Shangqun Yu

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Education

2022 – current **Ph.D. Computer Science, University of Massachusetts Amherst**
GPA: 3.9/4.0

2020 – 2022 **M.Sc. Computer Science, Brown University**
GPA: 4.0/4.0

2015 – 2019 **B.Sc. Computer Science, Shanghai Jiao Tong University**
GPA: 89.4/100

Research Interests

Robotics, Reinforcement Learning, Model Based Control, Legged Locomotion

Research Publications

Conference Proceedings

1. **S. Yu**, N. Perera, D. Marew, and D. Kim, "Learning generic and dynamic locomotion of humanoids across discrete terrains," in *2024 IEEE-RAS 23rd International Conference on Humanoid Robots (Humanoids)*, 2024.
2. D. Marew, N. Perera, **S. Yu**, S. Roelker, and D. Kim, "A biomechanics-inspired approach to soccer kicking for humanoid robots," in *2024 IEEE-RAS 23rd International Conference on Humanoid Robots (Humanoids)*, 2024.
3. N. Perera, **S. Yu**, D. Marew, *et al.*, "Staccatoe: A single-leg robot that mimics the human leg and toe," in *2024 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2024.
4. N. Guan, **S. Yu**, S. Zhu, and D. Kim, "Impedance matching: Enabling an rl-based running jump in a quadruped robot," in *2024 21st International Conference on Ubiquitous Robots (UR)*, 2024.
5. D. Marew, M. Lvovsky, **S. Yu**, S. Sessions, and D. Kim, "Integration of riemannian motion policy with whole-body control for collision-free legged locomotion," in *2023 IEEE-RAS 22nd International Conference on Humanoid Robots (Humanoids)*, 2023.
6. H. Fu, **S. Yu**, S. Tiwari, M. Littman, and G. Konidaris, "Meta-learning parameterized skills," in *Proceedings of the 40th International Conference on Machine Learning*, 2023.
7. S. Lobel, S. Rammohan, B. He, **S. Yu**, and G. Konidaris, "Q-functionals for value-based continuous control," in *Proceedings of the AAAI Conference on Artificial Intelligence*, 2023.
8. H. Fu, **S. Yu**, M. Littman, and G. Konidaris, "Model-based lifelong reinforcement learning with bayesian exploration," in *Advances in Neural Information Processing Systems*, 2022.

Journal Articles

1. M. M. Baker, A. New, M. Aguilar-Simon, *et al.*, "A domain-agnostic approach for characterization of lifelong learning systems," *Neural Networks*, 2023.

Research Experience

2022 – current **Graduate Research Assistance, DARoS Lab @ UMASS**
A Novel Framework for the Hardware and Control Co-design of Dynamic Humanoid Robots with Electric Motors

2020 – 2022 **Research Assistance, Intelligent Robot Lab @ Brown University**
Learning Task-Specific Representations for Broadly Capable Reinforcement Learning Agents

Technical Skills

Python, C++, C#, Java, PyTorch, Tensorflow, Matlab, LaTex, Linux, Git, Ros, Onshape.

Teaching Experience

Teaching Assistance

2024 - Present Systems for Data Science

Sep 2022 - Dec 2022 Introduction to Robotics: Perception, Mechanics, Dynamics and Control

Sep 2021 - Dec 2021 Learning and Sequential Decision Making

Academic Service

Reviewer - **IROS 24**, **Humanoids 24**, **ICRA 23**, **Ubiquitous Robots 23**.