

Peculiarities of Constructing an Optimal Vector Distributed Control with Nonlinear Optimization of Oscillation Processes

Elmira Abdyldaeva¹, Akylbek Kermbekov², Zarina Kabaeva³

¹ *Kyrgyz-Turkish Manas University, Kyrgyzstan, efa 69@mail.ru*

² *Kyrgyz-Russian Slavic University, Kyrgyzstan* ³ *Kyrgyz National University, Kyrgyzstan*

Abstract: Nonlinear optimization problem is investigated for oscillation processes described by Fredholm integro-differential equations in partial derivatives when the function of the external source nonlinearly depends on vector distributed control. It is established that, the optimal control procedure is greatly simplified with vector control. Algorithm is developed for constructing a complete solution of the nonlinear optimization problem.

Keywords: Boundary value problem, generalized solution, vector distributed control, functional, property of equal relations, system of nonlinear integral equations

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