

Multigrid and Domain Decomposition for C^0 Interior Penalty Methods

SUSANNE BRENNER¹ <brenner@math.sc.edu>

In this talk we will discuss fast solvers for C^0 interior penalty methods for fourth order elliptic boundary value problems. We will give a brief introduction to C^0 interior penalty methods, and present convergence results for the V -cycle, W -cycle and F -cycle multigrid algorithms, and also condition number estimates for two-level additive Schwarz preconditioners. Numerical results will also be reported.

¹University of South Carolina