

Title: Degree and wavenumber independence of a Schwarz preconditioner for the DPG method

Abstract: We show numerical results from an NGSolve implementation of the discontinuous Petrov Galerkin (DPG) method for high orders. A main observation is that a multiplicative Schwarz algorithm, with no coarse solve, provides a good p -preconditioner for solving the DPG system. The observations suggest that the condition number of the preconditioned system is independent of the frequency and the polynomial degree.