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教育经历

2012/10-2016/12, 日本北陆先端科技大学院大学, 信息科学系, 博士, 导师:
浅野文彦

2011/10-2012/09, 日本北陆先端科技大学院大学, 信息科学系, 硕士, 导师:
浅野文彦

2010/09-2011/07, 天津大学, 软件工程系, 硕士, 导师: 张加万

2006/09-2010/07, 天津大学, 计算机科学与技术系, 学士

工作经历

2016.4-2019.4, 清华大学, 航天航空学院, 智能空间系统联合实验室, 博士后。

2019.5至今, 天津工业大学, 计算机科学与技术学院, 讲师。

➤ 参与项目:

1. 中国载人航天技术改造项目, “约束空间机械臂任务半物理仿真验证系统”,
2016.12-2018.12, 1065万元, 型号项目, 结题。(第二参与人)

2. 中国空间技术研究院总体部，载人四批预研项目（921），“XX作业机器人”，2017.12-2019.12，100万元，已结题。（第二参与者）
3. 中国载人航天技术改造项目，批准号TC50LAB-1，“操作任务验证系统（机器人）平台研究”，2015.10-2016.10，565万元，已结题。（第三参与者）
4. 中国空间技术研究院总体部，自由研发项目，“空间机械臂跟踪捕获活动目标”，2016.1-2016.12，45万元，已结题。（第三参与者）
5. 中央军委科技委，国防科技创新特区项目，项目号18-163-00-TS-006-045-01，“XXX智能集群侦察系统”，2019.10-2022.10，300万元，在研，参加。（第二参与者）

目前研究课题

1. 面向复杂管道地形的蛇形机器人运动控制；
2. 基于同轴驱动变形机制复合移动机制设计；
3. 多足变形越野机器人移动控制与实验；
4. 超冗余机械臂的运动规划、控制与实验。

发表文章

主要研究方向为移动机器人研发与控制，研发了对接式蛇形机器人与混合移动式六足越野机器人，其作品入围 2022 年源创杯全国总决赛。发表期刊/会议 20 余篇，其中机器人顶会 ICRA (CCF B 类 5 篇) 与 IROS (CCF C 类 3 篇)，顶刊 TMECH 一篇。

➤ 期刊

1. **Xuan Xiao** and Fumihiko Asano, "Generating 1-DOF limit cycle walking at target walking speed by feed-forward and feedback limit cycle control," *Multibody System Dynamics*, 40(2), 155-175 (JCR 一区, Impact Factor 2.718)
2. **Xuan Xiao** and Fumihiko Asano, "Analysis of steady and target walking speeds in limit cycle walking," *International Journal of Dynamics and Control*, Vol. 5, No. 3, pp.454-465, Sep., 2017.
3. Fumihiko Asano, Yanqiu Zheng and **Xuan Xiao**, "Time-Scale Control Approaches to Collisionless Walking of an Underactuated Rimless Wheel," *Journal of Robotics and Mechatronics*, 29(4), 471-479, Jun, 2017

➤ 国际会议

1. Fatao Qin; Xiaojie Duan; Shihao Ma; Jinglun Yuan; Xiangyu Wang; Jianming Wang; Xuan Xiao; Design and experiments of snake robots with docking function, 2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS2022), Kyoto, Japan, (CCF C 类, 通讯作者)
2. Yongjiang Xue; Xichen Yuan; Yuhai Wang; Yang Yang; Siyu Lu; Bo Zhang; Juezhu Lai; Jianming Wang; Xuan Xiao X ; Lywal: a leg-wheel transformable quadruped robot with picking up and transport functions, The International Conference on Robotics and Automation (ICRA2021), Xian,China,2021. (CCF B 类, 通讯作者)
3. Yue Lin; Yujia Tian; Yongjiang Xue; Shujun Han; Huaiyu Zhang; Wenxin Lai; Xuan Xiao; Innovative design and simulation of a transformable robot with flexibility and versatility, rhex-t3, The International Conference on Robotics and Automation (ICRA2021), Xian, China, 2021. (CCF B 类, 通讯作者)
4. Xuan Xiao, Ou Ma and Fumihiko Asano, "Control Walking Speed by Approximate-kinetic-model-based Self-adaptive Control on Underactuated Compass-like Bipedal Walker," *Proceedings of the 2017 IEEE International Conference on Robotics and Automation (ICRA2017)*, Singapore, 2017. (CCF B 类, 一作及通讯作者)
5. **Xuan Xiao** and Fumihiko Asano, "Analytical Solution of Target Steady Walking Speed in 1-DOF Limit Cycle Walking," *Proceedings of the 2015 IEEE International Conference on Robotics and Automation (ICRA2015)*, pp. 4525-4531, 2015. (CCF B 类, 一作及通讯作者)
6. Fumihiko Asano and **Xuan Xiao**, "Role of deceleration effect in efficient and fast convergent gait generation," *Proceedings of the 2013 IEEE International Conference on Robotics and Automation (ICRA2013)*, pp. 5649-5654, 2013 (CCF B 类, 二作及通讯作者)
7. Fumihiko Asano, Yanqiu Zheng and **Xuan Xiao**, "Generation of Underactuated Bipedal Gait Completing in One Step," *IEEE/RSJ International Conference on Intelligent Robots & Systems (IROS2016)*, 2050-2055, Oct, 2016 (CCF C 类, 三作)
8. Fumihiko Asano, Yasunori Kikuchi and **Xuan Xiao**, "Control of Underactuated Rimless Wheel That Walks on Steep Slope," *IEEE/RSJ International Conference on Intelligent Robots & Systems (IROS2017)*, Oct, 2017. (CCF C 类, 三作)
9. **Xuan Xiao** and Fumihiko Asano, "Generating 1-DOF Limit Cycle Walking at Target Walking Speed by Feedforward Limit Cycle Control," *Proceedings of the 2015 IEEE Conference on Decision and Control (CDC)*, pp. 1316-1321, 2015. (控制与决策顶会, 一作及通讯作者)
10. Fumihiko Asano and **Xuan Xiao**, "Output deadbeat control approaches to fast convergent gait generation of underactuated spoked walker," *Proceedings of the 2012 IEEE/SICE International Symposium on System Integration (SII)*, pp. 265-270, 2012 (EI 检索, 通讯作者)
11. **Xuan Xiao** and Fumihiko Asano, "Limit cycle walker that forms various impact postures using mid-body," *Proceedings of the 2013 10th International Conference on Ubiquitous Robots and Ambient Intelligence (URAI)*, pp. 571-576, 2013. (EI 检索)

12. **Xuan Xiao** and Fumihiko Asano, "Analytical solution of steady step period in 1-dof limit cycle walking driven by stepwise control inputs," Proceedings of the 2014 IEEE International Conference on Mechatronics and Automation (ICMA), pp. 245-250, 2014 (EI 检索)
13. **Xuan Xiao** and Fumihiko Asano, "Approximate solution of steady step period in one-period limit cycle walking based on discretization of control input," Proceedings of the 11th International Conference on Ubiquitous Robots and Ambient Intelligence (URAI), pp. 585-590, 2014 (EI 检索)
14. **Xuan Xiao**, Yasunori Kikuchi, Fumihiko Asano and Tetsuro Fujimoto, "Limit cycle walking of underactuated bipedal humanoid on slippery road surface," Proceedings of the 14th IEEE-RAS International Conference on Humanoid Robots (Humanoid), pp. 622-627, 2014 (EI 检索)
15. **Xuan Xiao**, Go Fukuda and Fumihiko Asano, "Mathematical Analysis of Steady Walking States in Underactuated Limit Cycle Walking," Proceedings of the 2015 IEEE Conference on Robotics and Biomimetics (ROBIO), pp. 814-819, 2015. (EI 检索)
16. **Xuan Xiao**, Ou Ma and Fumihiko Asano, "Analytical Solution of Target Walking Speed Generation by Underactuated Compass-like Bipedal Walker," Proceedings of the 2016 IEEE Conference on Robotics and Biomimetics (ROBIO), Qingdao, P.R. China, 2016 (EI 检索)
17. Qingqing Wei, **Xuan Xiao**, Qingliang Meng and Fumihiko Asano, "Target Walking Speed Generation and Parameters Identification by Feedback Control of 1-DOF Limit Cycle Walker", Proceedings of the IEEE-RAS International Conference on Humanoid Robots (Humanoid), 2018 (EI 检索, 二作及通讯作者).