

Abstract

Ahmed Khamies El-Shenawy

Practical Construction and Position Control of a Modular Actuated Holonomic Wheeled Mobile Robot.

The presented work is related to previous development of the holonomic wheeled mobile robot C3P. This paper focuses on the platform implementation; the kinematics/ dynamics solutions used for its position control structure. The platform prototype is proposed in detailed description concerning its construction; configuration. A controller based on feed forwarding the inverse dynamics torques with the inverse kinematics to overcome the platform singularities is proposed. The based controllers practical experiments results illustrate the position controller performance; its efficiency