

Mingfang Zhang

✉ mfzhang@iis.u-tokyo.ac.jp • 🏠 Homepage

Education

The University of Tokyo	Japan
<i>Ph.D., supervised by Professor Yoichi Sato</i>	<i>2023.4–2026.3</i>
<i>M.Sc., supervised by Professor Yoichi Sato</i>	<i>2021.4–2023.3</i>
Nanjing Univeristy	China
<i>B.Sc. in Computer Science, Elite Class</i>	<i>2016.9–2020.8</i>

PhD Research

I focused on computer vision and human activity understanding, specifically involving video and multi-view understanding, vision-language multimodal models, and human body perception.

Internship Experience

Woven by Toyota, Tokyo	2025
<i>Video Grounded Reasoning with Large Vision-Language Models</i>	
CyberAgent AI Lab, Tokyo	2024
[B.3] <i>Egocentric Inertial Localization with Vision-Language Informed Action Cues</i>	
Shanghai AI Lab, Shanghai	2023
[B.4] <i>An Egocentric Vision-Language Model based Portable Real-time Smart Assistant</i>	
[A.4] <i>EgoExoLearn: A Dataset for Bridging Asynchronous Ego- and Exo-View of Activities</i>	
Microsoft Research Asia, Beijing	2022
[A.3] <i>Structural Multiplane Image: Bridging Neural View Synthesis and 3D Reconstruction</i>	
PCL Laboratory, Shenzhen	2021
[C.1] <i>GazeOnce: Real-Time Multi-Person Gaze Estimation</i>	

Services and Awards

- Reviewer of CVPR, ICCV, ECCV, NeurIPS, ICML, ICLR, AAAI, ACMMM, BMVC, TCSVT, MVA
- JSPS Research Fellowship for Young Scientists DC2, 2025
- Program Committee of the Human-Autonomous Vehicle Interaction Workshop at WACV 2025
- UTokyo-IIS Research Collaboration Initiative Award 2024
- Honorable mention in essay competition at ICVSS 2024
- 1st place award of EgoTracks challenge in Ego4D at CVPR 2023
- “Stars of Tomorrow” award by Microsoft Research Asia, 2022
- Excellent Graduation Paper award by Nanjing University, 2020

Skills

Programming Languages/Tools: Python, PyTorch, Hugging Face, Git, Docker, Singularity, \LaTeX

Publication

A. Video and Multi-view Understanding

- [A.5] **Masked Video and Body-worn IMU Autoencoder for Egocentric Action Recognition**
Mingfang Zhang, Yifei Huang, Ruicong Liu, Yoichi Sato
(**ECCV**) The European Conference on Computer Vision, 2024 [pdf]
 - [A.4] **EgoExoLearn: A Dataset for Bridging Asynchronous Ego- and Exo-View of Activities**
(*co-first authors) *Yifei Huang*, Guo Chen*, Jilan Xu*, Mingfang Zhang*, ..., Yu Qiao*
(**CVPR**) IEEE Conference on Computer Vision and Pattern Recognition, 2024 [pdf]
 - [A.3] **Structural Multiplane Image: Bridging Neural View Synthesis and 3D Reconstruction**
Mingfang Zhang, Jinglu Wang, Xiao Li, Yifei Huang, Yoichi Sato, Yan Lu
(**CVPR**) IEEE Conference on Computer Vision and Pattern Recognition, 2023 [pdf]
 - [A.2] **Optical Flow in the Dark**
Mingfang Zhang, Yinqiang Zheng, Feng Lu
(**TPAMI**) IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021 [pdf]
 - [A.1] **Optical Flow in the Dark**
(*co-first authors) *Yinqiang Zheng*, Mingfang Zhang*, Feng Lu*
(**CVPR**) IEEE Conference on Computer Vision and Pattern Recognition, 2020 [pdf]
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B. Vision-Language Multimodal Models

- [B.4] **An Egocentric Vision-Language Model based Portable Real-time Smart Assistant**
Yifei Huang, Jilan Xu, Baoqi Pei, Yuping He, Guo Chen, Mingfang Zhang, ..., Limin Wang
(**IMWUT**) ACM Interactive, Mobile, Wearable and Ubiquitous Technologies, 2025 [pdf]
 - [B.3] **Egocentric Action-aware Inertial Localization with Vision-Language Guidance**
Mingfang Zhang, Ryo Yonetani, Yifei Huang, Liangyang Ouyang, Ruicong Liu, Yoichi Sato
(**ICCV**) International Conference on Computer Vision, 2025 [pdf]
 - [B.2] **Humanity's Last Exam**
Long Phan, Alice Gatti, Ziwen Han, Nathaniel Li, ..., Mingfang Zhang, ..., Dan Hendrycks
ArXiv preprint, 2025 [pdf]
 - [B.1] **Prompt-augmented Boundary Attentive Learning for Weakly Supervised Temporal Grounding**
Zhehao Zhu, Yifei Huang, Mingfang Zhang, Liangyang Ouyang, Yoichi Sato
(**TCSVT**) IEEE Transactions on Circuits and Systems for Video Technology, 2025 [pdf]
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C. Human Body Perception

- [C.4] **Event-Based Hand Pose Estimation with RGB Images Pre-Training**
Ruicong Liu, Takehiko Ohkawa, Tze Ho Elden Tse, Mingfang Zhang, Angela Yao, Yoichi Sato
(in submission)
- [C.3] **SiMHand: Mining Similar Hands for Large-Scale 3D Hand Pose Pre-training**
Nie Lin, Takehiko Ohkawa, Yifei Huang, Mingfang Zhang, ..., Yoichi Sato
(**ICLR**) International Conference on Learning Representations, 2025 [pdf]
- [C.2] **Single-to-Dual-View Adaptation for Egocentric 3D Hand Pose Estimation**
Ruicong Liu, Takehiko Ohkawa, Mingfang Zhang, Yoichi Sato
(**CVPR**) IEEE Conference on Computer Vision and Pattern Recognition, 2024 [pdf]
- [C.1] **GazeOnce: Real-Time Multi-Person Gaze Estimation**
Mingfang Zhang, Yunfei Liu, Feng Lu
(**CVPR**) IEEE Conference on Computer Vision and Pattern Recognition, 2022 [pdf]