

Xiaoxuan Ma

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🏠 [Homepage](#)  [Google Scholar](#)  [Github](#)  [LinkedIn](#)

Education

- Ph.D. Candidate in Computer Science** 09 / 2021 – 07 / 2025 (expected)
School of Computer Science, Peking University
Advisor: Prof. [Yizhou Wang](#)
- M.S. in Computer Science** 09 / 2018 – 07 / 2021
School of Electronics Engineering and Computer Science, Peking University
Advisor: Prof. [Yizhou Wang](#)
- B.S. in Computer Science** 09 / 2014 – 07 / 2018
School of Electronics Engineering and Computer Science, Peking University

Research Interest

- Intersection of Computer Vision and Computer Graphics, 3D Vision, Human Digitization
- AI for Science, CV for Animals

Research Experience

- Research Intern** 01 / 2022 – 08 / 2022
Intelligent Multimedia Group, Microsoft Research Asia (MSRA)
Host: [Chunyu Wang](#)
- 3D Human Digitization

Preprints & Under Review

1. AlphaChimp: Tracking and Behavior Recognition of Chimpanzees. arXiv preprint arXiv:2410.17136. **Xiaoxuan Ma**^{*}, Yutang Lin^{*}, Yuan Xu, Stephan P. Kaufhold, Jack Terwilliger, Andres Meza, Yixin Zhu, Federico Rossano, Yizhou Wang
2. VMarker-Pro: Probabilistic 3D Human Mesh Estimation from Virtual Markers. arXiv preprint arXiv:2303.11726v3. **Xiaoxuan Ma**, Jiajun Su, Yuan Xu, Wentao Zhu, Chunyu Wang, Yizhou Wang.
3. SAT-HMR: Real-Time Multi-Person 3D Mesh Estimation via Scale-Adaptive Tokens. arXiv preprint arXiv:2411.19824.  **27 Stars**
Chi Su[†], **Xiaoxuan Ma**, Jiajun Su, Yizhou Wang
4. FreeCloth: Free-form Generation Enhances Challenging Clothed Human Modeling. arXiv preprint arXiv:2411.19942.
Hang Ye[†], **Xiaoxuan Ma**, Hai Ci, Wentao Zhu, Yizhou Wang

5. Efficient Action Counting with Dynamic Queries. arXiv preprint arXiv:2403.01543.
Zishi Li[†], **Xiaoxuan Ma**^{*}, *Qiuyan Shang*[†], *Wentao Zhu*, *Hai Ci*, *Yu Qiao*, *Yizhou Wang*

* equal contribution. [†] students mentored by me.

Publications

- Human Motion Generation: A Survey. **IEEE TPAMI** (vol. 46, no. 4), 2024. (IF=20.8)
Wentao Zhu^{*}, **Xiaoxuan Ma**^{*}, *Dongwoo Ro*^{*}, *Hai Ci*, *Jinlu Zhang*, *Jiaxin Shi*, *Feng Gao*, *Qi Tian*, *Yizhou Wang*
- Real-time Holistic Robot Pose Estimation with Unknown States. **ECCV**, 2024.  21 Stars
Shikun Ban[†], *Juling Fan*[†], **Xiaoxuan Ma**, *Wentao Zhu*, *Yu Qiao*, *Yizhou Wang*
- ScoreHypo: Probabilistic Human Mesh Estimation with Hypothesis Scoring. **CVPR**, 2024.  23 Stars
Yuan Xu[†], **Xiaoxuan Ma**, *Jiajun Su*, *Wentao Zhu*, *Yu Qiao*, *Yizhou Wang*
- Scaling Up Dynamic Human-Scene Interaction Modeling. **CVPR**, 2024.  127 Stars
Nan Jiang^{*}, *Zhiyuan Zhang*^{*}, *Hongjie Li*, **Xiaoxuan Ma**, *Zan Wang*, *Yixin Chen*, *Tengyu Liu*, *Yixin Zhu*, *Siyuan Huang*
- ChimpACT: A Longitudinal Dataset for Understanding Chimpanzee Behaviors. **NeurIPS**, 2023.  14 Stars
Xiaoxuan Ma^{*}, *Stephan P. Kaufhold*^{*}, *Jiajun Su*^{*}, *Wentao Zhu*, *Jack Terwilliger*, *Andres Meza*, *Yixin Zhu*, *Federico Rossano*, *Yizhou Wang*
- Social Motion Prediction with Cognitive Hierarchies. **NeurIPS**, 2023.  32 Stars
Wentao Zhu^{*}, *Jason Qin*^{*}, *Yuke Lou*, *Hang Ye*, **Xiaoxuan Ma**, *Hai Ci*, *Yizhou Wang*
- Learning Human Motion Representations: A Unified Perspective. **ICCV**, 2023.  1.1k Stars
Wentao Zhu, **Xiaoxuan Ma**, *Zhaoyang Liu*, *Libin Liu*, *Wayne Wu*, *Yizhou Wang*
- 3D Human Mesh Estimation from Virtual Markers. **CVPR**, 2023.  261 Stars
Xiaoxuan Ma, *Jiajun Su*, *Chunyu Wang*, *Wentao Zhu*, *Yizhou Wang*.
- GFPose: Learning 3D Human Pose Prior with Gradient Fields. **CVPR**, 2023.  126 Stars
Hai Ci, *Mingdong Wu*, *Wentao Zhu*, **Xiaoxuan Ma**, *Hao Dong*, *Fangwei Zhong*, *Yizhou Wang*.
- Virtual Pose: Learning Generalizable 3D Human Pose Models from Virtual Data. **ECCV**, 2022.  66 Stars
Jiajun Su, *Chunyu Wang*, **Xiaoxuan Ma**, *Wenjun Zeng*, *Yizhou Wang*.
- Locally Connected Network for Monocular 3D Human Pose Estimation. **IEEE TPAMI** (vol. 44, no. 3), 2022. (IF=23.6)
Hai Ci^{*}, **Xiaoxuan Ma**^{*}, *Chunyu Wang*, *Yizhou Wang*.
- Context Modeling in 3D Human Pose Estimation: A Unified Perspective. **CVPR**, 2021.  48 Stars
Xiaoxuan Ma^{*}, *Jiajun Su*^{*}, *Chunyu Wang*, *Hai Ci*, *Yizhou Wang*.
- Optimizing Network Structure for 3D Human Pose Estimation. **ICCV**, 2019.  41 Stars
Hai Ci, *Chunyu Wang*, **Xiaoxuan Ma**, *Yizhou Wang*.

* equal contribution. [†] students mentored by me.

Selected Awards and Honors

- Outstanding Student, Peking University

2024

- Industrial Bank Scholarship, Peking University 2024
- The Third Prize Scholarship, Peking University 2023
- Award for Scientific Research, Peking University 2023
- Award for Scientific Research, Peking University 2022
- Grand Prize of the 29th Challenge Cup, Peking University 2021
- Cushman & Wakefield Scholarship, Peking University 2020
- Outstanding Student, Peking University 2020
- Outstanding Undergraduate Thesis, Peking University 2018

Professional Services

Journal Reviewer: IEEE TPAMI, IJCV, IEEE TMM

Conference Reviewer: CVPR, ICCV, ECCV, NeurIPS, ICLR, AAAI, ICML

Teaching

- PKU Turing Class of 2017 (Counselor) 2018 - 2021
- Advisor: Prof. [Jiaying Liu](#)
- Computational Vision (TA, Taught in English) Fall 2019
- Instructor: Prof. [Yizhou Wang](#) from PKU
- Machine Learning for Time Series Analysis – Statistical Models and Deep Learning (TA, Taught in English) Summer 2018
- Instructor: Prof. [Yan Liu](#) from USC
- Computation, Economics and Data Science (TA, Taught in English) Summer 2018
- Instructor: Prof. [Yang Cai](#) from Yale

Updated Dec. 2024