Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics)

Tudor Nicosevici, Rafael Garcia

Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics)

Tudor Nicosevici, Rafael Garcia

Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) Tudor Nicosevici, Rafael Garcia

This book proposes a complete pipeline for monocular (single camera) based 3D mapping of terrestrial and underwater environments. The aim is to provide a solution to large-scale scene modeling that is both accurate and efficient. To this end, we have developed a novel Structure from Motion algorithm that increases mapping accuracy by registering camera views directly with the maps. The camera registration uses a dual approach that adapts to the type of environment being mapped.

In order to further increase the accuracy of the resulting maps, a new method is presented, allowing detection of images corresponding to the same scene region (crossovers). Crossovers then used in conjunction with global alignment methods in order to highly reduce estimation errors, especially when mapping large areas. Our method is based on Visual Bag of Words paradigm (BoW), offering a more efficient and simpler solution by eliminating the training stage, generally required by state of the art BoW algorithms.

Also, towards developing methods for efficient mapping of large areas (especially with costs related to map storage, transmission and rendering in mind), an online 3D model simplification algorithm is proposed. This new algorithm presents the advantage of selecting only those vertices that are geometrically representative for the scene.

Download and Read Free Online Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) Tudor Nicosevici, Rafael Garcia

---

From reader reviews:

John Krumm:

Have you spare time for any day? What do you do when you have considerably more or little spare time? Yeah, you can choose the suitable activity to get spend your time. Any person spent all their spare time to take a wander, shopping, or went to often the Mall. How about open or even read a book allowed Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics)? Maybe it is for being best activity for you. You realize beside you can spend your time along with your favorite's book, you can smarter than before. Do you agree with it has the opinion or you have other opinion?

Kevin Pinkney:

As people who live in the actual modest era should be change about what going on or facts even knowledge to make these keep up with the era and that is always change and progress. Some of you maybe will update themselves by reading books. It is a good choice to suit your needs but the problems coming to you is you don't know what one you should start with. This Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) is our recommendation so you keep up with the world. Why, as this book serves what you want and need in this era.

Travis Hargrove:

Nowadays reading books become more and more than want or need but also be a life style. This reading behavior give you lot of advantages. The advantages you got of course the knowledge even the information inside the book that improve your knowledge and information. The knowledge you get based on what kind of guide you read, if you want attract knowledge just go with education and learning books but if you want really feel happy read one using theme for entertaining such as comic or novel. The Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) is kind of publication which is giving the reader capricious experience.

Robert Quinonez:

The particular book Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) has a lot info on it. So when you read this book you can get a lot of help. The book was compiled by the very famous author. Tom makes some research prior to write this book. That book very easy to read you can find the point easily after reading this book.

Download and Read Online Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) Tudor Nicosevici, Rafael Garcia #4E9HVXCL1SY

Read Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) by Tudor Nicosevici, Rafael Garcia for online ebook

Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) by Tudor Nicosevici, Rafael Garcia 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 Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) by Tudor Nicosevici, Rafael Garcia books to read online.

Online Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) by Tudor Nicosevici, Rafael Garcia ebook PDF download

Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) by Tudor Nicosevici, Rafael Garcia Doc

Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) by Tudor Nicosevici, Rafael Garcia Mobipocket

Efficient 3D Scene Modeling and Mosaicing (Springer Tracts in Advanced Robotics) by Tudor Nicosevici, Rafael Garcia EPub