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Adaptive Learning for Multi-Agent Navigation

In crowded multi-agent navigation, the motion of the agents is constrained by the motion of nearby agents. This makes planning paths difficult and leads to inefficient global motion. We formulate the problem as an action-selection problem, and propose an approach that enables agents to compute in real-time efficient and collision-free motions. We demonstrate experimentally how the approach works in a variety of scenarios in simulation and with a few real robots.