703624.9 (已授权)
- [1] 李佳流源, 易畅言, **陈嘉源**, 吴强, "基于三重学习器的无人机辅助移动边缘计算强化学习方法", 专利号: ZL 2022 1 1099729.X (已授权)

学术活动

审稿人 (Reviewer):

- IEEE Transactions on Mobile Computing
- IEEE/ACM Transactions on Networking
- IEEE Journal on Selected Areas in Communications
- IEEE Transactions on Communications
- IEEE Transactions on Wireless Communications
- IEEE Transactions on Vehicular Technology
- IEEE Internet of Things Journal
- IEEE Systems Journal
- IEEE Transactions on Dependable and Secure Computing
- IEEE Network
- IEEE Communications Magazine
- IEEE Wireless Communications
- IEEE ICC, GLOBECOM, WCNC, VTC, etc.

技术程序委员会委员 (Technical Program Committee Member):

- IEEE Vehicular Technology Conference-Spring (IEEE VTC-Fall WKSHPs), 2025
 - WS-23: Workshop on Digital Twin Networks for Next-Gen Mobile Ecosystems
- IEEE International Conference on Communications Workshops (IEEE ICC WKSHPs), 2026
 - WS-13: Next-Evolution Waveform (NEW) for Future Wireless Networks
 - WS-26: Delay-Doppler and Chirp-Based Modulation for Future Communication Systems
- IEEE Vehicular Technology Conference-Spring (IEEE VTC-Spring), 2026
 - Track: Signal Processing for Wireless Communications, Cooperative Communication
 - WS-15: Intelligent Synergy of Sensing and Communications for Green IoT

- IEEE Vehicular Technology Conference-Spring (IEEE VTC-Fall), 2026

-Track: Machine Learning and AI for Communications

参与科研项目

主持:

面向个性化数字孪生系统的智能决策优化技术研究, 2024-2025, 江苏省研究生科研创新计划项目

参与:

- 融合 AI 大模型技术的新能源汽车电机可靠性和寿命预测算法研究, 2025-2026, 广东“铸魂工程”项目

- 面向大规模个性化定制的制造资源动态优化, 2023-2025, 全国重点实验室开放课题项目

- 低时延高可靠的感传算一体化关键技术研究, 2022-2023, 南航研究生科研与实践创新计划项目

- 超低时延高可靠的多接入精益网络 LeaNet 共生演进架构及关键技术, 2022-2025, 国家重点研发计划

- 面向延时敏感应用的分层异构边缘计算网络资源调度方案研究, 2021-2023, 国家自然科学基金青年基金

Google 引用情况

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