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Nota di contenuto	Preface -- Abstract -- Nomenclature -- Chapter 1 Gyroscopic effects in engineering -- Chapter 2 Acceleration analysis of rotating object -- Chapter 3 Inertial forces acting on simple spinning objects -- Chapter 4 Properties and specifics of gyroscopic torques -- Chapter 5 Mathematical models for motions of a gyroscope suspended from the flexible cord -- Chapter 6 Mathematical models for motions of a gyroscope with one side support -- Chapter 7 Mathematical models for the top motions and gyroscope nutation -- Chapter 8 Gyroscopic effects of deactivation of inertial forces -- Appendix A -- Appendix B .
Sommario/riassunto	This book highlights an analytical solution for the dynamics of axially symmetric rotating objects. It also presents the theory of gyroscopic effects, explaining their physics and using mathematical models of Euler's form for the motion of movable spinning objects to demonstrate these effects. The major themes and approaches are represented by the spinning disc and the action of the system of interrelated inertial torques generated by the centrifugal, common inertial, Coriolis forces, as well as the change in their angular momentum. These torques constitute the fundamental principles of the

mechanical gyroscope theory that can be used for any rotating objects, like rings, cones, spheres, paraboloids and propellers of different designs. Lastly, the mathematical models for the gyroscopic effects are validated by practical tests.
