

XIAOXUAN MA

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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

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- Intersection of computer vision, graphics, and machine learning, Human digitization
 - CV for science, AI-assisted scientific discovery

INTERNSHIP EXPERIENCE

Research Intern 01 / 2022 – 08 / 2022

Intelligent Multimedia Group, Microsoft Research Asia

Mentor: Principal Researcher Chunyu Wang

- 3D human digitization

PREPRINTS & UNDER REVIEW

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1. AlphaChimp: Tracking and Behavior Recognition of Chimpanzees. Under review, 2024.
*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. FreeCloth: Free-form Generation Enhances Challenging Clothed Human Modeling. Under review, 2024.
Hang Ye†, *Xiaoxuan Ma*, Hai Ci, Wentao Zhu, Yizhou Wang
 4. Efficient Action Counting with Dynamic Queries. arXiv preprint arXiv:2403.01543v3.
Zishi Li†*, *Xiaoxuan Ma**, Qiuyan Shang†, Wentao Zhu, Hai Ci, Yu Qiao, Yizhou Wang

* equal contribution. † students co-mentored by me.

JOURNAL 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. 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.

* equal contribution.

CONFERENCE PUBLICATIONS

1. Real-time Holistic Robot Pose Estimation with Unknown States. **ECCV**, 2024.
Shikun Ban[†], Juling Fan[†], Xiaoxuan Ma, Wentao Zhu, Yu Qiao, Yizhou Wang
 2. ScoreHypo: Probabilistic Human Mesh Estimation with Hypothesis Scoring. **CVPR**, 2024.
Yuan Xu[†], Xiaoxuan Ma, Jiajun Su, Wentao Zhu, Yu Qiao, Yizhou Wang
 3. 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*
 4. 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*
 5. Social Motion Prediction with Cognitive Hierarchies. **NeurIPS**, 2023.
Wentao Zhu, Jason Qin*, Yuke Lou, Hang Ye, Xiaoxuan Ma, Hai Ci, Yizhou Wang*
 6. Learning Human Motion Representations: A Unified Perspective. **ICCV**, 2023.
Wentao Zhu, Xiaoxuan Ma, Zhaoyang Liu, Libin Liu, Wayne Wu, Yizhou Wang
 7. 3D Human Mesh Estimation from Virtual Markers. **CVPR**, 2023.
Xiaoxuan Ma, Jiajun Su, Chunyu Wang, Wentao Zhu, Yizhou Wang.
 8. 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.
 9. Virtual Pose: Learning Generalizable 3D Human Pose Models from Virtual Data. **ECCV**, 2022.
Jiajun Su, Chunyu Wang, Xiaoxuan Ma, Wenjun Zeng, Yizhou Wang.
 10. Context Modeling in 3D Human Pose Estimation: A Unified Perspective. **CVPR**, 2021.
Xiaoxuan Ma, Jiajun Su*, Chunyu Wang, Hai Ci, Yizhou Wang.*
 11. Optimizing Network Structure for 3D Human Pose Estimation. **ICCV**, 2019.
Hai Ci, Chunyu Wang, Xiaoxuan Ma, Yizhou Wang.
- * equal contribution. [†] students co-mentored by me.

SELECTED AWARDS AND HONORS

• 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 th 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

TEACHING

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