



Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series)

By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza

[Download now](#)

[Read Online](#) 

Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza

Mobile robots range from the Mars Pathfinder mission's teleoperated Sojourner to the cleaning robots in the Paris Metro. This text offers students and other interested readers an introduction to the fundamentals of mobile robotics, spanning the mechanical, motor, sensory, perceptual, and cognitive layers the field comprises. The text focuses on mobility itself, offering an overview of the mechanisms that allow a mobile robot to move through a real world environment to perform its tasks, including locomotion, sensing, localization, and motion planning. It synthesizes material from such fields as kinematics, control theory, signal analysis, computer vision, information theory, artificial intelligence, and probability theory. The book presents the techniques and technology that enable mobility in a series of interacting modules. Each chapter treats a different aspect of mobility, as the book moves from low-level to high-level details. It covers all aspects of mobile robotics, including software and hardware design considerations, related technologies, and algorithmic techniques.

This second edition has been revised and updated throughout, with 130 pages of new material on such topics as locomotion, perception, localization, and planning and navigation. Problem sets have been added at the end of each chapter. Bringing together all aspects of mobile robotics into one volume, *Introduction to Autonomous Mobile Robots* can serve as a textbook or a working tool for beginning practitioners.

Curriculum developed by Dr. Robert King, Colorado School of Mines, and Dr. James Conrad, University of North Carolina-Charlotte, to accompany the National Instruments LabVIEW Robotics Starter Kit, are available. Included are 13 (6 by Dr. King and 7 by Dr. Conrad) laboratory exercises for using the LabVIEW Robotics Starter Kit to teach mobile robotics concepts.

 [Download](#) Introduction to Autonomous Mobile Robots (Intellig ...pdf

 [Read Online](#) Introduction to Autonomous Mobile Robots (Intell ...pdf

Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series)

By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza

Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza

Mobile robots range from the Mars Pathfinder mission's teleoperated Sojourner to the cleaning robots in the Paris Metro. This text offers students and other interested readers an introduction to the fundamentals of mobile robotics, spanning the mechanical, motor, sensory, perceptual, and cognitive layers the field comprises. The text focuses on mobility itself, offering an overview of the mechanisms that allow a mobile robot to move through a real world environment to perform its tasks, including locomotion, sensing, localization, and motion planning. It synthesizes material from such fields as kinematics, control theory, signal analysis, computer vision, information theory, artificial intelligence, and probability theory. The book presents the techniques and technology that enable mobility in a series of interacting modules. Each chapter treats a different aspect of mobility, as the book moves from low-level to high-level details. It covers all aspects of mobile robotics, including software and hardware design considerations, related technologies, and algorithmic techniques.

This second edition has been revised and updated throughout, with 130 pages of new material on such topics as locomotion, perception, localization, and planning and navigation. Problem sets have been added at the end of each chapter. Bringing together all aspects of mobile robotics into one volume, *Introduction to Autonomous Mobile Robots* can serve as a textbook or a working tool for beginning practitioners.

Curriculum developed by Dr. Robert King, Colorado School of Mines, and Dr. James Conrad, University of North Carolina-Charlotte, to accompany the National Instruments LabVIEW Robotics Starter Kit, are available. Included are 13 (6 by Dr. King and 7 by Dr. Conrad) laboratory exercises for using the LabVIEW Robotics Starter Kit to teach mobile robotics concepts.

Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza **Bibliography**

- Sales Rank: #197907 in Books
- Brand: Brand: The MIT Press
- Published on: 2011-02-18
- Original language: English
- Number of items: 1
- Dimensions: 9.00" h x .75" w x 7.00" l, 1.95 pounds
- Binding: Hardcover
- 472 pages



[Download Introduction to Autonomous Mobile Robots \(Intellig ...pdf](#)



[**Read Online**](#) **Introduction to Autonomous Mobile Robots (Intell ...pdf**

Download and Read Free Online Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza

Editorial Review

Review

This book is well suited for graduate courses in robotics, where it can provide a synthesis of the solutions and rapidly introduce problems for research.

(G. Gini *Computing Reviews*)

This text provides a clear and systematic development of the essentials of mobile robotics. The second edition adds up-to-date material to a book that has already been adopted in robotics classes worldwide. With this guide in hand, students and readers will swiftly navigate the field toward more advanced systems.

(Raja Chatila, LAAS-CNRS, France)

About the Author

Davide Scaramuzza is Senior Researcher at the Autonomous Systems Lab at ETH Zürich, where he is also a lecturer and leader of the European project sFly.

Roland Siegwart is Professor of Autonomous Systems and Director of the Center for Product Design at the Institute of Robotics and Intelligent Systems, ETH Zürich.

Illah R. Nourbakhsh is Associate Professor of Robotics in the Robotics Institute, School of Computer Science, at Carnegie Mellon University.

Users Review

From reader reviews:

James Lindberg:

This Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) book is absolutely not ordinary book, you have after that it the world is in your hands. The benefit you have by reading this book is actually information inside this reserve incredible fresh, you will get info which is getting deeper you actually read a lot of information you will get. This Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) without we know teach the one who looking at it become critical in contemplating and analyzing. Don't be worry Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) can bring any time you are and not make your case space or bookshelves' turn out to be full because you can have it inside your lovely laptop even mobile

phone. This Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) having very good arrangement in word in addition to layout, so you will not experience uninterested in reading.

Shannon Bland:

The book untitled Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) is the reserve that recommended to you to see. You can see the quality of the e-book content that will be shown to you. The language that publisher use to explained their ideas are easily to understand. The copy writer was did a lot of study when write the book, to ensure the information that they share to you personally is absolutely accurate. You also can get the e-book of Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) from the publisher to make you a lot more enjoy free time.

Christopher Barry:

Many people spending their time frame by playing outside along with friends, fun activity along with family or just watching TV all day long. You can have new activity to spend your whole day by reading through a book. Ugh, ya think reading a book really can hard because you have to accept the book everywhere? It all right you can have the e-book, bringing everywhere you want in your Cell phone. Like Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) which is obtaining the e-book version. So , try out this book? Let's observe.

Carolyn Rolon:

Do you like reading a book? Confuse to looking for your preferred book? Or your book has been rare? Why so many problem for the book? But almost any people feel that they enjoy with regard to reading. Some people likes reading through, not only science book but in addition novel and Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) or perhaps others sources were given know-how for you. After you know how the truly great a book, you feel need to read more and more. Science book was created for teacher as well as students especially. Those guides are helping them to include their knowledge. In some other case, beside science book, any other book likes Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) to make your spare time more colorful. Many types of book like here.

Download and Read Online Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza #QV51GTJN7BS

Read Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza for online ebook

Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza 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

Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza books to read online.

Online Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza ebook PDF download

Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza Doc

Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza MobiPocket

Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza EPub

QV51GTJN7BS: Introduction to Autonomous Mobile Robots (Intelligent Robotics and Autonomous Agents series) By Roland Siegwart, Illah Reza Nourbakhsh, Davide Scaramuzza