

# YUDA FAN

Preferred Interview Language: C++

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## EDUCATION

### Shanghai Jiao Tong University

Sep. 2016 - Jun. 2020

Bachelor of Engineering in Computer Science, ACM Honor Class

GPA: 3.92/4.30, 90.3/100

### ETH Zürich

Sep. 2021 -

Master of Science, D-INFK

Direct Doctorate Program in Computer Science

## RESEARCH EXPERIENCE

### MVIG, Shanghai Jiao Tong University

Jul. 2018 - Jun. 2020

RA advised by Prof. Cewu Lu

Shanghai, China

- **CyberPanda:** A novel universal robotic arm simulator with photorealistic visual feedback. Integrate the remote procedure call system, rendering pipeline and physics engine in the platform. Empower users to construct scene, collect data and conduct simulation. *Undergraduate Thesis*
- **3D Real Embodied Dataset and Transferable Active Grasping:** Improve the viewpoint optimization strategy to get a more reliable grasping algorithm with a better success rate. *ICRA 2020*

### Visiting Students, University of Illinois at Urbana-Champaign

Sep. 2019 - Dec. 2019

RA advised by Prof. Bin Hu

Urbana, IL

- **Efficient Verification of Neural Networks:** Formulate the verification problem as a semi-definite programming scheme and resolve it with linear matrix inequality.

### Vision AI Department, Meituan

Jul. 2020 - Feb. 2021

Machine Learning Engineer

Beijing, China

- **AutoVision:** A platform to automatically conduct neural architecture search, model compression and hyperparamters optimization.
- **Memory-Efficient Neural Architecture Search:** Propose a training scheme to eliminate the performance collapse in memory-efficient fashion. *Awarded with the highest level patent in 2020.*

### CADMO, ETH Zürich

Sep. 2021-

RA advised by Prof. Emo Welzl

Zürich, Switzerland

- **Unique Sink Orientation and USO Polytope:** Probe the combinatorial structure of all the USOs of the same cube, and characterize the symmetric difference map between any ordinary USO and the uniform USO. Figure all the affine transformations under which the USO polytope remain the same.
- **Hidden Points and Hidden Vertices in Class of Polygons:** Introduce novel techniques such as convex/reflex chains and continuous visibility graph, and find solutions for spiral polygons, funnel polygons, pseudo-triangles, fan-shaped polygons, and staircase polygons. Propose the first approximation scheme for hidden points in polygon with holes.

## RECENT PUBLICATIONS

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*Hidden Points and Hidden Vertices, Yuda Fan, JCDCGGG 2024.*

*ROME: Robustifying Memory-Efficient NAS via Topology Disentanglement and Gradients Accumulation, Xiaoxing Wang\*, Xiangxiang Chu\*, Yuda Fan, Zhixi Zhang, Junchi Yan, ICCV 2023.*

## AWARDS & HONORS

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Outstanding Graduate of Shanghai Jiao Tong University	Jul. 2020
Honor Degree Bachelor of Engineer of Zhiyuan College	Jul. 2020
Excellence Scholarship, ETH Zürich	2021-2023
The First Prize Scholarship at Shanghai Jiao Tong University	2016-2019
1st Runner Up, ACM-ICPC 2017-2018 Asia Pacific Regional Contest	Nov. 2017
Winner, ICPC 2021-2022 Swiss Subregional Individual Contest	Nov. 2021
Gold Medal 19th place, ACM-ICPC 2017-2018 Asia ECL Final	Dec. 2017
Gold Medal 6th place, ACM-ICPC 2017-2018 Xi'an Regional Contest	Oct. 2017
Gold Medal 9th place, ACM-ICPC 2016-2017 Myanmar Regional Contest	Dec. 2016
Gold Medal 9th place, CCPC 2017 Hangzhou Regional Contest	Nov. 2017
Gold Medal 7th place, ACM-ICPC 2016-2017 Xi'an Invitation Contest	May. 2017

## COMMUNITY SERVICE

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Problem Setter: CCF NOI 2019, CCPC 2018, ICPC Asia EC-Final 2021, 2024

Contest Coordinator: CCPC 2018, ICPC Swiss Subregional 2022, 2023

Reviewer: HPCC 2024, ICCV 2024, EuroCG 2023, 2024

## TEACHING EXPERIENCE

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Lecturer      CS477 Combinatorics (Spring 2020)

## PROGRAMMING PROFICIENCY

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Expert: Pascal

Efficient: C++, C, Python

Mediocre: Java, Rust