

Project Title: Multi-robot Motion Planning for Mobile Robots
Faculty Supervisor: Thomas Howard

Description: This project will involve the development of multi-robot motion planning algorithms for mobile robots in the Robotics and Artificial Intelligence Laboratory under the supervision of Prof. Thomas Howard. The undergraduate research assistant will be involved in the development of ROS2 modules for experimentation that will include work in perception, localization, planning, and control and interface with research being done in natural language understanding of robot instructions. Research activities may include the development of hardware that augments the basic capabilities of the mobile robots.

Skills:

Requirements:

- ECE 216: Mechatronics and Embedded Systems
- ECE 114: Introduction to C/C++ Programming

Recommended:

- ECE 217/417: Robot Motion Planning and Manipulation
- ECE 218/417: Mobile Robot Mapping, Estimation, and Interaction
- Experience in ROS/ROS2 programming, mechanical design, 3D printing, and robotic experimentation