

L^∞ -Error Estimates for an Optimal Control Problem with Distributed Control

T. Apel and A. Rösch and D. Sirch

Universität der Bundeswehr München, `thomas.apel@unibw.de`

The contribution is concerned with the finite element solution of an optimal control problem with a scalar, elliptic state equation and pointwise bounds of the control variable. Using improved L^∞ -error estimates for the discretization of boundary value problems on graded finite element meshes, the approximation errors in the state, the dual state and the control variable are shown to be of almost second order.