

Special Issue

Satellite Attitude Determination and Control

Message from the Guest Editors

Satellites and instruments on them need to be oriented in space for achieving mission requirements such as communicating with a ground station, observing a specific target etc. Attitude determination and control system (ADCS) has a key role for this reason especially under strict performance requirements. Attitude determination system combines inputs from sensor measurements mostly with the spacecraft dynamics in the determination process of the attitude states. This might include simply fusing multiple sensors or applying estimation filters such as Kalman filter. Mission-specific needs in terms of attitude determination and possible inherent limitations in the sensor data might result in improving the performance of the attitude algorithms. Attitude control system uses the determined attitude for providing desired orientation to the instrument or the whole body of the vehicle, or for compensation of the external torques using passive or active systems. Contributions with an added value to the satellite's attitude determination and control is of interest to this special issue. The topics of interest include – but not limited to– the following:

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