

NIU Xuezhi

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EDUCATION

- Uppsala University Ph.D. Student in Embedded Systems
- KTH Royal Institute of Technology M.Sc. Mechatronics
- City University of Hong Kong B.Eng. Mechanical Engineering
- National University of Singapore Academic Exchange

Research Interests

- Cyber-Physical Systems
- Reinforcement Learning

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.*, 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: 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-RAS International Conference on Humanoid Robots (Humanoids), IEEE International Conference on Industrial Cyber-Physical Systems (ICPS)
- Teaching assistant for master level courses at KTH (MF2007) and Uppsala (1DT106, 1DT108, 1DT054, 1RT495, 1DT104, 1DT059)

AWARDS & ACHIEVEMENTS

IEEE Robotics and Automation Society Travel Grant Awardee for ICRA	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 Competiti	ion 2019.4

TECHNICAL SKILLS

• MATLAB/Simulink, Python, C/C++, ROS/ROS2, Docker, Conda, Git, Inkscape, LATEX, Gazebo, Isaac Sim, STM32, ESP32, Jetson, Raspberry Pi, UART, SPI, I2C, TCP/IP, SolidWorks, AutoCAD.

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2024–present Uppsala, Sweden 2021–2023 Stockholm, Sweden 2017–2021 Hong Kong SAR, China 2020 Singapore

• Control & Dynamics