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## Reliability and cost effectiveness of spacecraft attitude and orbit monitoring

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This article reviews current state of the art reliability and cost effectiveness of spacecraft attitude and orbit monitoring. Failure analysis showed that more than 30% of spacecraft failures are due to attitude, orbit monitoring and control subsystem. Sometimes, the whole mission life time depends solely on this subsystem. Thus, spacecraft attitude and orbit monitoring subsystem design is considered to be challenge due to the high cost, high reliability requirements, limited power budget, processing budget and mass budgets usually associated with space missions. The monitoring system of spacecraft attitude and orbit consists of hardware and software components. This complicates the process of reliability calculation and implies the need for effective cost estimation methods.

### Biography

Tamer Mekky Ahmed Habib has completed his PhD, MSc and BSc from Cairo University, Faculty of Engineering, and Aerospace Department. He is the Head of Spacecraft Dynamics and Control Department. He has published 14 journal and conference papers in the field of spacecraft guidance, navigation, and control. He is currently a Researcher at the National Authority for Remote Sensing and Space Sciences. He is a Reviewer for the Aerospace Science and Technology Journal, in addition to four journals.

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