Welcome to the Novel Engineering for Swarm Technologies Lab!

We conduct research on swarm robotics, including coordination algorithms, software engineering, and human-swarm interaction.

Recent News

GRIE People's Choice Award (April 5, 2022)

Josh Bloom is the recipient of the People's Choice Award at WPI's Graduate Student Innovation Exchange (GRIE). He presented the talk What's Your Intention? Deep Intention Reinforcement Learning for Physically Constrained Multi-Agent Cooperation.

AAMAS Best Paper Award (February 3, 2022)

Ashay Aswale, Antonio Lopez, Aukkawut Ammartayakun, and Carlo Pincirol are the recipient of the Best Paper Award at AAMAS2022. The paper title is Hacking the Colony: On the Disruptive Effect of Misleading Pheromone and How to Defend Against It.

Ashay Successfully Defended His Qualifier Exam (February 1, 2022)

Ashay Aswale successfully defended his Qualifier exam. Congratulations Ashay!

Josh Successfully Defended His Qualifier Exam (December 7, 2021)

Josh Bloom successfully defended his Qualifier exam. Congratulations Josh!

Jayam Successfully Defended His PhD (February 1, 2021)

Jayam Patel successfully defended his PhD dissertation. Congratulations Dr. Patel!

Nathalie Successfully Defended Her PhD (January 22, 2021)

Nathalie Majcherczyk successfully defended her PhD dissertation. Congratulations Dr. Majcherczyk!

Recent Publications
Hacking the Colony: On the Disruptive Effect of Misleading Pheromone and How to Defend Against It

Ashay Aswale, Aukkawut Ammartayakun, Antonio Lopez, Carlo Pinciroli. AAMAS 2022 (Best Paper Award, in press).


Distributed Data Storage and Fusion for Collective Perception in Resource-Limited Mobile Robot Swarms


Flow-FL: Data-Driven Federated Learning for Spatio-Temporal Predictions in Multi-Robot Systems


SMAC: Symbiotic Multi-Agent Construction