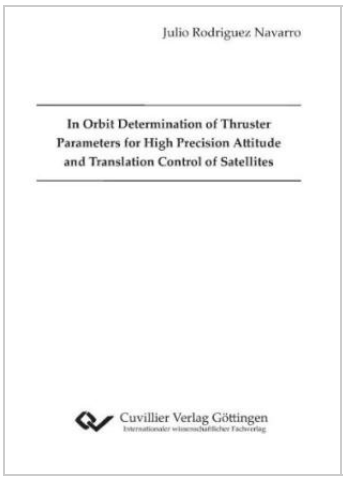

In Orbit Determination of Thruster Parameters for High Precision Attitude and Translation Control of Satellites

By Julio Rodríguez Navarro

Cuvillier Verlag Dez 2009, 2009. Taschenbuch. Condition: Neu. Neuware - New scientific space missions, which need precision pointing and/or drag-free control, are using active actuator systems for the spacecraft attitude and translation control. Such a control system requires precise actuators, which are able to generate forces and torques in the order of mN and µN. The control system performance depends on several factors. One of them is the accurate knowledge of the actuator system such as stochastic errors as well as the configuration, including alignment errors or side effects. The success of a mission depends basically on the knowledge of such an actuator system. Thrusters are arranged in a system in order to generate forces and torques in all directions and it is known as the thruster-configuration. It may vary due to extreme environmental conditions, and mechanical effects during the launch. In addition, there are uncertainties in this configuration because it can be determined only with a limited accuracy before the launch. For that reason an in-orbit calibration is needed.Estimation methods, such as least-squares or Kalman-filter, can be applied to solve the problem. However, the data used for the estimation process has many noise sources, and the satellite itself is...

Reviews

A brand new eBook with a brand new standpoint. I could possibly comprehended everything out of this composed e publication. Your life span will likely be enhance once you total reading this pdf.

-- ***Willa Ritchie***

Without doubt, this is the best work by any author. I really could comprehended everything using this written e publication. Once you begin to read the book, it is extremely difficult to leave it before concluding.

-- ***Dr. Hiram Romaguera***