Xinyi Zhang

+81 090-6605-5511
xinyiz0931@gmail.com
https://xinyiz0931.github.io/
〒560-8531, Machikaneyama, Toyonaka, Osaka

Xinyi Zhang a Ph.D. student at the Graduate School of Engineering Science at Osaka University working on the Robot Manipulation Laboratory. Her research interests include robotic manipulation, deep learning and computer vision. Her current research is focused on perception and planning for vision-based industrial bin picking under complex scenarios.

EDUCATION

2020 – present **Osaka University**, Osaka, Japan
Ph. D. in Engineering at Graduate School of Engineering Science
Advisor: Prof. Kensuke Harada

2018 – 2020 **Osaka University**, Osaka, Japan
Master of Engineering at Graduate School of Engineering Science

2012 – 2016 **Tianjin University**, Tianjin, China
Bachelor of Engineering in Information Management and Information System

AWARDS AND HONORS

2021 **Best Oral Presentation (優秀講演賞)**
SICE SI2021

2021 **Young Researcher Award (若手奨励賞)**
SICE SI2021

2021 **Japan Joint Chapter Young Award (IROS, CASE2021)**
IEEE Robotics and Automation Society

2021 – 2023 **Scholarship**
Kobayashi Foundation (公益財団法人小林財団)

2020 **Best Oral Presentation (優秀講演賞)**
SICE SI2020

PUBLICATIONS

Journal Paper (Peer-Reviewed)

[1] **Xinyi Zhang**, Yukiyasu Domae, Weiwei Wan, Kensuke Harada. Learning a Sequential Policy of Efficient Actions for Tangled-Prone Parts in Robotic Bin Picking. IEEE Robotics and Automation Letters (RA-L), 2022.

[2] Kaidi Nie, Felix von Drigalski, Joshua C. Triyonoputro, Chisato Nakashima, Yoshiya Shibata, Yoshinori Konishi, Yoshihisa Ijiri, Taku Yoshioka, Yukiyasu Domae, Toshio Ueshiba, Ryuichi Takase, **Xinyi Zhang**, Damien Petit, Ixchel G. Ramirez-Alpizar, Weiwei Wan & Kensuke Harada. Team O2AS' approach for the task-board task of the World Robot Challenge 2018. Advanced Robotics, 2020.

International Conferences (Peer-Reviewed)

[3] **Xinyi Zhang**, Keisuke Koyama, Yukiyasu Domae, Weiwei Wan, Kensuke Harada. A Topological Solution of Entanglement for Complex-shaped Parts in Robotic Bin-picking. IEEE International Conference on Automation Science and Engineering (CASE), 2021.

Preprints

[4] **Xinyi Zhang**, Yukiyasu Domae, Weiwei Wan, Kensuke Harada. Learning to Dexterously Pick or Separate Tangled-Prone Parts for Industrial Bin Picking. arXiv, 2023.

Domestic Conferences

[5] Mizuki Takasu, **Xinyi Zhang,** Yukiyasu Domae, Weiwei Wan, Kensuke Harada. Bin-Picking for Potential Entangled Object by Linearing Image of the Pile. SI2022.

[6] **Xinyi Zhang**, Weiwei Wan, Yukiyasu Domae, Kensuke Harada. Learning Dexterous Bin Picking Policies for Picking and Separating Tangled-Prone Parts. RSJ2022.

[7] **Xinyi Zhang**, Yukiyasu Domae, Weiwei Wan, Kensuke Harada. Efficiently Picking Tangled-Prone Parts by Learning a Sequential Bin Picking Policy. SICE SI2021.

[8] **Xinyi Zhang**, Keisuke Koyama, Yukiyasu Domae, Weiwei Wan, Kensuke Harada. Topology-based Grasp Detection Avoiding Entanglement for Robotic Bin-picking. SICE SI2020.

[9] **Xinyi Zhang**, Keisuke Koyama, Weiwei Wan, Yukiyasu Domae, Kensuke Harada. Motion Generation for Separating Tangled Objects in Robotic Bin-picking. ISCIE SCI'20.

[10] **Xinyi Zhang**, Damien Petit, Yukiyasu Domae, Ixchel G. Ramirez-Alpizar, Weiwei Wan, Kensuke Harada. Error Analysis and Adjustment on Randomized Bin-picking. SI2019.

[11] **Xinyi Zhang**, Damien Petit, Yukiyasu Domae, Ixchel G. Ramirez-Alpizar, Weiwei Wan, Kensuke Harada. A Real-time Robotic Calibration Method for Vision-based Bin-picking. ROBOMECH2019.

PATENTS

[1] 原田研介, 万偉偉, 堂前幸康, **張馨芸**, 森建郎, 吹田和嗣, 五十嵐淳. ワーク取り出し装置、ワーク取り出し方法、プログラム及び制御装置. 特開 2021-186542, 2021/11/16.

SKILLS

Languages	Chinese (native), English (fluent), Japanese (fluent)
Programming Languages	Python, C++, C
Software/Libraries	PyTorch, TensorFlow, NVIDIA PhysX, ROS
Other Skills	Ubuntu, git, vim