

# 寇立伟

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## 研究领域

主要：水下航行器和水面船嵌入式系统及控制算法设计，多智能体系统协同控制。

次要：卡尔曼滤波器及其在水面船定位中的应用，约束推力分配。

## 教育背景

11/2019-4/2020	澳大利亚纽卡斯尔大学	电气工程与计算机	访问学生
09/2015-06/2021	浙江大学电气工程学院	电气工程	博士
09/2011-06/2015	华中科技大学人工智能与自动化学院	自动化	本科

说明：2015年，**保送**直博至浙江大学，专业为**电气工程**，导师为**项基**教授。2019年底前往澳大利亚纽卡斯尔大学访问学习半年，导师为**陈智勇**教授。

## 工作经历

08/2021-至今	太原理工大学	电气与动力工程学院	讲师
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## 科研成果

### 期刊论文

- [1] **Liwei Kou**, Zhiyong Chen\* and Ji Xiang, "Cooperative fencing control of multiple vehicles for a moving target with an unknown velocity", *IEEE Transactions on Automatic Control*, 2022, 67(2): 1008-1015.
- [2] **Liwei Kou**, Yi Huang, Zhiyong Chen\*, Shiming He and Ji Xiang, "Cooperative fencing control of multiple second-order vehicles for a moving target with and without velocity measurements", *International Journal of Robust and Nonlinear Control*, 2021, 31(10): 4602-4615.
- [3] **Liwei Kou**, Shiming he, Yanjun Li\* and Ji Xiang, "Constrained control allocation of a quadrotor-like autonomous underwater vehicle", *Journal of Guidance, Control and Dynamics*. 2021, 44(3): 659-666.
- [4] **Liwei Kou**, Ji Xiang\*, Yanjun Li and Jingwei Bian, "Stability and nonlinear controllability analysis of a quadrotor-like autonomous underwater vehicle considering variety of cases", *International Journal of Advanced Robotic Systems*, 2018.
- [5] Shiming He, **Liwei Kou**, Yanjun Li and Ji Xiang\*, "Robust orientation-sensitive trajectory tracking of underactuated autonomous underwater vehicles", *IEEE Transactions on Industrial Electronics*. 2021, 68(9): 8464-8473.
- [6] Shiming He, **Liwei Kou**, Yanjun Li and Ji Xiang\*, "Position tracking control of fully-actuated underwater vehicles with constrained attitude and velocities", *IEEE Transactions on Industrial Electronics*. 2022, DOI: 10.1109/TIE.2022.3140516.

### 会议论文

- [1] **Liwei Kou**, Ji Xiang\* and Jingwei Bian, "Controllability analysis of a quadrotor-like autonomous underwater vehicle". *IEEE 27th International Symposium on Industrial Electronics (ISIE)*, 2018.
- [2] **Liwei Kou**, Ji Xiang\*, Yanjun Li and Jingwei Bian, "Yaw angle tracking control for a quadrotor-like autonomous underwater vehicle using global fast terminal sliding mode control", *IEEE CYBER*, 2018.
- [3] Wenbo Zhang, Yonggang Peng\*, Wei Wei and **Liwei Kou**, "Real-time conflict-free task assignment and path planning of multi-AGV system in intelligent warehousing", *IEEE 27th Chinese Control Conference*, 2018.

- [4] Haotian Wu, Shiming He, Zejun Deng, **Liwei Kou**, Kangwei Huang, Feiyang Suo, Ze Cao, "Fishery monitoring system with AUV based on YOLO and SGBM", *IEEE 28th Chinese Control Conference*, 2019.

#### 中文论文

- [1] **寇立伟**, 项基\*, "基于输出反馈线性化的多移动机器人目标包围控制". *自动化学报*, 2020.
- [2] **寇立伟**, 何诗鸣, 项基\*, "基于平方根容积卡尔曼滤波的水面无人艇导航定位算法". *中国造船*, 2020, 61(S01), 60-69.
- [3] 边靖伟, **寇立伟**, 项基, "应用 PSO 和 SVM 的水下航行器黑箱建模", *哈尔滨工业大学学报*, 2019, 51(10): 55-60.
- [4] **寇立伟**, 彭勇刚, 金斌华, 韦巍, 项基, "基于分布式可移动平台的自动化柔性装配系统及控制方法", 2019. (专利, 授权)

#### 科研项目

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- [1] 浙江省重点研发计划 "机械电子智能化生产线开发及应用示范"
- [2] 浙江省重点研发计划 "水产养殖水下管理机器人-水产养殖四旋翼水下航行器"
- [3] 浙江大学校长专项基金 "水下护卫队—可悬停微型四旋翼水下机器人运动控制及成群关键技术研究"