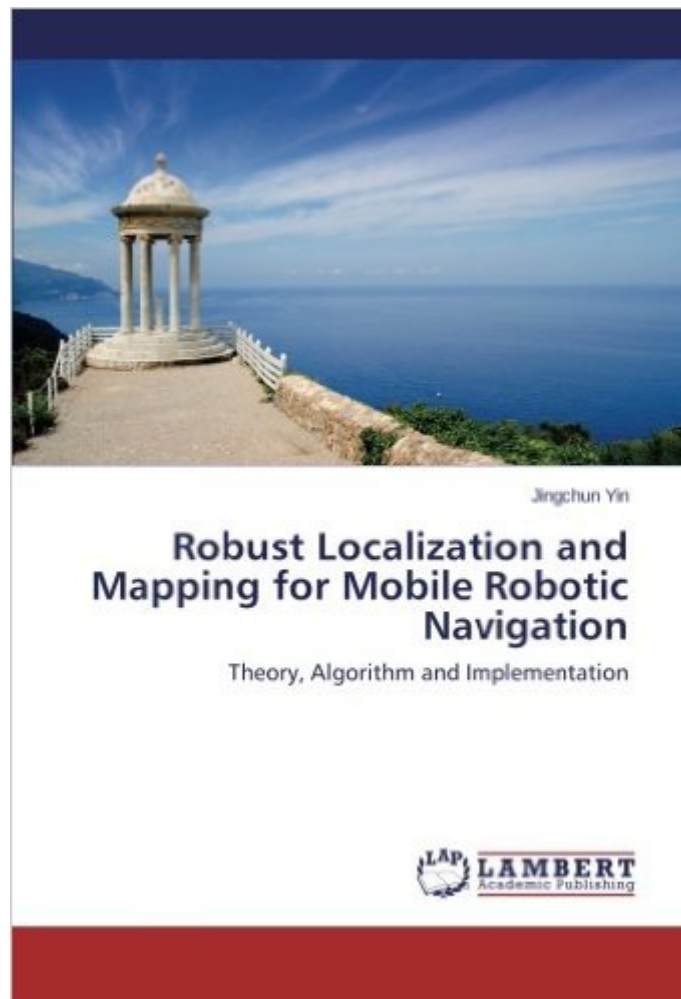


The book was found

Robust Localization And Mapping For Mobile Robotic Navigation: Theory, Algorithm And Implementation



Synopsis

How can mobile robot navigate autonomously without the knowledge of its own state of pose and the model of the surrounding environment? Simultaneous Localization and Mapping (SLAM) is the mobile robot's significant and critical perceptual capability to achieve autonomous navigation, and it is applied in a wide range of application fields. Graph-based SLAM constructs a hierarchical topological graph to address the issues of localization and mapping, where the local relative spatial displacement of roto-translation and the global trajectory of the mobile robot are estimated, respectively. Then each local map can be transformed and integrated to the unique global frame for the construction of the global map. The theory, algorithm, and implementation of Graph-SLAM are explained in detail in this book. Scan matching is performed to estimate the local relative roto-translation, batch optimization is executed to estimate the global mobile robot's trajectory, and the global line-feature-based mapping is applied to construct the global line-feature model of the environment. The results in the experiments will verify the effectiveness of the proposed graph-based SLAM algorithm.

Book Information

Paperback: 132 pages

Publisher: LAP LAMBERT Academic Publishing (April 30, 2014)

Language: English

ISBN-10: 3838360117

ISBN-13: 978-3838360119

Product Dimensions: 5.9 x 0.3 x 8.7 inches

Shipping Weight: 8.6 ounces (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #9,898,821 in Books (See Top 100 in Books) #74 in Books > Computers & Technology > Programming > Software Design, Testing & Engineering > Localization

[Download to continue reading...](#)

Robust Localization and Mapping for Mobile Robotic Navigation: Theory, Algorithm and Implementation
Mobile Apps Made Simple: The Ultimate Guide to Quickly Creating, Designing and Utilizing Mobile Apps for Your Business - 2nd Edition (mobile application, ... programming, android apps, ios apps)
VLSI Analog Signal Processing Circuits: Algorithm, Architecture, Modeling, and Circuit Implementation
Robotics: The Beginner's Guide to Robotic Building, Technology, Mechanics, and Processes (Robotics, Mechanics, Technology, Robotic Building, Science)
Edinburgh: Mapping

the City (Mapping the Cities Series) Strapdown Inertial Navigation Technology (IEE Radar, Sonar, Navigation and Avionics Series) The Future Air Navigation System (FANS): Communications, Navigation, Surveillance - Air Traffic Management (CNS/ATM) Adaptive Sampling with Mobile WSN: Simultaneous Robot Localisation and Mapping of Paramagnetic Spatio-Temporal Fields (Iet Control Engineering Series) Robust Control Systems: Theory and Case Studies Localization Algorithms and Strategies for Wireless Sensor Networks New Antibody Microarray Tube for Cellular Localization and Signaling Pathways The Game Localization Handbook Functional localization in relation to frontal lobotomy (The William Withering memorial lectures, the Birmingham Medical School) Mobile Design and Development: Practical concepts and techniques for creating mobile sites and web apps (Animal Guide) Mobile App Marketing And Monetization: How To Promote Mobile Apps Like A Pro: Learn to promote and monetize your Android or iPhone app. Get hundreds of thousands of downloads & grow your app business Mobile Computing Principles: Designing and Developing Mobile Applications with UML and XML Designing Mobile Payment Experiences: Principles and Best Practices for Mobile Commerce Apps: Make Your First Mobile App Today- App Design, App Programming and Development for Beginners (ios, android, smartphone, tablet, apple, samsung, App ... Programming, Mobile App, Tablet App Book 1) The Bike Doctor's Mobile Bicycle Repair Manual: How to Start and Run A Mobile Bicycle Repair Shop The Mobile Mind Shift: Engineer Your Business to Win in the Mobile Moment

[Dmca](#)