

# YUDA FAN

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## EDUCATION

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**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 (Rank 6/38)

**ETH Zürich**

Sep. 2021 -

*Master of Science in Computer Science, D-INFK*

Direct Doctorate Program in Computer Science

## RESEARCH EXPERIENCE

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**MVIG, Shanghai Jiao Tong University**

Jul. 2018 - Jun. 2020

*Research Assistant to Prof. Cewu Lu*

*Shanghai, China*

- **CyberPanda: A Universal Robotic Arm Simulator Towards Photorealistic Visual Perception:** Propose 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:** Based on the previous work, improve the viewpoint optimization stage to overcome the sparse reward in grasping problem, getting more reliable grasping algorithm and better success rate. *ICRA 2020*

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

Sep. 2019 - Dec. 2019

*Research Assistant to Prof. Bin Hu*

*Urbana, IL*

- **Efficient Estimation of Lipschitz Constant of Recurrent Neural Networks:** Employ semidefinite programming to efficiently estimate the upper bound of Lipschitz Constant of RNNs.
  - **Meituan - Sankuai Technology Co., Ltd.**
- System Architecture Group*
- Jul. 2020 - Feb. 2021
- Beijing, China*
- **AutoVision:** A platform to automatically conduct neural architecture search, model compression and hyperparameters 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 Q4.*

## PUBLICATIONS

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Xiangyu Chen\*, Zelin Ye\*, Jiankai Sun, **Yuda Fan**, Fang Hu, Chenxi Wang, and Cewu Lu, *Transferable Active Grasping and Real Embodied Dataset*, *ICRA 2020*.

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

## SELECTED INTERESTING PROJECTS

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## CS492: Reinforcement Learning

*Prof. Zhihua Zhang*

Jun. 2019

*Shanghai, China*

- **Fight with Landlord:** Combine hand decomposition module and Hierarchy Reinforcement Learning to learn the subgoals of card games.

## MS208: Compiler Design and Implementation

*Dr. Rong Ma*

Jun. 2018

*Shanghai, China*

- **Mx\* Compiler:** Designed a compiler implemented in Java from scratch, translating **Mx\*** code into x64-nasm code.
- Implemented optimizations for the compiler, faster than gcc O1 on elaborated test set.

## MS110: Operating System

*Prof. Alei Liang*

Jun. 2018

*Shanghai, China*

- **NachOS:** Implemented the whole kernel of a UNIX operating system, including threads, file system, network, virtual memory, etc.
- 96/100, Rank: 8/41.

## AWARDS & HONORS & NOMINATION

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Outstanding Graduate of Shanghai Jiao Tong University *Jul. 2020, SJTU*

2016-2018 The First Prize Scholarship: Top 5% of SJTU

Problem Setter of CCF NOI 2019, CCPC 2018, ICPC EC Final **2021** *2018-2022, Beijing*

2017 Rong Chang Scholarship: Top 0.02% of Shanghai Jiao Tong University *Oct. 2017, SJTU*

1st Runner Up, ACM-ICPC 2017-2018 Hua-Lien Regional Contest *Nov. 2017, Taiwan*

Gold Medal 19th place, ACM-ICPC 2017-2018 Asia ECL Final *Dec. 2017, Shanghai*

Gold Medal 6th place, ACM-ICPC 2017-2018 Xi'an Regional Contest *Oct. 2017, Xi'an*

Gold Medal 9th place, ACMICPC 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*

## TEACHING EXPERIENCE

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Lecturer & TA      CS477 Combinatorics (Spring 2020)

## PROGRAMMING PROFICIENCY

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C#, Lua, Swift, Rust

## LANGUAGE PROFICIENCY

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Wu: Native

Mandarin: Expert

English: Fluent