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# Application of perturbation method and sensitivity functions to the problem of optimizing the systems with distributed parameters

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*Creating of effective optimization methods is important for solving real engineering problems. In this paper we developed a method for constructing the sensitivity function to solve the problem of optimizing of the elastic construction. Moreover, for optimizing of the systems we offer an iterative algorithm, which is based on the linearization procedure and the sensitivity function. The quality of these systems is described by a fractional-linear functional with control restrictions.*

**Keywords:** *sensitivity functions, optimization, iterative algorithm, systems with distributed parameters*

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