

Wei Mao, Tencent, XR Vision Lab, Canberra

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Level 4, Suite 02, 60 Marcus Clarke Street, Canberra, Australia, 2601

Education

- 2018 – 2022 **Ph.D., Australian National University, Canberra, Australia.**
Research topic: *3D Human Understanding*
Supervisor: Dr. Miaomiao Liu.
Working closely with Dr. Mathieu Salzmann from EPFL
Thesis: Human Motion Prediction: From Deterministic to Stochastic
- 2016 – 2018 **Master of Computing (advanced), Australian National University, Canberra, Australia.**
Specialisations: Artificial Intelligence
- 2009 – 2013 **Bachelor of Engineering, East China University of Science and Technology, Shanghai, China.**
Major: Information Engineering

Employment History

- 2024 – now **Senior Research Scientist, Tencent, XR Vision Lab, Canberra, Australia.**
Working on: 3D AIGC for games.
- 2022 – 2024 **Postdoc, Australian National University, Canberra, Australia.**
Supervisor: Prof. Richard Hartley, Dr. Miaomiao Liu.
- 2013 – 2016 **Software Engineer, Dongyuan Computer Automation Engineering Co.,Ltd., Shanghai, China**

Publications

Journal Articles

- 1 **Mao, W.**, Liu, M., Salzmann, M., & Li, H. (2021). Multi-level motion attention for human motion prediction. *International Journal of Computer Vision (IJCV)*.
- 2 Yang, J., **Mao, W.**, Alvarez, J. M., & Liu, M. (2021). Cost volume pyramid based depth inference for multi-view stereo. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*.

Conference Proceedings

- 1 **Mao, W.**, Hartley, R., Mathieu, S., & Liu, M. (2024). *Neural sdf flow for 3d reconstruction of dynamic scenes*. The International Conference on Learning Representations (ICLR).
- 2 Gao, H., **Mao, W.**, & Liu, M. (2023). *Visfusion: visibility-aware online 3d scene reconstruction from videos*. Conference on Computer Vision and Pattern Recognition (CVPR).
- 3 Wang, R., **Mao, W.**, & Li, H. (2023a). *Deepsimho: stable pose estimation for hand-object interaction via physics simulation*. Neural Information Processing Systems (NeurIPS).
- 4 Wang, R., **Mao, W.**, & Li, H. (2023b). *Interacting hand-object pose estimation via dense mutual attention*. Winter Conference on Applications of Computer Vision (WACV).

- 5 **Mao, W.**, Liu, M., Hartley, R., & Salzmann, M. (2022). *Contact-aware human motion forecasting*. Advances in Neural Information Processing Systems (NeurIPS) **Spotlight**.
- 6 **Mao, W.**, Liu, M., & Salzmann, M. (2022). *Weakly-supervised action transition learning for stochastic human motion prediction*. Conference on Computer Vision and Pattern Recognition (CVPR) **ORAL**.
- 7 **Mao, W.**, Liu, M., & Salzmann, M. (2021). *Generating smooth pose sequences for diverse human motion prediction*. International Conference on Computer Vision (ICCV) **ORAL**.
- 8 **Mao, W.**, Liu, M., & Salzmann, M. (2020). *History repeats itself: human motion prediction via motion attention*. European Conference on Computer Vision (ECCV).
- 9 Yang, J., **Mao, W.**, Alvarez, J. M., & Liu, M. (2020). *Cost volume pyramid based depth inference for multi-view stereo*. Conference on Computer Vision and Pattern Recognition (CVPR) **ORAL**.
- 10 **Mao, W.**, Liu, M., Salzmann, M., & Li, H. (2019). *Learning trajectory dependencies for human motion prediction*. International Conference on Computer Vision (ICCV) **ORAL**.

Teaching

- 2023 **Guest Lecturer:** Advanced Computer Vision (ENGN8501), ANU.
- 2022 **Guest Lecturer:** Advanced Computer Vision (ENGN8501), ANU.
- 2021 **Tutor:** Artificial Intelligence (COMP3620), Computer Vision (ENGN6528), ANU.
- 2019 **Tutor:** Computer Vision (ENGN6528), ANU.
- 2018 **Tutor:** Artificial Intelligence (COMP3620), Relational Database (COMP6240), ANU.
- 2017 **Tutor:** Relational Database (COMP6240), ANU.

Academic Service

- Reviewer **CVPR:** 2021,2022,2023; **ICCV:** 2021,2023; **IJCAI:** 2022,2023; **ICML:** 2022,2023; **NeurIPS:** 2021,2022; **RAL:** 2021,2022,2023; **ICLR:** 2024.

Honour

- 2022 **NeurIPS Top Reviewer**
- CVPR Outstanding Reviewer**
- 2019 **ICCV Student Travel Award**