



## Chao Sun

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### Education

Sep 2020- Present	Tongji University	Control Science and Engineering	Doctor <b>Top 5%</b>
Sep 2017-Jun 2020	Nanjing University of Aeronautics and Astronautics	Mechanical Engineering	Master <b>Top 5%</b>
Sep 2013-Jun 2017	University of Jinan	Mechanical Engineering	Bachelor <b>Top 1%</b>

### Research Area

His current research interests include visual simultaneous localization and mapping (SLAM), reinforcement learning, computer vision, and robotics.

### Publications

- [1] **Chao Sun**, Xing Wu, Jia Sun, Nianzu Qiao, Changyin Sun, Multi-stage Refinement Feature Matching using Adaptive ORB Features for Robotic Vision Navigation. *IEEE Sensors Journal*, 22(3) (2022) 2603–2617.
- [2] **Chao Sun**, Xing Wu, Jia Sun, Changyin Sun, Lu Dong, Robust Pose Estimation via Hybrid Point and Twin Line Reprojection for RGB-D Vision Navigation. *IEEE Transactions on Instrumentation and Measurement*, 71 (2022) 1–19.
- [3] **Chao Sun**, Xing Wu, Jia Sun, Changyin Sun, Mingzhu Xu, Quanbo Ge, Saliency-induced Moving Object Detection for Robust RGB-D Vision Navigation Under Complex Dynamic Environments. *IEEE Transactions on Intelligent Transportation Systems*, 2023 (in press).
- [4] Xing Wu, **Chao Sun\***, Leisheng Chen, Ting Zou, Wei Yang, Haining Xiao, Adaptive ORB Feature Detection With a Variable Extraction Radius in RoI for Vision-based Robot Navigation. *Robotics and Autonomous Systems*, 157 (2022) 104248.
- [5] Xing Wu, **Chao Sun**, Ting Zou, Linhui Li, Longjun Wang, Hui Liu, SVM-based image partitioning for vision recognition of AGV guide paths under complex illumination conditions. *Robotics and Computer Integrated Manufacturing*, 61 (2020) 101856.
- [6] Xing Wu, **Chao Sun**, Ting Zou, Haining Xiao, Longjun Wang, Jingjing Zhai, Intelligent Path Recognition against Image Noises for Vision Guidance of Automated Guided Vehicles in a Complex Workspace, *Applied Sciences*, 9(19) (2019) 4108.
- [7] **Chao Sun**, Nianzu Qiao, Jia Sun, Robust Feature Matching Based on Adaptive ORB for Vision-based Robot Navigation[C], *36th IEEE Youth Academic Annual Conference of Chinese Association of Automation, (YAC)*. 2021: 282–287.
- [8] **Chao Sun**, Nianzu Qiao, Wei Ge, Jia Sun, Robust RGB-D Visual Odometry Using Point and Line Features[C], *41st IEEE Chinese Control Conference, (CCC)*. Hefei, China, Jul 25-27, 2022.

### HONOR & SCHOLARSHIP

Sep 2022	Huate Scholarship of Tongji University	Top 5%
Oct 2020	First prize of Academic Scholarship (Thrice)	Top 10%

### Professional Services

#### Invited reviewer for the following journals

- IEEE Transactions on Neural Networks and Learning Systems
- IEEE Sensors Journal