

# Zicong Fan (Alex)



## Research interest

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Humans interact with the world (objects and scenes) using our hands. To this end, my research so far has focused on hand-object interaction and hand pose estimation. For hand-object interaction, my main research is on 3D reconstruction from images. I also co-supervised several projects on hand-object interaction generation. More on my [page](#).

## Education

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**ETH Zürich** [Supervisors: [Otmar Hilliges](#), [Michael J. Black](#)]  
Ph.D. in Computer Science

Zürich, Switzerland  
August 2020 – Present

**The University of British Columbia** [Supervisors: [Leonid Sigal](#), [Jim Little](#)]  
Thesis Masters in Computer Science [94/100]

Vancouver, Canada  
September 2018 – June 2020

**The University of British Columbia**  
Bachelor of Science in Computer Science [91/100]

Vancouver, Canada  
September 2016 – June 2018

## Employment

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**Reality Labs, Meta Zürich**  
Research Scientist Intern

Zürich, Switzerland  
June 2024 – Present

**Advanced Interactive Technologies, ETH Zürich**  
Ph.D. Student Researcher

Zürich, Switzerland  
August 2020 – Present

**Perceiving Systems, Max Planck Institute for Intelligent Systems**  
Ph.D. Student Researcher

Tübingen, Germany  
April 2022 – March 2023

## Selected Publications

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[Fan Z.](#), Parelli M., Kadoglou M., Kocabas M., Chen X., Black M., and Hilliges O. **HOLD: Category-agnostic 3D Reconstruction of Interacting Hands and Objects from Video**. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2024. [CVPR Highlights]  
[\[Project\]](#)[\[Video\]](#)[\[Code\]](#)[\[Paper\]](#)

[Fan Z.](#), Taheri O., Tzionas D., Kocabas M., Kaufmann M., Black M., and Hilliges O. **ARCTIC: A Dataset for Dexterous Bimanual Hand-Object Manipulation**. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023.  
[\[Project\]](#)[\[Video\]](#)[\[Code\]](#)[\[Paper\]](#)

[Fan Z.](#), Spurr A., Kocabas M., Tang S., Black M.J., Hilliges O. **Learning To Disambiguate Strongly Interacting Hands via Probabilistic Per-Pixel Part Segmentation**. IEEE International Conference on 3D Vision (3DV), 2021. [Oral]  
[\[Project\]](#)[\[Video\]](#)[\[Code\]](#)[\[Paper\]](#)

## Other Publications

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Zhang H., Christen S., Fan Z., Hilliges O., and Song J. **GraspXL: Generating Grasping Motions for Diverse Objects at Scale**. European Conference on Computer Vision (ECCV), 2024.

[\[Project\]](#)[\[Video\]](#)[\[Code\]](#)[\[Paper\]](#)

Fan Z.\*, Ohkawa T.\*, Yang L.\*, Lin N., Zhou Z., Zhou S., Liang J., Gao Z., Zhang X., Zhang X., Li F., Zheng L., Lu F., Abou Zeid K., Leibe B., On J., Baek S., Prakash A., Gupta S., He K., Sato Y., Hilliges O., Chang H.J., and Yao A.

**Benchmarks and Challenges in Pose Estimation for Egocentric Hand Interactions with Objects**. European Conference on Computer Vision (ECCV), 2024. (\*Equal Contr.)

[\[Paper\]](#)

Zhang H., Christen S., Fan Z., Zheng L., Hwangbo J., Song J., and Hilliges O. **ArtiGrasp: Physically Plausible Synthesis of Bi-Manual Dexterous Grasping and Articulation**. International Conference on 3D Vision (3DV), 2024.

[Spotlight]

[\[Project\]](#)[\[Video\]](#)[\[Code\]](#)[\[Paper\]](#)

Ziani A.\*, Fan Z.\*, Kocabas M., Christen S. and Hilliges O. **TempCLR: Reconstructing Hands via Time-Coherent Contrastive Learning**. IEEE International Conference on 3D Vision (3DV), 2022. (\*Equal Contr.)

[\[Project\]](#)[\[Video\]](#)[\[Code\]](#)[\[Paper\]](#)

Karunratanakul K., Spurr A., Fan Z., Hilliges O., Tang S. **A skeleton-driven neural occupancy representation for articulated hands**. IEEE International Conference on 3D Vision (3DV), 2021. [Oral]

[\[Project\]](#)[\[Video\]](#)[\[Paper\]](#)

Fan Z., Meng L., Chen T.Q., Li J., Mitchell I. **Learning Motion Predictors for Smart Wheelchair using Autoregressive Sparse Gaussian Process**. IEEE International Conference on Robotics and Automation (ICRA), 2018.

[\[Paper\]](#)

## Service

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**Workshop organizer:** HANDS at ICCV'23, ECCV'24

**Reviewer:** CVPR '23, ICCV '23, ECCV '22, SIGGRAPH ASIA '23, 3DV '23, '24, RA-L '23

## Teaching

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- ETH Machine Perception: Spring '24 (Head TA)
- ETH Machine Perception: Spring '21/'22/'23
- ETH Informatik II: Fall '21
- UBC CPSC 425 Computer Vision: Spring '19, Fall '19
- UBC CPSC 422 Artificial Intelligence: Fall '18