

Yongguo Mei

Energy-Efficient Mobile Robots

Abstract: Mobile robots can be used in many applications, such as carpet cleaning, search and rescue, exploration, and entertainment. They usually carry limited energy and thus energy conservation is important. To my best knowledge, my PhD thesis is the first one focusing on energy-efficient mobile robots. In this presentation, I will focus on two topics: robotic exploration and multi-robot coordination. The first one is about an energy-efficient motion strategy for a robot to explore an unknown area and build a map. The second one is on coordination algorithms for a group of robots to maintain a large number of sensors (sensor networks) and save motion and communication cost. My plan of future research will also be discussed.