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

WPI Team Capricorn qualifies for NASA Space Robotics Challenge (January 15, 2021)

WPI’s Team Capricorn passes the qualification round in the NASA Space Robotics Challenge, advancing to the final competition round with 21 other teams out of 114 registered teams.

Dr. Glenn Yee Graduate Student Tuition Award (August 5, 2020)

Nathalie Majchercyzk was the recipient of a Dr. Glenn Yee Graduate Student Tuition Award.

Amazon Research Award (June 17, 2020)

Carlo Pinciroli was the recipient of an Amazon Research Award for the project An Immersive Interface for Multi-User Supervision of Multi-Robot Operations.

NSF Grant (March 23, 2020)

Profs. Jing Xiao, Marko Popovic, Jie Fu, and Carlo Pinciroli are lead and co-PIs on a new NSF award “Phase II I/UCRC WPI: Center for Robots and Sensors for the Human Well-Being”.

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 (full paper, in press).

On Multi-Human Multi-Robot Remote Interaction: A Study of Transparency, Inter-Human
Communication, and Information Loss in Remote Interaction


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