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VIBRATION SUPPRESSION OF A THREE-AXIS FLEXIBLE SATELLITE USING COMPOSITE  
CONTROL**Abstract**

This paper presents a composite control approach for three-axis attitude stabilization of a Geostationary satellite in the presence of vibrations disturbance from flexible appendages. A disturbance observer is constructed for observing the unwanted torques of the system; the estimated disturbance has been used to compensate the effect of vibrations. A proportional derivative controller (PD) is proposed to control all attitude angles of the spacecraft. The Lyapunov method is employed to demonstrate the global stability of the system, the simulation results confirm the performance of the combined proposed control algorithm.