Special Issue

Intelligent Control and Robotic System in Path Planning

Message from the Guest Editor

Recently, path planning has been applied to complex environment, whether it is known or unknown. For unknown environments, systems that are capable of SLAM can use optimum coverage path planning approaches to achieve systematic coverage of the entire free space. Some common global path-planning algorithms include rapidly-exploring random trees and graph search algorithms. Examples include A* and D* algorithms, optimization of predefined paths, artificial potential field methods, mathematical programming and optimization, tangent graph-based planning, evolutionary algorithms, simulated annealing, particle swarm optimization, and partially observable Markov decision processes. Path planning and trajectory planning are important issues in the field of robotics, vehicles, and, automation. Contributions from all fields related to path planning using intelligent system methods are welcome for this Special Issue.

Guest Editor

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Deadline for manuscript submissions

closed (15 December 2022)

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About the Journal

Message from the Editorial Board

We are just entering the Next Wave of Technology (NWT) where actuators will play the same role as the computer chip did for computers/social media approximately four decades ago. Just in the U.S., production of $1 trillion year of electromechanical systems (vehicles, orthotics, manufacturing cells, freight trains, aircraft, etc.) will be impacted by the NWT, all driven by actuators. Five key trends can be found for the future perspectives: “Performance to Reliability”, “Hard to Soft”, “Macro to Nano”, “Homo to Hetero” and “Single to Multi functional”. We invite papers that primarily impact these economic sectors; those illustrating basic scientific principles are also welcome.

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