YUDA FAN

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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 (Rank 6/38)

ETH Zürich   *Sep. 2021 -*
Master of Science in Computer Science, D-INFK
Direct Doctorate Program in Computer Science

RESEARCH EXPERIENCE

MVIG, Shanghai Jiao Tong University   Jul. 2018 - Jun. 2020
Research Assistant to 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
Research Assistant to Prof. Bin Hu   *Urbana, IL*

· **Efficient Estimation of Lipschitz Constant of Recurrent Neural Networks**: Utilize semidefinite pro-
  gramming to efficiently estimate the upper bound of Lipschitz Constant of RNNs.

Meituan - Sankuai Technology Co., Ltd.   Jul. 2020 - Feb. 2021
Machine Learning Architecture Group   *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 perfor-
  mance collapse in memory-efficient fashion. *Awarded with the highest level patent in 2020.*

CADMO, ETH Zürich   Sep. 2021-
Emo Welzl's Group   *Zürich, Switzerland*

· **Unique Sink Orientation and USO Polytope**: Study 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**: Prove that the hidden point problem is
  in $\exists\mathbb{R}$, and the VC-dimension of visible area set system is bounded by the logarithm of the number of
  reflex vertices.

  Introduce novel techniques such as convex/reflex chains and continuous visibility graph, and find solu-
  tions for spiral polygons, funnel polygons, pseudo-triangles, fan-shaped polygons, and staircase poly-
  gons. Propose the first approximation scheme for hidden points in polygon with holes.

PUBLICATIONS

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, *ROME: Robustifying Memory-Efficient NAS via Topology Disentanglement and Gradients Accumulation, ICCV 2023*

AWARDS & HONORS

Outstanding Graduate of Shanghai Jiao Tong University	*Jul. 2020*
The First Prize Scholarship at Shanghai Jiao Tong University	*2016-2018*
2017 Rong Chang Scholarship	*Oct. 2017*
1st Runner Up, ACM-ICPC 2017-2018 Hua-Lien Regional Contest	*Nov. 2017*
1st Runner Up, ACM-ICPC 2021-2022 Swiss Subregional, Individual	*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, 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*

COMMUNITY SERVICE

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

Contest Coordinator: ICPC Swiss Subregional 2022, 2023

Competitive REL Judge: Pro Tour Bacelona, Preliminary PTQ, Regional PTQ

Broadcast Talent: ITSL 2021, TS Chinese Open Cup 2020, TS Chinese Master 2021

TEACHING EXPERIENCE

Lecturer & TA   **CS477 Combinatorics (Spring 2020)**

PROGRAMMING PROFICIENCY

Expert: Pascal
Efficient: C, C#, Python