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Titolo	ACS Without an Attitude [[electronic resource] /] / by Harold L. Hallock, Gary Welter, David G. Simpson, Christopher Rouff
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ISBN	1-4471-7325-2
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Descrizione fisica	1 online resource (XVII, 279 p. 54 illus.)
Collana	NASA Monographs in Systems and Software Engineering, , 1860-0131
Disciplina	004
Soggetti	Special purpose computers Aerospace engineering Astronautics Software engineering Special Purpose and Application-Based Systems Aerospace Technology and Astronautics Software Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- Attitude Conventions & Definitions -- General Orbit Background -- Angular Momentum and Torque -- Attitude Measurement Sensors -- Attitude Actuators -- Reference Models -- Onboard Attitude Determination -- Spacecraft State Estimation more Broadly -- Onboard Orbit Computations -- Control Laws: General Qualities -- Control Laws: Attitude Applications -- Mission Characteristics -- Appendix A: Time Measurement Systems -- Appendix B: Variation on Deriving the Kalman Gain -- Index.
Sommario/riassunto	This book de-emphasizes the formal mathematical description of spacecraft on-board attitude and orbit applications in favor of a more qualitative, concept-oriented presentation of these topics. The information presented in this book was originally given as a set of lectures in 1999 and 2000 instigated by a NASA Flight Software Branch Chief at Goddard Space Flight Center. The Branch Chief later suggested this book. It provides an approachable insight into the area and is not intended as an essential reference work. ACS Without an Attitude is intended for programmers and testers new to the field who are seeking

a commonsense understanding of the subject matter they are coding and testing in the hope that they will reduce their risk of introducing or missing the key software bug that causes an abrupt termination in their spacecraft's mission. In addition, the book will provide managers and others working with spacecraft with a basic understanding of this subject.

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