



NIU Xuezhhi

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Uppsala, Sweden

EDUCATION

- Uppsala University** 2024–2028(Est.)
Ph.D. Student in Embedded Systems Uppsala, Sweden
- KTH Royal Institute of Technology** 2021–2023
M.Sc. Mechatronics Stockholm, Sweden
- City University of Hong Kong** 2017–2021
B.Eng. Mechanical Engineering Hong Kong SAR, China
- National University of Singapore** 2020
Academic Exchange Singapore

RESEARCH INTERESTS

- Cyber-Physical Systems
- Reinforcement Learning
- Control & Dynamics
- Heterogeneous Robots Collaboration

JOURNAL PUBLICATIONS

- Tan, K., **Niu, X.**, Q. Ji, L. Feng, and M. Törngren, "Optimal gait design for a soft quadruped robot via multi-fidelity Bayesian optimization," *Applied Soft Computing*, vol. 169, p. 112568, 2025.

CONFERENCE PUBLICATIONS

- Niu, X.** and Broo, D. G. Investigating Symbiosis in Robotic Ecosystems: A Case Study for Multi-Robot Reinforcement Learning Reward Shaping. In *2025 9th International Conference on Robotics and Automation Sciences (ICRAS)*. IEEE
- Niu, X.**, Calvo, N., and Broo, D. G. Enabling Symbiosis in Multi-Robot Systems through Multi-Agent Reinforcement Learning. In *2025 IEEE 8th International Conference on Industrial Cyber-Physical Systems (ICPS)*. IEEE
- Niu, X.***, Tan, K.*, Broo, D. G. and Feng, L.. Optimal Gait Control for a Tendon-driven Soft Quadruped Robot by Model-based Reinforcement Learning. In *2025 International Conference on Robotics and Automation (ICRA)*. IEEE

OTHER PUBLICATIONS

- Maser Thesis: Xuezhhi, N. (2023). Optimal Gait Control of Soft Quadruped Robot by Model-based Reinforcement Learning. Thesis, 2023. Available: DiVA, id: diva2:1810127.
- HK project: C. Egenäs*, F. Ekman*, C. Ma*, T. Naser*, **X. Niu***, A. Sernelin*, S. Stenow*, and B. Ström*, "Electronically Vacuum Regulated Shut-off Valve for Milking System," Report (Refereed), 2023. [Online]. Available: DiVA, id: diva2:1738909.

PROFESSIONAL SERVICE

- Reviewer for IEEE-RAS International Conference on Humanoid Robots (Humanoids), IEEE International Conference on Industrial Cyber-Physical Systems (ICPS), IEEE International Conference on Robot and Human Interactive Communication (ROMAN)
- Teaching assistant for master level courses at KTH (MF2007) and Uppsala (1DT106, 1DT108, 1DT054, 1RT495, 1DT104, 1DT059)
- Master thesis supervision

AWARDS & ACHIEVEMENTS

- IEEE Robotics and Automation Society Travel Grant Awardee for ICRA, Atlanta, United States 2025.5
- Talent Development Scholarship, Hong Kong SAR, China 2020.6
- Second Prize in National Finals of the Challenge Cup Competition, Beijing, China 2019.11
- Silver Prize in National Finals of Internet + Competition, Hangzhou, China 2019.10
- Second Prize in HK University Student Innovation and Entrepreneurship Competition, Hong Kong SAR, China 2019.4