1. Record Nr. UNINA9910483157703321

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| Autore | Xie Yongchun |
| Titolo | Guidance, navigation, and control for spacecraft rendezvous and docking : theory and methods / / Yongchun Xie, 3 others |
| Pubbl/distr/stampa | Singapore : , : Springer, , [2021]<br>Â©2021 |
| ISBN | 981-15-6990-8 |
| Edizione | [1st ed. 2021.] |
| Descrizione fisica | 1 online resource (XII, 495 p. 243 illus., 212 illus. in color.) |
| Disciplina | 050 |
| Soggetti | Automobiles - Design and construction<br>Motor vehicles - Design and construction |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Introduction -- Rendezvous Kinematics and Dynamics -- Navigation Meathod and Schematic Design for Rendezvous and Docking -- Guidance Meathod and Schematic Design for Rendezvous and Docking -- Automatic Control Method and Scheme Design for Rendezvous and Docking -- Manual Control Method and Scheme Design for Rendezvous and Docking -- Theory and Design of Thruster Configuration and Control Allocation -- Method and Scheme Design of Safety for Rendezvous and Docking -- Simulation Verification of Rendezvous and Docking -- RVD Verification in Orbit Flight. |
| Sommario/riassunto | This book focuses on the theory of and design methods for guidance, navigation, and control (GNC) in the context of spacecraft rendezvous and docking (RVD). The position and attitude dynamics and kinematics equations for RVD are presented systematically and in accordance with several different coordinate systems, including elliptical orbital frame, and recommendations are supplied on which of these equations to use in different phases of RVD. The book subsequently explains the basic principles and relative navigation algorithms of RVD sensors such as GNSS, radar, and camera-type RVD sensors. It also provides guidance algorithms and schemes for different phases of RVD, including the latest research advances in rapid RVD. In turn, the book presents a detailed introduction to intelligent adaptive control and proposes |

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| | corresponding theoretical approaches to thruster configuration and control allocation for RVD. Emphasis is placed on the design method of active and passive trajectory protection in different phases of RVD, and on the safety design of the RVD mission as a whole. For purposes of verification, the Shenzhou spacecraft's in-orbit flight mission is presented as well. All issues addressed are described and explained from basic principles to detailed engineering methods and examples, providing aerospace engineers and students both a basic understanding of, and numerous practical engineering methods for, GNC system design in RVD. . |

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| 2. | Record Nr. | UNINA9910554494503321 |
| | Autore | Lindsay Jon R. |
| | Titolo | Information technology and military power / / Jon R. Lindsay |
| | Pubbl/distr/stampa | Ithaca : , : Cornell University Press, , 2021 |
| | ISBN | 1-5017-4958-7 |
| | Descrizione fisica | 1 online resource (xi, 291 pages) : illustrations (black and white) |
| | Collana | Cornell studies in security affairs<br>Cornell scholarship online |
| | Disciplina | 355.80285 |
| | Soggetti | Military art and science - Information technology - United States<br>Military art and science - Technological innovations - United States<br>Information technology - Military aspects - United States<br>Military art and science - Automation<br>War - Technological innovations |
| | Lingua di pubblicazione | Inglese |
| | Formato | Materiale a stampa |
| | Livello bibliografico | Monografia |
| | Note generali | Previously issued in print: 2020. |
| | Nota di bibliografia | Includes bibliographical references and index. |
| | Nota di contenuto | Frontmatter -- Contents -- Acknowledgments -- List of Abbreviations -- Introduction: Shifting the Fog of War -- 1. The Technology Theory of Victory -- 2. A Framework for Understanding Information Practice -- 3. Strategic and Organizational Conditions for Success: The Battle of Britain -- 4. User Innovation and System Management: Aviation Mission Planning Software -- 5. Irregular Problems and Biased Solutions: Special Operations in Iraq -- 6. Increasing Complexity and Uneven |

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| | Results: Drone Campaigns -- 7. Practical Implications of Information Practice -- Appendix: Methodology -- Notes -- Index |
| Sommario/riassunto | Militaries with state-of-the-art information technology sometimes bog down in confusing conflicts. To understand why, it is important to understand the micro-foundations of military power in the information age, and this is exactly what this book gives us. As the text shows, digital systems now mediate almost every effort to gather, store, display, analyze, and communicate information in military organizations. The book highlights how personnel now struggle with their own information systems as much as with the enemy. |