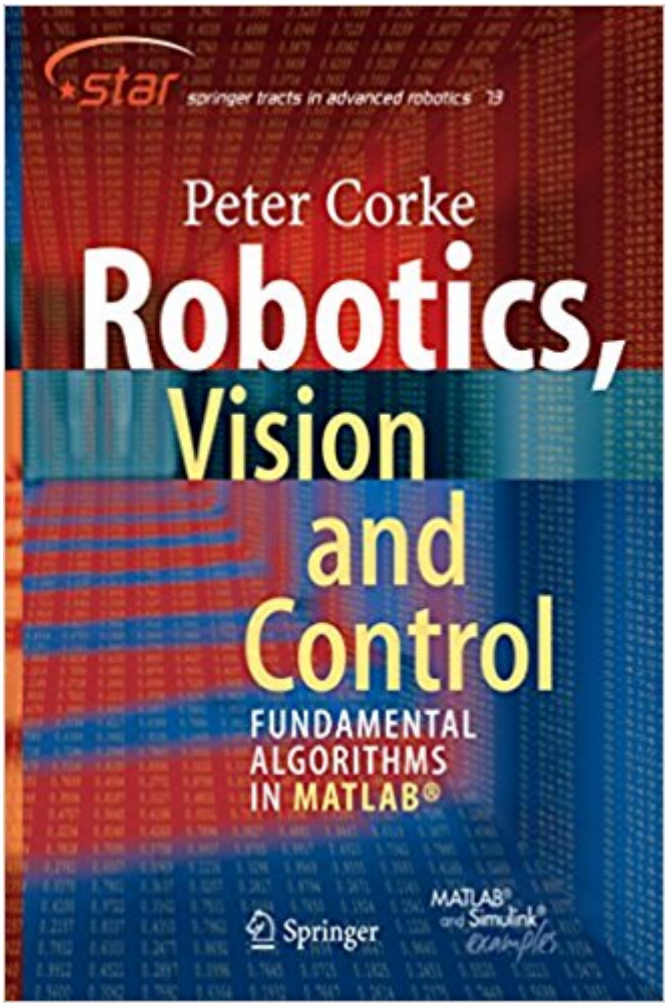
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Robotics, Vision And Control: Fundamental Algorithms In MATLAB (Springer Tracts In Advanced Robotics)



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Synopsis

The author has maintained two open-source MATLAB Toolboxes for more than 10 years: one forÃ Â robotics and one for vision. The key strength of the Toolboxes provide a set of tools that allow the user to work with real problems, not trivial examples. For the student the book makes the algorithms accessible, the Toolbox code can be read to gain understanding, and the examples illustrate how it can be used Ã¢â ¬â •instant gratification in just a couple of lines of MATLAB code. The code can also be the starting point for new work, for researchers or students, by writing programs based on Toolbox functions, or modifying the Toolbox code itself.The purpose of this book is to expand on the tutorial material provided with theÃ Â toolboxes, add many more examples, and to weave this into a narrative that covers robotics and computer vision separately and together. The author shows how complex problems can be decomposed and solved using just a few simple lines of code, and hopefully to inspire up and coming researchers. The topics covered are guided by the real problems observed over many years as a practitioner of both robotics and computer vision. It is written in a light but informative style, it is easy to readÃ Â and absorb, and includes a lot of Matlab examples and figures. The book is a real walk through the fundamentals of robot kinematics, dynamics and joint level control, then camera models, image processing, feature extraction and epipolar geometry, and bring it all together in aÃ Â visual servo system. Additional material is provided atÃ Â http://www.petercorke.com/RVC

Book Information

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Customer Reviews

understandable explanation with useful MATLAB examples to graduate students who will potentially use vision and control algorithms in domains of aerospace, robotics, and others.

A bit dense in the beginning while you recall university material on matrices, Jacobians and Laplacians, but once you again get used to it, it reads much easier.The content is fantastic, systematically organized and very applicable to a wide variety of robot designs, with many references to additional material. Stimulating to read on and exciting to carry out the Matlab examples.Highly recommended!

Outstanding treatise on Robotics with accompanying Matlab examples.

It is a great book for those people interested in learning about Robotics (vision and control). With several graphics, drawings and pictures, it is a very helpful book. I loved it.

The book itself is a great reference for who looks for general information about robotics. It also helps you use Matlabs robotic toolbox. The book has a good quality and contains nice pictures. I also received the book sooner than I expected. I am totally happy with that

This book have the same that other Robotics books have but much better explained and with further deep, very interesting.

It is definately one of the most complete book in robotic fundamentals an vision , applied on matlab.What it misses may be a better explanation in concerning authors' matlab toolbox.It explains amazingly what he does but does not help a lot in teaching you the abilities of this toolbox. This is obvious when trying to solve the chapter's exercises...

I was new to robotics 5 years ago and mid-way through that period decided I needed to get a little

more serious about the math of what I was working with. When MathWorks made Home editions of their software available for a very generous price I went for this book immediately. Peter Corke has a lot of respect in the field and I found the exercises to be extremely well organized and fun to go through. I haven't gone through the whole book yet (I'm not doing vision), but have benefited (as has my employer) from time well spent in this book. I've looked at a few Robotics best and while there are other great books, the hands on nature of this one (in the MathWorks sense) was exactly what I needed.

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