

Robust Stability of Fractional-Order Control Systems Under Parametric Uncertainty

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Abstract:

The thesis should focus on robust stabilization of fractional-order control systems under conditions of parametric uncertainty. This task becomes nontrivial even for the integer-order systems if a complex uncertainty structure is supposed, and the complexity of the problem further increases for the generalization in the form of fractional orders. The student should deal with various kinds of families of systems/polynomials, including the cases of commensurate and non-commensurate orders, various uncertainty structures, real or complex coefficients, with or without time delay, non-traditional control structures, etc. The part of the work should also be oriented to the creation of the relevant software tools.

Literature:

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