Rakisheva Z., Sukhenko A., Kaliyeva N. (2019) Optimization Issues in the Problem of Small Satellite Attitude Determination and Control. In: Fasano G., Pintér J. (eds) Modeling and Optimization in Space Engineering. Springer Optimization and Its Applications, vol 144. Springer, Cham

[Modeling and Optimization in Space Engineering](https://link.springer.com/book/10.1007/978-3-030-10501-3)pp 373-393| [Cite as](https://link.springer.com/chapter/10.1007/978-3-030-10501-3_14%22%20%5Cl%20%22citeas)

Optimization Issues in the Problem of Small Satellite Attitude Determination and Control

* [Authors](https://link.springer.com/chapter/10.1007/978-3-030-10501-3_14#authors)
* [Authors and affiliations](https://link.springer.com/chapter/10.1007/978-3-030-10501-3_14#authorsandaffiliations)
* Zaure Rakisheva
* Anna Sukhenko
* Nazgul Kaliyeva
1. .

Chapter

**First Online:**11 May 2019

Part of the [Springer Optimization and Its Applications](https://link.springer.com/bookseries/7393) book series (SOIA, volume 144)

## Abstract

The problems of synthesis of attitude determination and control system of small satellites regarding the influence of external perturbations due to their small mass and restrictions in using high-precision actuators, due to the limitations of energy budget and construction, are considered. The solutions to this problem are proposed involving the development of high-accuracy algorithms for satellite attitude determination and control, using the minimum set of sensors, various types of actuators, and optimization principles.

© Springer Nature Switzerland AG 2019 G. Fasano, J. D. Pintér (eds.), Modeling and Optimization in Space Engineering, Springer Optimization and Its Applications 144, <https://doi.org/10.1007/978-3-030-10501-3_14>