

Energy Management Techniques in Mobile Robots

Authors : G. Gurguze, I. Turkoglu

Abstract : Today, the developing features of technological tools with limited energy resources have made it necessary to use energy efficiently. Energy management techniques have emerged for this purpose. As with every field, energy management is vital for robots that are being used in many areas from industry to daily life and that are thought to take up more spaces in the future. Particularly, effective power management in autonomous and multi robots, which are getting more complicated and increasing day by day, will improve the performance and success. In this study, robot management algorithms, usage of renewable and hybrid energy sources, robot motion patterns, robot designs, sharing strategies of workloads in multiple robots, road and mission planning algorithms are discussed for efficient use of energy resources by mobile robots. These techniques have been evaluated in terms of efficient use of existing energy resources and energy management in robots.

Keywords : energy management, mobile robot, robot administration, robot management, robot planning

Conference Title : ICRESEM 2017 : International Conference on Renewable Energy Sources and Energy Management

Conference Location : Copenhagen, Denmark

Conference Dates : October 02-03, 2017