

ACMS Applied Math Seminar

Ari Stern

Washington University,
St. Louis

Thursday, May 5, 2022

154 Hurley Hall

3:00 PM – 4:00 PM



Hybridization and Postprocessing in Finite Element Exterior Calculus

Finite element exterior calculus (FEEC) unifies several families of conforming finite element methods for Laplace-type problems, including the scalar and vector Poisson equations. This talk presents a framework for hybridization of FEEC, which recovers known hybrid methods for the scalar Poisson equation and gives new hybrid methods for the vector Poisson equation using $H(\text{curl})$ elements. We also generalize Stenberg postprocessing, proving new superconvergence estimates.

The Department of Applied and Computational
Mathematics and Statistics

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