

Junming Chen

Job Title: Assistant Professor
Department: Faculty of Humanities and Arts
E-mail: jmchen@must.edu.mo
Telephone: (853) 8897 - 3525
Fax: (853) 2888 - 0091
Office: R 503
Mailing Address: Weilong Road, Taipa, Macau

Research Areas

Application and improvement of artificial intelligence in digital media, design and architecture; Image generation; Design automation; Aging adaptation

Individual Resume

Junming Chen holds a PhD in Digital Media. He is an Assistant Professor and Master's Supervisor at the Faculty of Humanities and Arts, Macau University of Science and Technology (MUST). He has led projects funded by the Macau Science and Technology Development Fund and the MUST Foundation. He has participated in three national or provincial-level research projects. His publications include over 40 papers in SCI, A&HCI, SSCI, and CCF core journals, with over 20 as first author/corresponding author. He serves as a reviewer for over 40 SCI, SSCI, and A&HCI journals and as a guest editor for the SCI journal Buildings.

Education Background

2021 - 2024 Macau University of Science and Technology / Digital Media / PhD

Work Experience

2025 - at present Macau University of Science and Technology / Faculty of Humanities and Arts / Assistant Professor, Master supervisor

Journal Publication

*Corresponding author

1. Hu, Q., Peng, Y., KinTak, U., & **Chen, J***. (2025). MSFusion: A Degradation-Correctable Framework for Robust Infrared and Visible Image Fusion. *IEEE Sensors Journal*. [Doi: 10.1109/JSEN.2025.3640678](https://doi.org/10.1109/JSEN.2025.3640678)
2. Hu, Q., Peng, Y., Shao, Z., & **Chen, J***. (2026). Scene degradation-aware fusion network for robust infrared and visible image synthesis in extreme conditions. *The Visual Computer*. (SCI JCR Q2) [Doi:10.1007/s00371-025-04297-7](https://doi.org/10.1007/s00371-025-04297-7)
3. **Chen, J.**, Yin, H., Zhang, K., Ren, Y., & Zeng, H. (2025). Integration of neural networks in brain - computer interface applications: Research frontiers and trend analysis based on Python. *Engineering Applications of*

Artificial Intelligence, 151, 110654. (SCI JCR Q1 , IF : 7.5)
[Doi:10.1016/j.engappai.2025.110654](https://doi.org/10.1016/j.engappai.2025.110654)

4. Zhao, S., Shao, Z., Chen, Y., Zheng, L., & **Chen, J***. (2025). A self-organizing decomposition based evolutionary algorithm with cooperative diversity measure for many-objective optimization. *AIMS Mathematics*, 10(6), 13880-13907. (SCI JCR Q1) [Doi: 10.3934/math.2025625](https://doi.org/10.3934/math.2025625)
5. Cheng, M., Zhang, X., Xia, L., **Chen, J.**, Xie, J., Ma, Z., & Li, Q. (2025). Visual defect detection for historical building preservation. *Expert Systems with Applications*, 128376. (SCI JCR Q1TOP , IF : 7.5) [Doi: 10.1016/j.eswa.2025.128376](https://doi.org/10.1016/j.eswa.2025.128376)
6. Lei Liang, **Chen, J***, Jiawei Shi*, Kai Zhang, Xiaodong Zheng. (2025) Noise-Robust Image Edge Detection Based on Multi-Scale Automatic Anisotropic Morphological Gaussian Kernels. *PLOS One*, (SCI JCR Q1) [Doi:10.1371/journal.pone.0319852](https://doi.org/10.1371/journal.pone.0319852)
7. Zhang, K., & **Chen, J***. (2025). Enhancing learning stickiness in virtual simulation experiments through the dynamic design of user interface. *Kybernetes*. (SCI JCR Q2) [Doi: 10.1108/K-11-2024-3052](https://doi.org/10.1108/K-11-2024-3052)
8. Zhang, X., Zhang, K., Liang, L., Zhang, J., & **Chen, J***. (2025). Research on the Factors and Pathways Affecting Users' Willingness to Use AR Animations for Science Popularization: An Extension of the Technology Acceptance Model. *IEEE Access*. (SCI JCR Q2) [Doi: 10.1109/ACCESS.2025.3557006](https://doi.org/10.1109/ACCESS.2025.3557006)
9. Zhou, Y., Liu, Y., Shao, Y., & **Chen, J.*** (2025). Fine-tuning diffusion model to generate new kite designs for the revitalization and innovation of intangible cultural heritage. *Scientific Reports*, 15(1), 7519. (SCI JCR Q1) [Doi:10.1038/s41598-025-92225-z](https://doi.org/10.1038/s41598-025-92225-z)
10. **Chen, J.**, Zheng, X., Shao, Z., Ruan, M., Li, H., Zheng, D., & Liang, Y. (2025). Creative interior design matching the indoor structure generated through diffusion model with an improved control network. *Frontiers of Architectural Research*, 14(3), 614-629. (A&HCI, JCR Q1, Journal Ranking: 1/97) [Doi:10.1016/j.foar.2024.08.003](https://doi.org/10.1016/j.foar.2024.08.003)
11. Liu, R., Pang, W., **Chen, J.**, Balakrishnan, V. A., & Chin, H. L. (2024). The application of scaffolding instruction and AI-driven diffusion models in children's aesthetic education: A case study on teaching traditional chinese painting of the twenty-four solar terms in chinese culture. *Education and Information Technologies*, 1-32. (SSCI JCR Q1) [Doi:10.1007/s10639-024-13135-7](https://doi.org/10.1007/s10639-024-13135-7)
12. **Chen, J.**, Shao, Z., Zheng, X., Zhang, K., & Yin, J. (2024). Integrating aesthetics and efficiency: AI-driven diffusion models for visually pleasing interior design generation. *Scientific Reports*, 14(1), 3496. (SCI JCR Q1) [Doi:10.1038/s41598-024-53318-3](https://doi.org/10.1038/s41598-024-53318-3)
13. **Chen, J.**, Shao, Z., Cen, C., & Li, J. (2024). HyNet: A novel hybrid deep learning approach for efficient interior design texture retrieval. *Multimedia Tools and Applications*, 83(9), 28125-28145. (SCI JCR Q2, CCF C) [Doi:10.1007/s11042-023-16579-0](https://doi.org/10.1007/s11042-023-16579-0)
14. **Chen, J.**, Shao, Z., Zhu, H., Chen, Y., Li, Y., Zeng, Z., ... & Hu, B. (2023). Sustainable interior design: A new approach to intelligent design and

automated manufacturing based on Grasshopper. *Computers & Industrial Engineering*, 183, 109509. (**SCI JCR Q1TOP** , **IF : 7.9**)
[Doi:10.1016/j.cie.2023.109509](https://doi.org/10.1016/j.cie.2023.109509)

Book publishing

1. Practice and Application of Artificial Intelligence in Urban Decision-Making
ISBN: 978-3-7258-5946-7

Research Grands

1. 2025 Macao Science Foundation Development Fund Project: "Research on Constructable Space Design Based on Feedback Learning and Diffusion Model" (Principal Investigator, Ongoing)
2. 2025 Macau University of Science and Technology FRG Fund Project: "Research on the Theory and Application Innovation of Diffusion Model Interior Design Generation from a Multidisciplinary Perspective" (Principal Investigator, Ongoing)
3. 2025 National Social Science Fund of China (Arts) Project: "Research on Brand IP Design of Chinese Cultural Symbols and the Synergistic Development Strategy of National Image" (Participant, Ongoing)
4. 2025 Ministry of Education Humanities and Social Sciences Research Planning Fund Project: "Research on the Evolution Path and Driving Forces of Chinese Digital Media Art Aesthetics" (Participant, Ongoing)
5. 2023 Guangdong Provincial Philosophy and Social Sciences Planning Project: "Research on the Path and Countermeasures of Art Intervention in Rural Revitalization in the Guangdong-Hong Kong-Macao Greater Bay Area" (Participant, Ongoing)

Academic Institutions and Social Positions

Served as a journal reviewer

1. International Journal of Applied Earth Observation and Geoinformation, (SCI, JCR Q1)
2. IEEE Access, (SCI, JCR Q2)
3. Advanced engineering informatics, (SCI, JCR Q1)
4. Engineering applications of artificial intelligence, (SCI, JCR Q1)
5. Automation in construction, (SCI, JCR Q1)
6. BMC Psychology, (SSCI, JCR Q2)
7. Scientific Reports, (SCI, JCR Q1)
8. Neural networks, (SCI, JCR Q1)
9. Education and Information Technologies, (SSCI, JCR Q1)
10. Computers & Industrial Engineering, (SCI, JCR Q1)
11. The Imaging Science Journal, (SCI)
12. Applied Sciences, (SCI, JCR Q1)
13. Buildings, (SCI, JCR Q2)

14. Sustainability, (SSCI, JCR Q2)
15. Applied Soft Computing, (SCI, JCR Q1)
16. PloS one, (SCI, JCR Q1)
17. Cluster Computing, (SCI, JCR Q1)
18. Ain Shams Engineering Journal, (SCI, JCR Q1)
19. Visual Computer, (SCI, JCR Q2)
20. Land, (SSCI JCR Q2)
21. Archives of Computational Methods in Engineering, (SCI, JCR Q1)
22. Sensors, (SCI, JCR Q2)
23. Mathematics, (SCI JCR Q1)
24. New Zealand Journal of Crop and Horticultural Science, (SCI JCR Q3)
25. Asian Architecture and Building Engineering, (SCI JCR Q3)
26. Journal of Cleaner Production, (SCI, JCR Q1)
27. Mathematics, (SCI JCR Q1)
28. The Visual Computer, (SCI JCR Q2)
29. Information Fusion, (SCI, JCR Q1)
30. Agriculture-Basel, (SCI, JCR Q1)
31. Electronics, (SCI, JCR Q2)
32. Frontiers of Architectural Research, (A&HCI JCR Q1)
33. Drones, (SCI JCR Q1)
34. Systems, (SSCI JCR Q1)
35. Geocarto International, (SCI JCR Q2)
36. Geo-spatial Information Science, (SCI JCR Q1)
37. ISPRS International Journal of Geo-Information, (SCI JCR Q2)
38. International Journal of Human-Computer Interaction, (SCI, JCR Q1)
39. Sustainable Environment, (SCI JCR Q3)
40. Journal of Multidisciplinary Healthcare (SCI JCR Q2)
41. Learning, Culture and Social Interaction (SSCI JCR Q2)
42. GIScience & Remote Sensing (SCI JCR Q1)
43. Acta Psychologica (SSCI JCR Q2)
44. Optics and Lasers in Engineering (SCI JCR Q2)
45. PeerJ Computer Science (SCI JCR Q2)
46. Measurement (SCI JCR Q1)
47. Humanities and Social Sciences (SSCI JCR Q1)

Served as a journal editor

Buildings Guest editor (SCI, JCR Q2)

Invention Patent

1. A patented energy-saving ventilation structure for building design (authorized)
2. Construction method, device, computer equipment and storage medium Application number (authorized)