Resources

Multimedia

- NPS LaTeX Thesis Portal
  - Has the most up-to-date (and Thesis Processing Office-approved) templates, helpful FAQs, and a place to report any issues
- Data sets
  - Robot logs
  - Camp Roberts
- Photo galleries

Software

Cooperative Localization for Multi-UAV

Referenced in Davis’ M.S. thesis, "Applying Cooperative Localization to Swarm UAVs using an Extended Kalman Filter"

- Robot Operating System source files (in Python) (ROS_ArDrone_CL.zip)

A Modular Framework for Swarm Search Simulation Modeling and Analysis


- MATLAB files (SwarmSearch_matlab.zip)
- Design of Experiment files (SwarmSearch_DoE.zip)

Agent-based Simulation of Swarm Tactics

Referenced in Uwe Gaertner’s M.S. thesis, "UAV Swarm Tactics: An Agent-based Simulation and Markov Process Analysis"

- Agent-based simulation model (implemented in MASON) (UAVSwarm_source.jar)
- Executable versions: UAVSwarm.jar, UAVSwarmGUI.jar
- Central Composite Design experimental design matrix (csv)
- Nearly-orthogonal Latin Hypercube experimental design matrix (csv)

Other Software

- Robot Operating System (ROS) links
- SASIO Decision Support Tool
  - Camp Roberts - Multi-agent Teaming for Surveillance, Tracking, and Interdiction
  - Joint Expeditionary Force Experiment (JEFX10-3) - Joint Convoy Protection
- Probabilistic quadtrees (collaboration with Stefano Carpin)
- MATLAB scripts for fundamental search theory concepts
- SASIO Simulation Analysis Tool
  - Teaming for Surveillance, Tracking, and Interdiction
  - Exhaustive Probabilistic Search

Interesting Links

- Robotics and Automation Magazine YouTube Channel
- Robotics Innovations Competition and Conference