

# Xiaoxuan Ma

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## Education

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### 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

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

## Research Experience

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### Research Intern

01 / 2022 – 08 / 2022

*Intelligent Multimedia Group, Microsoft Research Asia*

Host: [Chunyu Wang](#)

- 3D Human Digitization

## Preprints & Under Review

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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. Under review, 2024. Chi Su<sup>†</sup>, **Xiaoxuan Ma**, Jiajun Su, Yizhou Wang
4. FreeCloth: Free-form Generation Enhances Challenging Clothed Human Modeling. Under review, 2024. Hang Ye<sup>†</sup>, **Xiaoxuan Ma**, Hai Ci, Wentao Zhu, Yizhou Wang
5. Efficient Action Counting with Dynamic Queries. arXiv preprint arXiv:2403.01543v3. Zishi Li<sup>\*†</sup>, **Xiaoxuan Ma\***, Qiuyan Shang<sup>†</sup>, Wentao Zhu, Hai Ci, Yu Qiao, Yizhou Wang

\* equal contribution. <sup>†</sup> students mentored by me.

## Publications

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1. 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*
  2. Real-time Holistic Robot Pose Estimation with Unknown States. **ECCV**, 2024.  
*Shikun Ban<sup>†</sup>*, *Juling Fan<sup>†</sup>*, **Xiaoxuan Ma**, *Wentao Zhu*, *Yu Qiao*, *Yizhou Wang*
  3. ScoreHypo: Probabilistic Human Mesh Estimation with Hypothesis Scoring. **CVPR**, 2024.  
*Yuan Xu<sup>†</sup>*, **Xiaoxuan Ma**, *Jiajun Su*, *Wentao Zhu*, *Yu Qiao*, *Yizhou Wang*
  4. Scaling Up Dynamic Human-Scene Interaction Modeling. **CVPR**, 2024.  
*Nan Jiang\**, *Zhiyuan Zhang\**, *Hongjie Li*, **Xiaoxuan Ma**, *Zan Wang*, *Yixin Chen*, *Tengyu Liu*, *Yixin Zhu*, *Siyuan Huang*
  5. ChimpACT: A Longitudinal Dataset for Understanding Chimpanzee Behaviors. **NeurIPS**, 2023.  
**Xiaoxuan Ma\***, *Stephan P. Kaufhold\**, *Jiajun Su\**, *Wentao Zhu*, *Jack Terwilliger*, *Andres Meza*, *Yixin Zhu*, *Federico Rossano*, *Yizhou Wang*
  6. Social Motion Prediction with Cognitive Hierarchies. **NeurIPS**, 2023.  
*Wentao Zhu\**, *Jason Qin\**, *Yuke Lou*, *Hang Ye*, **Xiaoxuan Ma**, *Hai Ci*, *Yizhou Wang*
  7. Learning Human Motion Representations: A Unified Perspective. **ICCV**, 2023.  
*Wentao Zhu*, **Xiaoxuan Ma**, *Zhaoyang Liu*, *Libin Liu*, *Wayne Wu*, *Yizhou Wang*
  8. 3D Human Mesh Estimation from Virtual Markers. **CVPR**, 2023.  
**Xiaoxuan Ma**, *Jiajun Su*, *Chunyu Wang*, *Wentao Zhu*, *Yizhou Wang*.
  9. GFPose: Learning 3D Human Pose Prior with Gradient Fields. **CVPR**, 2023.  
*Hai Ci*, *Mingdong Wu*, *Wentao Zhu*, **Xiaoxuan Ma**, *Hao Dong*, *Fangwei Zhong*, *Yizhou Wang*.
  10. Virtual Pose: Learning Generalizable 3D Human Pose Models from Virtual Data. **ECCV**, 2022.  
*Jiajun Su*, *Chunyu Wang*, **Xiaoxuan Ma**, *Wenjun Zeng*, *Yizhou Wang*.
  11. 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*.
  12. Context Modeling in 3D Human Pose Estimation: A Unified Perspective. **CVPR**, 2021.  
**Xiaoxuan Ma\***, *Jiajun Su\**, *Chunyu Wang*, *Hai Ci*, *Yizhou Wang*.
  13. Optimizing Network Structure for 3D Human Pose Estimation. **ICCV**, 2019.  
*Hai Ci*, *Chunyu Wang*, **Xiaoxuan Ma**, *Yizhou Wang*.
- \* equal contribution. <sup>†</sup> students mentored by me.

## Selected Awards and Honors

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| • 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 29 <sup>th</sup> Challenge Cup, Peking University | 2021 |

- Cushman & Wakefield Scholarship, Peking University 2020
- Outstanding Student, Peking University 2020
- Outstanding Undergraduate Thesis, Peking University 2018

## Professional Services

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Journal Reviewer: IEEE TPAMI, IJCV, IEEE TMM

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

## Teaching

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- 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

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