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Author: Dr. Yongsheng Xu
China Academy of Space Technology (CAST), China, yoshgxu@126.com

Dr. Xueqian WANG
China Academy of Space Technology (CAST), China, xqwang@foxmail.com

Prof. Bin LIANG
China Academy of Space Technology (CAST), China, oaisis@163.com
Prof. ZHANG YINGCHUN
China, zhang@hit.edu.cn

DYNAMICS AND COOPERATIVE CONTROL OF A SPACE ROBOT TEAM AFTER CAPTURING A
COMMON TARGET

Abstract

Space robot teams are wonderful on-orbit servicing systems for transporting and assembling large space structures such as solar power stations. In this paper, the modeling and cooperative control method for a space robot team holding a common target are studied. First, the complex system dynamics is described in the recursive formulation. Then, the cooperative control approach to the interaction forces between robots and the target is presented. In the end, the validity of the proposed methodology is demonstrated by the computer simulation.