Simple preconditioner for a thin membrane difussion problem

Piotr Krzyzanowski University of Warsaw, Poland p.krzyzanowski@mimuw.edu.pl

A diffusion through a thin membrane problem is discretized with a variant of the composite h-p discontinuous Galerkin method. A preconditioner based on the additive Schwarz method is introduced, and its convergence properties are investigated in numerical experiments.

Keywords: preconditioner, thin membrane, additive Schwarz method, discontinuous Galerkin.