



# NIU Xuezhi

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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
- Control & Dynamics
- Reinforcement Learning
- 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, 2025.
- 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, 2025.
- 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, 2025.

## OTHER PUBLICATIONS

- Maser Thesis: Xuezhi, 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 International Conference on Robotics and Automation (ICRA), IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM), 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 (Ibrahim Bala)

**AWARDS & ACHIEVEMENTS**

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- 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*