

Local projection stabilization for convection-diffusion problems

Petr Knobloch¹

We apply the local projection stabilization to finite element discretizations of convection-diffusion and convection-diffusion-reaction problems. We shall present error estimates and stability results and demonstrate the properties of the method by means of various numerical experiments.

¹ Charles University in Prague, Faculty of Mathematics and Physics, Department of Numerical Mathematics, Sokolovska 83, 18675 Praha 8, Czech Republic, knobloch@karlin.mff.cuni.cz