

## PIMS / AMI Seminar



Friday, March 2, 2018 3:00 p.m. CAB 657

## "Inverse Approximation of Algebraic Polynomials and Finite Element Solutions of the P-version"

## Benqi Guo

Department of Mathematics, University of Manitoba and College of Mathematics & Science, Shanghai Normal University

## **Abstract:**

The inverse algebraic approximation is addressed and established the direct and inverse approximation of algebraic polynomials in the Jacobi-weighted Sobolev and Besov spaces. With the approximation theory of algebraic polynomials, we investigate the inverse approximation of the finite element solutions of the p-version, and apply to the inverse approximation theorems for the finite element solutions of the p-version in the Chebyshev-weighted Besov spaces based upon the convergence rate measured in the energy norms for problems of 2<sup>nd</sup> order in two dimensions.