Title

Motion Planning for Mobile Robots & Manipulators with MATLAB®

Presenters

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Abstract

Adding autonomy to any system, such as a self-driving car, includes three main building blocks: perception, planning, and control. In this session, we will see how some of the popular motion planning algorithms work and how you can use them with MATLAB to simulate and deploy for mobile robot navigation as well as robot manipulators.

Bios

Mihir Acharya supports the Robotics and Autonomous Systems applications at MathWorks, focusing on Autonomous Navigation. Prior to MathWorks, Mihir has worked with ABB Corporate Research, where he designed and developed mechatronics systems such as end effectors for robot manipulation. Mihir also worked with Omron Adept Technologies for a year, conducting research on various path planning algorithms and their efficiency on a mobile robot platform. Mihir holds an MS in Robotics Engineering from Worcester Polytechnic Institute (WPI). While at WPI, Mihir's focus of study was mobile robotics and he also worked as the lab assistant of the Music, Perception, and Robotics Lab (mprlab) where he designed state-of-the-art musical robots (interactive platforms to generate music).

YJ Lim is a Senior Technical Product Manager of robotics and autonomous systems at the MathWorks. He has over 20 years of experience in robotics and autonomous systems area. Lim's responsibility in MathWorks includes long-term strategy development and product management of robotics and autonomous systems. Before joining MathWorks, Lim worked at Vecna Robotics based in Waltham, MA as a Sr. Project Manager focused on Vecna's advanced robotics system development. Prior to Vecna, he served as the Chief Innovation Officer at Hstar Technologies, a startup focused on agile mobile robotic platform and healthcare service robotics system. He worked with government agencies and served on governmental working groups on matters of advanced robotics system research. Lim also led development teams at Energid Technologies, a firm that provides engineering services and products for advanced robotic, machine-vision, and simulation applications, for robotic software development. Lim received his Ph.D. in mechanical engineering from Rensselaer Polytechnic Institute (RPI) and his Master from KAIST in S. Korea.