

## **Control of elastic missile based on the distributed measuring system**

This article considers a possibility of using several inertial sensors distributed along a rod-shaped elastic structure. An example of such a structure is given by a complex elastic model of a rocket with distributed aerodynamics, dynamics of the control system, fluctuations of the fuel in the tanks, and other physical factors. Position optimization for the sensors is performed, taking into account restrictions on their possible locations. The results presented in the report provide a basis for constructing an optimal system for suppression of elastic oscillations of complex objects whose parameters change in the course of the motion. The results of modeling are presented.