

Interactive Presentations (IP)
Topic 7 - Interactive Presentations (7)

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CAPTURING OF SPACE DEBRIS BY MULTIPLE WEB STRUCTURE SYSTEM

Abstract

It has been a long time since intellects have started noticing and acquired data on how much affect and danger , the existence of space debris could cause to space programmes and near-earth space activities. Even a minute debris segment of 1-10 mm could damage a system of upto 10 cm impact at least. Aiming to minimize and capturing space debris by development of multiple net equipped system having capability of capturing various sizes of debris and hence being economical and more profitable. This paper presents the design and development of the concept of multiple concentric web structure converged , altogether connected to nodes at the end. it has specific features of capturing different web sized debris depending on the loading and sustainable capacity. The Absolute Nodal coordinate formulation (ANCF) model is used to validate , authorize the significant application and compute the ability of the system. The design is made with CATIA v5 software tool and synthesized in MATLAB. This technology will be able to capture those debris with range greater than or equal to the minimum net size and the maximum net size. The nodes of Multiple web will direct and orient system selected coordinates leading the web full of active debris to the graveyard orbit.