5. MULTIVARIABLE ROBUST CONTROL

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Konzultant:

Anotace:

Many real-life systems comprise multiple mutually interacting variables. Analysis and control of such Multiple-Input Multiple-Output (MIMO) systems represent a challenging task because they are usually based on highly non-trivial generalizations of the Single-Input Single-Output (SISO) approaches. The situation is even more complicated if the MIMO models are affected by some kind of uncertainty. This thesis should be focused on multivariable robust control systems. The student should research the existing principles for description, analysis, and synthesis of MIMO systems (linear fractional transformations, structured singular value μ, H-infinity problem, etc.). Then, the main research aim should consist in the development, improvement or suitable application of a related robust analysis/synthesis method.

Literatura:

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