

## Editorial

### Special Issue on Structures and Control

The Department of Aerospace Engineering has organized an International Conference (ICEAE 2009) to commemorate the centenary year of the Indian Institute of Science, Bangalore, India. The editor of “International Journal of Aerospace Innovations” has agreed to bring out a special issue containing selected papers in the area of structures and control, presented in the conference.

The problem of the effect of bi-modularity ratio in the dynamic response of composite conical shells is presented (Khan et.al). The positive and negative half-cycle frequencies as well as amplitude are shown to vary significantly with bi-modularity ratio. Non-destructive evaluation of composite structures is distinct in the techniques used and approach relative to metallic structures. The stresses and the associated temperature change in a glass fiber-epoxy matrix composite using surface infrared thermography reveals temperature decreasing linearly with increase in tensile stress (Muneer et.al). The effect of interfacial fluid in composite hollow tubes in mitigating sound transmission is addressed (Ghosh). The sound absorption is observed to be more in fluid filled composite tubes in accordance with the acoustic mass law. Damping in composite structures exhibits viscoelastic behaviour. A closed form expression for the viscoelastic response of an elastomeric material is derived (S. Adhikari).

Three papers in control systems area addresses parameter estimation problems that occur in aircraft (Saraf and Kumaresan), kinematics state estimation of re-entry ballistic targets (Ghosh and Mukhopadhyay), and estimation of relative kinematics of ballistic targets (Saha et.al). Another three papers deals with vision based target tracking (Trivedi and Lekshmi), path generation (Kothari et.al), and implementation of neural network controller (Puttige and Anavatti), in the context of Unmanned Aerial Vehicles (UAV) and Micro Air Vehicle (MAV). Another paper (George) presents a multiple model approach for robust tracking of desired trajectories.

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