

SPACE DEBRIS SYMPOSIUM (A6)  
Poster Session (P)

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## ROBOTIC ARM TO CLEAN SPACE DEBRIS

**Abstract**

Satellite have been the major break through in the field of science. We have been sending satellite for various scientific experiments and have also helped mankind to communicate in various regions of earth. But these satellites are under threat from other nonfunctional satellite or we call them space junk/debris that is left in space since the beginning and have caused great destruction by hitting live satellite. To reduce this space junk we have planned to build a satellite that can throw the junk satellite more into deeper space or give them a deorbiting velocity so that they reenter the earth atmosphere and burn. The satellite we are designing will be having mechanical arm and a camera for its payload that will be controlled from the ground station. The mechanical arm will hold the junk satellite and will release it when the perfect velocity is just about to be achieved. Our satellite will be installed with thruster for gaining speed to throw other satellite into outer space and also to get back into the orbit that has been assigned to our satellite. We will be using two independent micro controllers, one for controlling the mechanical arm and other for the rest of the satellite communication and power management. The satellite will have a tether mechanism as a secondary payload for the end of its life so that it will help the satellite to deorbit and hence reduce space debris.