# Mingdong Wu

#### **EDUCATION**

Peking University

Beijing, China

Bachelor of Science - Turing Class of 2021, EECS: Summa Cum Laude

July 2017 - June 2021

Email: wmingd@pku.edu.com

Courses: Advanced Algebra (100/100), Discrete Mathematics (99/100), Mathematical Analysis, Convex Optimization, Data Structures, Analysis Of Algorithms, Artificial Intelligence, Machine Learning

Peking University

Beijing, China

Turing Phd - Center on Frontiers of Computing Science; Supervised by Asst. Prof. Hao Dong July 2021 - present

### **PUBLICATIONS**

- TarGF: Learning Target Gradient Field to Rearrange Objects without Explicit Goal Specification: Mingdong Wu\*, Fangwei Zhong\*, Yulong Xia, Hao Dong, NeurIPS 2022.
- GFPose: Learning 3D Human Pose Prior with Gradient Fields: Hai Ci, Mingdong Wu, Wentao Zhu, Xiaoxuan Ma, Hao Dong, Fangwei Zhong, Yizhou Wang, CVPR 2023.
- SA2VAN: Learning Semantic-Agnostic and Spatial-Aware Representation for Generalizable Visual-Audio Navigation:

Hongcheng Wang, Yuxuan Wang, fangwei zhong, Mingdong Wu, Yizhou Wang, Hao Dong, RAL 2023.

- Score-PA: Score-based 3D Part Assembly: Junfeng Cheng, Mingdong Wu, Ruiyuan Zhang, Guanqi Zhan, Chao Wu, Hao Dong, BMVC 2023 (Oral).
- GenPose: Generative Category-level Object Pose Estimation via Diffusion Models: Jiyao Zhang\*, Mingdong Wu\*, Hao Dong, Neurips 2023 under review(Avg rating 6.4).
- Learning Score-based Grasping Primitive for Human-assisting Dexterous Grasping: Tianhao Wu\*, Mingdong Wu\*, Jiyao Zhang, Yunchong Gan, Hao Dong, Neurips 2023 under review(Avg rating 6.0).
- Learning Gradient Fields for Scalable and Generalizable Irregular Packing: Tianyang Xue\*, Mingdong Wu\*, Lin Lu, Haoxuan Wang, Hao Dong, Baoquan Chen, Siggraph Asia 2023.
- Find What You Want: Learning Demand-conditioned Object Attribute Space for Demand-driven Navigation: Hongcheng Wang, Guanhong Chen, Xiaoqi Li, Mingdong Wu, Hao Dong, Neurips 2023 under review (Avg rating 6.0).
- DualGF: Example-driven Planning via Dual Gradient Fields:
  Mingdong Wu, Fangwei Zhong, Yulong Xia, Yizhou Wang, Hao Dong, submitting to ICLR 2024.
- SocialGFs: Learning Social Gradient Fields for Multi-Agent Reinforcement Learning:
  Qian Long, Fangwei Zhong, Mingdong Wu, Yizhou Wang, Song-Chun Zhu, submitting to ICLR 2024.

### INVITED TALKS

- May 2023, Lightning Talk: Learning Target Gradient Fields for Object Rearrangement, Turing Student Research Forum
- May 2023, Tutorial: Embracing Diffusion Models and Gradient Field Planners, Turing Student Research Forum
- Nov 2022, Live Talk: Learning Target Gradient Fields for Object Rearrangement, ZHIDX AI New Youth Talk
- Nov 2022, Learning Target Gradient Fields for Object Rearrangement, Beijing Institute for General Artificial Intelligence
- Oct 2022, Learning Gradient Fields for Object Rearrangement, CMU Safe AI Laboratory

#### Internship

• Beijing Institute for General Artificial Intelligence (BIGAI), July 2022 - Aug 2023

### Honors and Awards

- Best Tutorial Award, Turing Student Research Forum, May 2023
- Best Poster Award, Turing Student Research Forum, May 2023
- BIGAI's Rising Star Award, 1st, Jan 2023
- Ubiquant Investment Scholarship, Ubiquant Investment (Beijing), May 2019
- Peking University's Third-class Scholarship, Peking University, May 2018

## PROFESSIONAL SERVICES

- ICLR 2024 Reviewer, Aug 2023
- NeurIPS 2023 Reviewer, May 2023