

Department of Mathematics

University of Houston

Scientific Computing Seminar

Prof. Natasha Sharma

A C^0 Interior Penalty Method for Elliptic Distributed Optimal Control Problems in 3D with Pointwise State Constraints

Thursday, April 21, 2016

1:30 PM- 2:30PM

Room 646 PGH

Abstract: In this talk, we introduce a biquadratic C^0 interior penalty method for elliptic distributed optimal control problem with pointwise state constraints in three dimensions and present three post-processing techniques to approximate the optimal control based on the discrete optimal state which, in turn is obtained by the primal-dual active set algorithm introduced by M. Hintermüller, K. Ito, K. Kunisch. Results of the numerical experiments will be discussed to illustrate and compare the performance of these three techniques.

* This is a joint work with Drs. Susanne C. Brenner, Minah Oh, Sara Pollock, Kamana Porwal and Mira Schedensack.