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## Algorithms Development of the Attitude Determination and Control of the Low-Orbit Small Satellites

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In many cases for the execution of different problems which are assigned within the mission of small satellite, it is necessary to provide the required accuracy of its orientation although the small satellite is more influenced by the external disturbances due to its small mass. The main sources of the disturbances for the attitude of small satellites are the torques of external forces, however there are no less impact of the disturbances caused by the faults of sensors and actuators of small satellite and disturbances caused by the various uncertainties. In this connection for the solution of the assigned to the small satellite tasks, it is necessary to develop the algorithms of high-accuracy attitude determination and algorithms of attitude control that are stable to different disturbances. There are many different theories and techniques of attitude determination and control for small satellites that are developed by many authors [1-7]. However, not all these techniques can be used with respect to any satellite due to the fact that the all satellites are unique by its content of components of control system. In this connection, this theme of research is relevant during the last few decades.