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# Space Vehicle Dynamics and Control

By Bong Wie

American Institute of Aeronautics & Astronautics. Hardback. Book Condition: new. BRAND NEW, Space Vehicle Dynamics and Control, Bong Wie, "Space Vehicle Dynamics and Control" provides a solid foundation in mathematics modelling analysis and control of space vehicles. More than 200 figures, photographs and tables are featured in detailed sections covering the fundamentals of orbital, attitude and structural motions of space vehicles. The textbook highlights a range of orbital manoeuvring issues: orbital transfer, rendezvous, orbit control and halo orbit determination. Rotational manoeuvre and attitude control of rigid spacecraft under the influence of reaction jet firings, internal energy dissipation and robotic manipulators in the presence of structural modelling uncertainties are also discussed. At the end of each chapter, Dr. Wie includes a helpful list of references for graduate students and working professionals studying spacecraft design. "Space Vehicle Dynamics and Control" requires a thorough knowledge of vector and matrix algebra, calculus, ordinary differential equations, linear system dynamics and engineering mechanics. Some familiarity with structural dynamics and partial differential equations is presumed, and because some problems may require the use of software for the analysis control design and numerical simulation, readers should have access to computational software (ie MATLAB) on a personal computer.



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