

ASTRODYNAMICS SYMPOSIUM (C1)
Mission Operations (3)

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JOHN V. BREAKWELL MEMORIAL LECTURE : ASTRODYNAMIC FUNDAMENTALS FOR
DEFLECTING HAZARDOUS NEAR-EARTH OBJECTS

Abstract

The John V. Breakwell Memorial Lecture for the Astrodynamics Symposium of the 60th International Astronautical Congress (IAC) presents a tutorial overview of the astrodynamical problem of deflecting a near-Earth object (NEO) that is on a collision course toward Earth. This lecture focuses on the astrodynamic fundamentals of such a technically challenging, complex engineering problem. Although various deflection technologies have been proposed during the past two decades, there is no consensus on how to reliably deflect them in a timely manner. Consequently, now is the time to develop practically viable technologies that can be used to mitigate threats from NEOs while also advancing space exploration.