Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping

Nezih Ergin Özkucur

Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping

Nezih Ergin Özkucur

Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping Nezih Ergin Özkucur

The Simultaneous Localization and Mapping (SLAM) problem is one of the most challenging problems in robot navigation. The problem addresses autonomously exploring and mapping an unknown environment without prior knowledge (of features). The robot should generate the map of the environment and estimate its pose with respect to the map. An extension of this problem to the distributed multi-robot platform is a popular research topic for its challenges and commitments. Multiple cooperative robots exploring an area would decrease exploration time and increase the accuracy. This work introduces the application of two successful SLAM solution techniques to the multi-robot domain using visual sensors and non-unique landmarks. There are two contributions to the literature: Evolutionary Strategies (ES) is used to calibrate the parameters of the Extended Kalman Filter-SLAM (EKF-SLAM) method with supervised data, and a novel map merging method with uncertainty propagation is introduced for the Fast-SLAM algorithm. The developed algorithms are tested in both simulated and real robot experiments and the improvements and applicability of the developed methods are shown with the results.

Download and Read Free Online Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping Nezih Ergin Özkucur

---

From reader reviews:

Stephen Louis:

Have you spare time to get a day? What do you do when you have a lot more or little spare time? Sure, you can choose the suitable activity intended for spend your time. Any person spent all their spare time to take a stroll, shopping, or went to the particular Mall. How about open or read a book called Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping? Maybe it is to get best activity for you. You realize beside you can spend your time together with your favorite's book, you can smarter than before. Do you agree with their opinion or you have other opinion?

Carlos Vickers:

This Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping book is absolutely not ordinary book, you have after that it the world is in your hands. The benefit you get by reading this book will be information inside this publication incredible fresh, you will get info which is getting deeper a person read a lot of information you will get. This Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping without we realize teach the one who reading it become critical in contemplating and analyzing. Don't become worry Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping can bring any time you are and not make your case space or bookshelves' grow to be full because you can have it inside your lovely laptop even mobile phone. This Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping having great arrangement in word and also layout, so you will not experience uninterested in reading.

Anthony Rouse:

Reading can called brain hangout, why? Because when you are reading a book especially book entitled Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping the mind will drift away trough every dimension, wandering in each aspect that maybe unfamiliar for but surely can be your mind friends. Imaging just about every word written in a guide then become one contact form conclusion and explanation that will maybe you never get prior to. The Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping giving you one more experience more than blown away the mind but also giving you useful facts for your better life with this era. So now let us present to you the relaxing pattern this is your body and mind will likely be pleased when you are finished reading through it, like winning a casino game. Do you want to try this extraordinary paying spare time activity?

Benjamin Williams:

In this age globalization it is important to someone to receive information. The information will make anyone to understand the condition of the world. The health of the world makes the information better to share. You can find a lot of referrals to get information example: internet, magazine, book, and soon. You will see that now, a lot of publisher that will print many kinds of book. The particular book that

recommended to you personally is Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping this reserve consist a lot of the information in the condition of this world now. This particular book was represented just how can the world has grown up. The terminology styles that writer make usage of to explain it is easy to understand. Typically the writer made some study when he makes this book. This is why this book appropriate all of you.

Download and Read Online Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping Nezih Ergin Özkucur #0WCX6OLY4S1

Read Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping by Nezih Ergin Özkucur for online ebook

Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping by Nezih Ergin Özkucur Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping by Nezih Ergin Özkucur books to read online.

Online Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping by Nezih Ergin Özkucur ebook PDF download

Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping by Nezih Ergin Özkucur Doc

Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping by Nezih Ergin Özkucur Mobipocket

Multi-Agent Visual-SLAM Algorithms on Autonomous Robots: Multi-Robot Mapping by Nezih Ergin Özkucur EPub