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2014 IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2014
23 February 2015, Article number 7047427
2014 IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2014; Berjaya
Hotels and Resorts Kuala LumpurKuala Lumpur; Malaysia; 25 November 2014 through ; Category numberCFP14YAG-
ART; Code 112417

Smart inertial sensor-based navigation system for flexible snake robot

(Conference Paper)

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Abstract

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The position and orientation of a robot during the navigation is a big challenge to the researchers. The received signal strength information (RSSI) of Wifi or Bluetooth or RFID is the available way to solve this issue for the localization researches. But the obstacles in the environment are very big challenge for this technology. RSSI should be vulnerable depends on the obstacle, if it is dynamic environment then there is nothing to say about this signal. Thus inertial sensors like accelerometer and rate gyro are chosen for flexible snake robot localization in planar surface navigation. This paper describes the methods of navigation positioning system using inertial sensor and finally, perform the experiment with the flexible snake robot for indoor position and orientation. © 2014 IEEE.

Author keywords

Flexible Snake Robot Inertial Sensor Navigation Position and orientation

ISBN: 978-147998041-3

Source Type: Conference
Proceeding

Original language: English

DOI: 10.1109/ICSIMA.2014.7047427

Document Type: Conference Paper

Sponsors:

Publisher: Institute of Electrical and Electronics
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