Computational Mathematics Seminar Series

A Two Level Additive Schwarz Preconditioner for a Partition of Unity Method

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Assistant Professor

Digital Media Center 1034
October 13, 2015 - 03:30 pm

Abstract:

The partition of unity finite element method is a type of finite element method that enables one to construct smooth approximation functions at low cost. Investigation into the conditioning of partition of unity methods is an active field or research. In this talk, we discuss the use of two level additive Schwarz preconditioners for a partition of unity method. The numerical algorithm will be presented and analyzed. Numerical examples will be given to demonstrate the effectiveness of the method. This is joint work with Susanne C. Brenner and Li-yeng Sung.

Speaker's Bio:

Chris Davis received his Ph.D. in Applied Mathematics in 2011 from the University of North Carolina at Charlotte. He then completed a three year VIGRE postdoc at Louisiana State University and is now a tenure track assistant professor at Tennessee Technological University. His research focuses on analysis of numerical methods for partial differential equations with a particular emphasis on partition of unity methods.

This lecture has refreshments @ 03:00 pm
This lecture has a reception @ 03:00 pm

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