

Linear Algebraic Approach to PDE Control

The linear algebraic method in control system design seeks to construct a feedback controller such that the closed-loop transfer function coincides with a realizable target transfer function $G_0(s)$. The objective of this project is to investigate the applicability of this method to systems governed by partial differential equations (PDEs).

Planned tasks include:

- Selection of a representative example system
- Specification of a realizable target transfer function and analysis of the associated conditions
- Examination of the solvability of the design equations (equivalent to the Diophantine equations)
- Implementation of numerical simulations

Contacts: Stefan Koch (stefan.koch@tugraz.at),
Markus Reichhartinger
(markus.reichhartinger@tugraz.at)

