KUN ZHANG

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EDUCATION

- **Hong Kong University of Science and Technology**, Hong Kong SAR, China   2019.08-present
  Ph.D. Candidate in Electronic and Computer Engineering, **Robotics Institute**; *GPA:* 3.433/4
  Supervisors: Prof. Michael Yu WANG, Prof. Yiwen WANG

- **Southern University of Science and Technology**, Shen Zhen, China   2021.10-2022.09
  Visiting Research Student in Department of Mechanical and Energy Engineering
  Supervisor: Prof. Wei ZHANG

- **University of Macau**, Macau SAR, China   2016.09-2019.06
  M.S. in Electromechanical Engineering; *GPA:* 3.52/4
  State Key Laboratory of Internet of Things for Smart City
  Supervisor: Prof. Zhixin YANG

- **Harbin Engineering University**, Harbin, China   2012.08-2016.07
  B.E. in Mechanical Design, Manufacturing and Automation; *GPA:* 84.22/100
  Supervisor: Prof. Jinxing ZHENG

WORK EXPERIENCE

- Tencent Robotics-X Lab Control Center Intern   2021.05-2021.08
- Shenzhen Dorabot Company Robotics Software Intern   2019.08-2019.12
- Helper of the Office of Health, Safety and Environmental Affairs of UM   2016.10-2018.12
- Shenyang Airplane Industry (Group) Limited Company Intern   2016.03-2016.05
- Dalian Shipping Heavy Industry Group Company Intern   2015.07-2015.09
- Header of the Competition Sector of HEU Free-carbon Vehicle Association   2014.05-2016.05

SKILLS

- Programming Languages: Python == Matlab > C++
- 3D Design: Pro/E, Sharp3D, Blender
- Simulation: PyBullet,MuJoCo,Coppeliasim
- Platforms: Linux, LaTeX, ROS, OpenCV, Open3D
- Others: WordPress, VN, Microsoft Offices
- Languages: Mandarin(Native speaker), English(IELTS6), German(A2)，Cantonese(麻麻哋)

RESEARCH PROJECTS

- **Robotics Perception, Manipulation and Hardware Design**   2019.08-present
  ·*Deformable object manipulation: Cloth-like*   2022.10-present
  ·*Design and test of a novel modular dexterous gripper*   2022.10-2023.03
  ·*Peg-in-hole manipulation: USB,HDMI,RJ45*   2021.10-2022.09
  ·*Joggling manipulation: Toss and throw*   2021.05-2021.08
  ·*Design and test of a novel mobile manipulator*   2021.01-2021.05
  ·*Nonprehensile manipulation: Ball balancing*   2020.07-2020.10
  ·*Design and test of a novel modular force control manipulator*   2020.02-2020.07
  ·*Grasp manipulation:Best grasp point and self collision detection*   2019.08-2019.12

- **Machine tools recognition system**   2016.10-2018.10
  based on ELM-embedded deep learning

- **Intelligent energy-saving automatic closing device for refrigerators**   2014.10–2015.05
  (Principal) National innovation and entrepreneurship training program for college students.

PUBLICATIONS

[1] **Kun Zhang**, Chen Wang, Hua Chen, Jia Pan, Michael Yu Wang, and Wei Zhang, "Vision-based Six-Dimensional Peg-in-Hole for Practical Connector Insertion", to appear in Proceedings *IEEE International Conference on Robotics and Automation (ICRA), 2023.*

[2] L. Luo, Z. Yang, L. Tang and **K. Zhang**, "An ELM-Embedded Deep Learning Based Intelligent Recognition System for Computer Numeric Control Machine Tools.", IEEE Access, vol. 8, pp. 24616-24629, 2020, doi: 10.1109/ACCESS.2020.2965284.

[3] Wang, X. B., Miao, P., **Zhang, K.**, Zhang, X., & Wang, J. "Study on novel signal processing and simultaneous-fault diagnostic method for wind turbine.", Transactions of the Institute of Measurement and Control, 014233121984926. https://doi.org/10.1177/0142331219849261

[4] Yang Z X, Tang L, **Zhang K**, et al.,"Multi-View CNN Feature Aggregation with ELM Auto-Encoder for 3D Shape Recognition.", Cognitive Computation, 2018, 10(2).

[5] **Zhang. K.** Tang, L.L. Yang. Z.X.* Luo, L.Q. , "Intelligent Machine Tools Recognition Based on Hybrid CNNs and ELMs Networks.", to appear in Proceedings *International Conference on Extreme Learning Machine(ELM),2018.* Singapore. Nov 21-23, 2018. (**Oral**)

[6] 郭清, **张坤**, 祝海波, 孙蓉, 离心式控速闭门装置 [P]. CN Patent CN105,332,583 B. & CN Patent CN205,206,567 U

[7] 郭清, **张坤**, 祝海波, 基于 TRIZ 理论的安全节能闭门装置创新设计 [J]. 科技资讯, 2015, 1(12): 2-2.

ACADEMIC SERVICES

Reviewer for following conferences and journals:

- IEEE International Conference on Robotics and Automation(ICRA) (2021，2023)
- Journal of Healthcare Engineering(2022)

Teaching Assistant:

- HKUST ELEC1100 Introduction to Electro-Robot Design   2021 Fall
- HKUST ELEC1030 The Rise of Autonomous Robots   2019 Spring
- UM Undergraduate Final Year Project: Structure design of 3D printer   2017
- UM EMEB221 Computer Aided Design   2017 Spring,2018 Spring
- UM EMEB350 Advanced Manufacturing   2017 Spring
- UM EMEB312 Control Engineering   2016 Fall

HONORS AND AWARDS

- **Postgraduate Scholarship of HKUST**   2019-2023
- **Postgraduate Scholarship of Macau Government (CTABE)**   2016-2019
- **Student scholarship of HEU**   2012-2016
- *2nd Prize*, Award on the 4th Method of TRIZ, college innovation competition   2016.05
- *2nd Prize*, Award on the Heilongjiang college engineering ability competition   2015.12
- *1st Prize*, Award on the 3rd HEU college engineering ability competition   2014.12
- *3rd Prize*, Award on the 2nd HEU physical instrument innovation design competition   2014.10
- *3rd Prize*, Award on the 19th HEU "54 Cup" college technology innovation competition   2013.10
- *1st Prize*, Award on the 4th HEU "Sailing Cup" college technology innovation competition   2012.11
- **Academic Proof of APS** (Akademische Prüfstelle Kulturreferat der Deutschen Botschaft Peking) 2015.11
- **Outstanding volunteer**, Award on the 7th International College Snow Sculpture competition   2015.12
- **Outstanding volunteer**, Award on the 3rd Method of TRIZ, college innovation competition   2014.05