JOHANNES KEPLER UNIVERSITÄT LINZ
INSTITUT FÜR NUMERISCHE MATHEMATIK
o.Univ.-Prof. Dr. Ulrich Langer

Talk announcement (ZOOM)

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15:30, via ZOOM
(Meeting-ID: 928 9299 5483, Password: 360632)

Space-Time Finite Element Methods for Parabolic Optimal Control Problems

In this talk, we will shortly summarize our recent work on space-time finite element methods for optimal control of parabolic equations. Three approaches are discussed by using L^2-regularization, H^{-1}-regularization,

and L^2-regularization combined with L^1-norm of the control. A space-time Petrov-Galerkin finite element discretization is used for the first-order necessary optimality system. The discretization is based on a variational formulation that employs piecewise linear finite elements simultaneously in space and time. This is a joint work of Ulrich Langer (JKU/RICAM), Olaf Steinbach (TU Graz), Fredi Tröltzsch (TU Berlin).