Functional perturbation results for PDE eigenvalue problems

A. Miedlar

We discuss a functional perturbation results, i.e., a functional normwise backward error for PDE eigenvalue problems. Inspired by the work of M. Arioli et al. for linear systems arising from the finite element discretization of boundary problems we will extend the ideas of functional compatibility and condition number to eigenvalue problems in their variational formulation. At the end some first ideas about stopping criteria for iterative eigenvalue solvers in the context of adaptive methods will be introduced.

This is a joint work with V. Mehrmann.