



Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library)

By F. Landis Markley, John L. Crassidis

Download now

Read Online →

Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis

This book explores both theoretical derivations and practical implementation of spacecraft attitude determination and control systems. It features real-world examples from actual working spacecraft missions.

↓ [Download Fundamentals of Spacecraft Attitude Determination ...pdf](#)

📖 [Read Online Fundamentals of Spacecraft Attitude Determinatio ...pdf](#)

Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library)

By F. Landis Markley, John L. Crassidis

Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis

This book explores both theoretical derivations and practical implementation of spacecraft attitude determination and control systems. It features real-world examples from actual working spacecraft missions.

Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis Bibliography

- Rank: #4497501 in Books
- Brand: Ingramcontent
- Published on: 2016-09-03
- Released on: 2016-09-03
- Original language: English
- Number of items: 1
- Dimensions: 9.25" h x 1.14" w x 6.10" l, 1.68 pounds
- Binding: Paperback
- 486 pages

 [Download Fundamentals of Spacecraft Attitude Determination ...pdf](#)

 [Read Online Fundamentals of Spacecraft Attitude Determinatio ...pdf](#)

Editorial Review

Review

“It is of exceptional quality in both the range of subjects covered and the detail of that coverage. ... this book has a lot to offer to those of us involved in the developments and data processing for such projects, describing in detail external forces as well as the effects of non-rigidity. ... this is a very worthwhile volume, highly recommended for anyone involved in astronomical or other satellite projects.” (Floor van Leeuwen, The Observatory, Vol. 135 (1246), June, 2015)

“This is an excellent book. Markley ... and Crassidis (Univ. of Buffalo) have succeeded in creating a work that is a good textbook for both upper-level undergraduate and graduate students as well as practitioners. ... book ends with several appendixes that further support the rest of the book and also provide novice practitioners with a good resource to help them understand the more technical and complicated material. ... Summing Up: Highly recommended. Aerospace engineering collections serving upper-division undergraduates through professionals/practitioners.” (D. B. Spencer, Choice, Vol. 52 (7), March, 2015)

From the Back Cover

This book explores topics that are central to the field of spacecraft attitude determination and control. The authors provide rigorous theoretical derivations of significant algorithms accompanied by a generous amount of qualitative discussions of the subject matter. The book documents the development of the important concepts and methods in a manner accessible to practicing engineers, graduate-level engineering students and applied mathematicians. It includes detailed examples from actual mission designs to help ease the transition from theory to practice, and also provides prototype algorithms that are readily available on the author's website.

Subject matter includes both theoretical derivations and practical implementation of spacecraft attitude determination and control systems. It provides detailed derivations for attitude kinematics and dynamics, and provides detailed description of the most widely used attitude parameterization, the quaternion. This title also provides a thorough treatise of attitude dynamics including Jacobian elliptical functions. It is the first known book to provide detailed derivations and explanations of state attitude determination, and gives readers real-world examples from actual working spacecraft missions. The subject matter is chosen to fill the void of existing textbooks and treatises, especially in state and dynamics attitude determination. MATLAB code of all examples will be provided through an external website.

About the Author

Dr. F. Landis Markley has been a leader in spacecraft attitude estimation as well as one of the most important mission engineers. He joined the Computer Sciences Corporation in 1974 and established himself as an expert on all aspects of spacecraft attitude mission support. He moved to the U. S. Naval Research Laboratory in 1978 and to NASA Goddard Space Flight Center in 1985. Since 2010, he has been Aerospace Engineer Emeritus in Goddard's Attitude Control Systems Engineering Branch. He has supported more than twenty space missions, most notably the Hubble Space Telescope, the Tropical Rainfall Measuring Mission and the Wilkinson Microwave Anisotropy Probe. Dr. Markley is the author of many classic papers in

spacecraft attitude estimation, dynamics, and control. He was one of the principal contributors to the book "Spacecraft Attitude Determination and Control" (Springer, 1978), which has been essential to the education of many astronautical engineers. He was elected Fellow of the AIAA in 1998 and of the AAS in 2007 and has been a Goddard Senior Fellow since 2000. He is a recipient of the NASA Exceptional Service Medal (1994 and 2005), the AIAA Mechanics and Control of Flight Award (1998), and the AAS Dirk Brouwer Award (2005).

Dr. John L. Crassidis is the CUBRC Professor in Space Situational Awareness of Mechanical and Aerospace Engineering at the University of Buffalo (UB). Currently, he is the Director of UB's Center for Multisource Information Fusion. Before joining UB in 2001, he held previous academic appointments at Catholic University of America (1996-1998) and Texas A&M University (1998-2000). He also held a position as a NASA Postdoctoral Research Fellow at Goddard Space Flight Center (1996-1998). While at NASA-Goddard he worked on a number of mission projects, such as the Tropical Rainfall Measurement Mission, the Geostationary Operational Environmental Satellite, and the Wilkinson Microwave Anisotropy Probe. He is first author to the book "Optimal Estimation of Dynamic Systems," which is currently in its second edition. He was elected Fellow of the AAS in 2014 and Associate Fellow of the AIAA in 2002. He is a recipient of the AIAA Mechanics and Control of Flight Award (2012) and several teaching awards.

Users Review

From reader reviews:

John Espitia:

Have you spare time for a day? What do you do when you have much more or little spare time? Yep, you can choose the suitable activity intended for spend your time. Any person spent their particular spare time to take a stroll, shopping, or went to the particular Mall. How about open or even read a book titled Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library)? Maybe it is to be best activity for you. You know beside you can spend your time with your favorite's book, you can cleverer than before. Do you agree with their opinion or you have some other opinion?

Fern Rodriquez:

Book is definitely written, printed, or illustrated for everything. You can recognize everything you want by a book. Book has a different type. As you may know that book is important point to bring us around the world. Next to that you can your reading expertise was fluently. A reserve Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) will make you to end up being smarter. You can feel a lot more confidence if you can know about every little thing. But some of you think this open or reading a book make you bored. It is far from make you fun. Why they could be thought like that? Have you in search of best book or ideal book with you?

Alice Black:

Nowadays reading books be than want or need but also work as a life style. This reading routine give you lot of advantages. Associate programs you got of course the knowledge the actual information inside the book which improve your knowledge and information. The details you get based on what kind of book you read, if

you want get more knowledge just go with training books but if you want really feel happy read one along with theme for entertaining including comic or novel. The Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) is kind of reserve which is giving the reader erratic experience.

Sylvester Perkins:

A lot of people always spent their own free time to vacation or maybe go to the outside with them family or their friend. Are you aware? Many a lot of people spent they will free time just watching TV, or perhaps playing video games all day long. If you want to try to find a new activity that is look different you can read the book. It is really fun in your case. If you enjoy the book which you read you can spent 24 hours a day to reading a reserve. The book Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) it is very good to read. There are a lot of individuals who recommended this book. We were holding enjoying reading this book. If you did not have enough space to deliver this book you can buy the particular e-book. You can m0ore very easily to read this book from the smart phone. The price is not too costly but this book has high quality.

Download and Read Online Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis #07KJZLXRQBV

Read Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis for online ebook

Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis 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 Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis books to read online.

Online Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis ebook PDF download

Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis Doc

Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis Mobipocket

Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis EPub

07KJZLXRQBV: Fundamentals of Spacecraft Attitude Determination and Control (Space Technology Library) By F. Landis Markley, John L. Crassidis