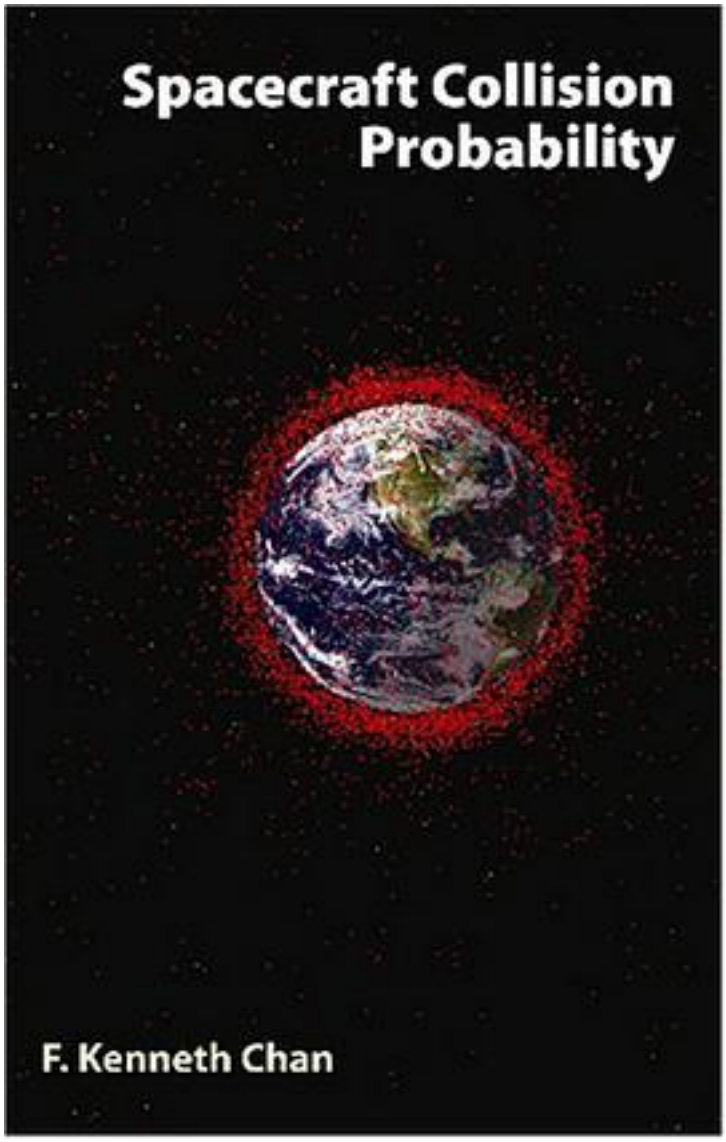
Spacecraft Collision Probability



Spacecraft Collision Probability_下载链接1_

著者:Chan, F. Kenneth

出版者:

出版时间:2008-5

装帧:

isbn:9781884989186

The amount of debris in space is growing at an alarming rate, raising concern about operational spacecraft colliding with orbiting debris. This book analyzes the probability of such a collision when the orbits of two approaching objects are measured.Many recent papers have dealt with the methodology of computing the collision probability in the encounter region, but they have assumed that the encounter is a flyby and is short-term, with the trajectories of the objects represented by straight lines. By contrast, "Spacecraft Collision Probability", the outgrowth of the author's research during the past two decades, deals not only with those cases but also with important long-term cases in which objects spend protracted periods in the vicinity of each other.An extensive chapter is included on the International Space Station, to demonstrate how one would accurately gauge its probability of collision. The ISS is modeled according to its actual complex shape, component by component-enabling the detailed computation of a more realistic collision probability than one would obtain by the routine practice of modeling it as a sphere.In addition, the author developed Excel macros to obtain the numerical tables and graphical plots appearing in the book. That software is available on the Supporting Materials page of the AIAA website.

作者介绍:

目录:

标签

评论

Spacecraft Collision Probability_下载链接1_

书评

Spacecraft Collision Probability_下载链接1_