

# Zicong Fan (Alex)



## Research interest

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My primary focus in research centers on 3D vision, especially as it applies to digital human modeling and mixed reality. I am interested in topics including 3D hand-object reconstruction, 3D interacting hand reconstruction, 3D hand pose estimation, and egocentric vision. See more on my [personal page](#).

## Education

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

Zürich, Switzerland  
Fall 2020 – Present

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

Vancouver, Canada  
Fall 2018 – Summer 2020

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

Vancouver, Canada  
Fall 2016 – Summer 2018

## Employment

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**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

## Publication

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

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

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

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

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

## Skills

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### Programming Languages:

- Proficient: Python, MATLAB, Java, C/C++
- Prior experience: CUDA kernel, HTML/CSS, TypeScript, Julia, Erlang, Lua

**Technologies/Environment:** Unix/Linux, Git, PyTorch, Robot Operating System (ROS).

## Teaching

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- 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

## Awards and Recognitions

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### Canada Graduate Scholarships-Master's, April 2019

*Natural Sciences and Engineering Research Council of Canada (NSERC) (national)*

"The objective of the CGS-M Program is to help develop research skills and assist in the training of highly qualified personnel by supporting students who demonstrate a high standard of achievement in undergraduate and early graduate studies."

### Trek Excellence Scholarship, August 2017

*The University of British Columbia (institutional)*

Awarded to students in the top 5% of their undergraduate years, faculty, and school based on the top 27 credits.

### Governor General's Collegiate Bronze Medal, May 2016

*Governor General of Canada (national)*

Awarded to the Langara graduate from a two-year Associate Degree Program with the highest cumulative GPA. The Collegiate Bronze Medal is at the postsecondary level.