Applied Mathematics

McGill Applied Mathematics Seminar

Nov. 8, 2007, 2:35 pm THURSDAY
At McGill, Burnside Hall 1234

"Polynomial extension operators "

Jay Gopalakrishnan Dept. of Mathematics
U. Florida

Coffee and refreshments will be served after the seminar

Abstract:

We construct operators that extend certain given functions on the boundary of a tetrahedron into the interior of the tetrahedron, with continuity properties in appropriate Sobolev norms. These extensions are novel in that they have polynomial preservation properties important in the analysis of high order finite elements. We will pay particular extension to the generalizations required to obtain polynomial preserving extension in the Sobolev space $H(curl)$.