Jingying Wang

Tel: +1 7349680999 | wangchy@umich.edu

Education

University of Michigan — Ann Arbor, Michigan, U.S.
Ph.D. in Computer Science and Engineering — *Aug.2022 – Present*
- Advisor: Xu Wang and Vitaliy Popov

University of Michigan — Ann Arbor, Michigan, U.S.
M.S. in Electrical and Computer Engineering — *Aug.2020 – Apr.2022*

University of Michigan – Shanghai Jiao Tong University Joint Institute — Shanghai, China
B.S. in Electrical and Computer Engineering — *Sep.2016– Aug.2020*

Publications

Conference Papers

- **Jingying Wang**, Rosiana Natalie, Keyuan Hu, Wenqian Xu, Brian George, Vitaliy Popov, Anhong Guo, and Xu Wang. Surggaze: Implicit calibration for accurate gaze analysis in operating rooms with wearable eyetrackers. In *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems*, 2026. [Under Review]
- **Jingying Wang**, Jingjing Zhang, Anhong Guo, Vitaliy Popov, and Xu Wang. Surggraph: Quantitative laparoscopic video understanding via expertise-embedded scene graphs. In *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems*, 2026. [Under Review]
- Yayuan Li, Chenglin Li, **Jingying Wang**, Filippos Bellos, Anhong Guo, and Jason J Corso. Aligning visual context in instructional videos for physical task assistance: Effectiveness, attribution, and feasibility. In *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems*, 2026
- **Jingying Wang**, Jingjing Zhang, Juana Nicoll Capizzano, Matthew Sigakis, Xu Wang, and Vitaliy Popov. explainmr: Generating real-time textual and visual explanations to facilitate ultrasonography learning in mr. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems*, pages 1–18, 2025
- **Jingying Wang**, Haoran Tang, Taylor Kantor, Tandis Soltani, Vitaliy Popov, and Xu Wang. Surgment: Segmentation-enabled semantic search and creation of visual question and feedback to support video-based surgery learning. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems*, CHI '24, New York, NY, USA, 2024. Association for Computing Machinery
- Vitaliy Popov, Xinyue Chen, **Jingying Wang**, Michael Kemp, Gurjit Sandhu, Taylor Kantor, Natalie Mateju, and Xu Wang. *Looking Together ≠ Seeing the Same Thing*: Understanding surgeons' visual needs during intra-operative coordination and instruction. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems*, CHI '24, New York, NY, USA, 2024. Association for Computing Machinery. [Best Paper Honorable Mention]
- Ye Pan, Ruisi Zhang, **Jingying Wang**, Yu Ding, and Kenny Mitchell. Real-time facial animation for 3d stylized character with emotion dynamics. In *Proceedings of the 31st ACM International Conference on Multimedia*, MM '23, page 6851–6859, New York, NY, USA, 2023. Association for Computing Machinery
- **Jingying Wang**, Yilin Qiu, Keyu Chen, Yu Ding, and Ye Pan. Fully automatic blendshape generation for stylized characters. In *2023 IEEE Conference Virtual Reality and 3D User Interfaces (VR)*, pages 347–355, 2023
- Yukang Yan, Haohua Liu, Yingtian Shi, **Jingying Wang**, Ruici Guo, Zisu Li, Xuhai Xu, Chun Yu, Yuntao Wang, and Yuanchun Shi. Conespeech: Exploring directional speech interaction for multi-person remote communication in virtual reality. *IEEE Transactions on Visualization and Computer Graphics*, 29(5):2647–2657, 2023
- **Jingying Wang**. A survey on crowd counting methods and datasets. In Sanjiv K. Bhatia, Shailesh Tiwari, Su Ruidan, Munesh Chandra Trivedi, and K. K. Mishra, editors, *Advances in Computer, Communication and Computational Sciences*, pages 851–863, Singapore, 2021. Springer Singapore
- Tianyu Wang, Minhao Jin, **Jingying Wang**, Yijie Wang, and Mian Li. Towards a data-driven method for rgb video-based hand action quality assessment in real time. In *Proceedings of the 35th Annual ACM Symposium on Applied Computing*, SAC '20, page 2117–2120, New York, NY, USA, 2020. Association for Computing Machinery

Demos and Posters

- **Jingying Wang**, Vitaliy Popov, and Xu Wang. Sketchsearch: Fine-tuning reference maps to create exercises in support of video-based learning for surgeons. In *Adjunct Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology*, UIST '23 Adjunct, New York, NY, USA, 2023. Association for Computing Machinery
- Ye Pan, Ruisi Zhang, **Jingying Wang**, Nengfu Chen, Yilin Qiu, Yu Ding, and Kenny Mitchell. Miencap: Performance-based facial animation with live mood dynamics. In *2022 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, pages 654–655, 2022

Academic Experiences

Research Assistant May.2021 – Jan.2022

Advisor: Prof. Michael Nebeling & Dr. Yukang Yan, Mi2Lab, University of Michigan *Ann Arbor, USA*

- Repurposed everyday physical objects as tangible input devices for VR to facilitate character manipulation in a variety of VR applications that require simultaneous control of high degrees of freedom.
- Detected skeleton of toys; used data synthesis to generate training data, designed and trained a CNN model.
- Developed app on Oculus Quest to gather hand pose of grabbing.
- The toy skeleton detection algorithm outperformed state-of-the-art Mediapipe.

Research Assistant Sep.2020 – Jan.2023

Advisor: Prof. Ye Pan, Character Lab, John Hopcroft Center, Shanghai Jiao Tong University *Shanghai, China*

- Designed a pipeline and mechanism to automatically generate stylized blendshapes of various avatars.
- Worked on retargeting the facial expression of users to the virtual avatar with accurate emotion.

Undergraduate Research Assistant Jun.2018 – Jan.2020

Advisor: Prof. Mian Li, System, Control, and Optimization Laboratory, UM-SJTU JI *Shanghai, China*

- Developed a VR medical operation learning and practicing system with HTC VIVE and Leap Motion.
- Realized multiple remote collaboration functions with Unity3d built-in functions.
- Proposed a hand-pose estimation method only from RGB input. The main idea is to estimate hand pose from key point results based on pose prior knowledge.

Technical Skills

Software: MAYA, Unity3d (Advanced), LaTeX, OpenGL, Tensorflow, PyTorch (Advanced), OpenCV (Advanced), ReactJS
Programming Skills: Python (Advanced), C# (Advanced), Julia (Advanced), C++ (Advanced), MATLAB, C, Verilog HDL, JavaScript
Hardware: FPGA, Arduino, HTV VIVE, Meta Quest, Tobii Eyetracker, PICO, Leap Motion, Pupil Labs

Honors & Rewards

- Barbour Scholars 2025-2026, the most prestigious scholarship funds exceptional women from Asia in the University of Michigan.
- Best Paper Honorable Mention at ACM CHI 2024.
- 2020-2021 University of Michigan James Lu and Qingni Li Engineering Graduate Scholarship Fund
- Outstanding graduates of Shanghai Jiao Tong University
- Silver Price of 2019 UM-SJTU JI Winter Design Expo
- 2018–2019 Undergraduate Academic Progress Scholarship
- 2018–2019 Undergraduate Excellent Scholarship
- 2017–2018 Undergraduate Excellent Scholarship
- Honorable Mention in 2018 Mathematical Contest in Modeling (MCM)