1. Record Nr. UNINA9910133579203321 Autore Jazar Reza N Titolo Advanced dynamics [[electronic resource]]: rigid body, multibody, and aerospace applications / / Reza N. Jazar Hoboken, N.J., : Wiley, 2011 Pubbl/distr/stampa 1-5231-2339-7 **ISBN** 0-470-89213-7 1-283-02523-X 9786613025234 0-470-95176-1 0-470-89211-0 0-470-95002-1 Descrizione fisica 1 online resource (1344 p.) Disciplina 620.1/04 620.104 Soggetti **Dvnamics** Mechanics, Applied Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Nota di contenuto Advanced Dynamics; Contents; Preface; Part I Fundamentals; 1 Fundamentals of Kinematics; 2 Fundamentals of Dynamics; Part II Geometric Kinematics; 3 Coordinate Systems; 4 Rotation Kinematics; 5 Orientation Kinematics; 6 Motion Kinematics; 7 Multibody Kinematics; Part III Derivative Kinematics; 8 Velocity Kinematics; 9 Acceleration Kinematics: 10 Constraints: Part IV Dynamics: 11 Rigid Body and Mass Moment; 12 Rigid-Body Dynamics; 13 Lagrange Dynamics; A Global Frame Triple Rotation; B Local Frame Triple Rotation; C Principal Central Screw Triple Combination: D Industrial Link DH Matrices E Trigonometric FormulaIndex Sommario/riassunto According to the author and reviewers, more than 50% of the material taught in courses such as Advanced Dynamics, Mutibody Dynamics,

and Spacecraft Dynamics is common to one another. Where graduate students in Mechanical and Aerospace Engineering may have the

potential to work on projects that are related to any of the engineering disciplines, they have not been exposed to enough applications in both areas for them to use this information in the real world. This book bridges the gap between rigid body, multibody, and spacecraft dynamics for graduate students and specialists in mechanical and a