

Improved error estimates in space-time finite element methods

Olaf Steinbach¹

In this talk we will discuss improved a priori error estimates for space-time finite element methods for the solution of parabolic evolution equations. These error estimates are anisotropic in space and time, reflecting the different orders of spatial and temporal derivatives in the partial differential equations. We also discuss related estimates for space-time discretizations of distributed control problems subject to the heat equation.

¹TU Graz, Institut für Angewandte Mathematik
o.steinbach@tugraz.at