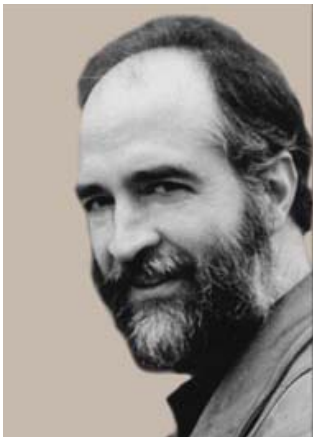
College of Arts and Sciences
Department of Mathematics
University of South Carolina

Math Colloquium

The Evolution of the HDG Methods

Bernardo Cockburn, University of Minnesota



Thursday
April 14

4:30-5:30 PM
LeConte 412

The hybridizable discontinuous Galerkin methods were introduced in the framework of steady-state diffusion problems as a subclass of old discontinuous Galerkin methods whose distinctive feature is to be amenable to static condensation, and hence to be efficiently implemented. We review the evolution of these methods, discussing the relation of how their local spaces and stabilization functions influenced their convergence properties and their efficiency. We end by sketching their extension to other PDEs arising in fluid dynamics and solid mechanics.

UNIVERSITY OF SOUTH CAROLINA