Poster Session (P)
Poster Lunch (1)

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RESEARCH ON 6-DOF MOTION MEASUREMENT BASED ON RADAR FOR SPACE RENDEZVOUS AND DOCKING

Abstract

In this paper measurement for rendezvous and docking without vision equipment but radar was researched. Based on the theory of stewart platform, rendezvous and docking with six ranging radar was studied. The motion measurement problem was translated to the positive solution problem of stewart platform, and a numeric iteration method was given to solve it. Simulation was taken, showing its validity by giving available result in less than 30 iterations. Convergence region of iteration was discussed in rendezvous field, and influnce of measuring error was analyzed for docking, due to their different requirement.