Department of Mathematics

University of Houston

Scientific Computing Seminar

Professor Bulent Karasozen Department of Mathematics & Institute of Applied Mathematics Middle East Technical University, Ankara, Turkey

Optimal Control of linearized Burgers Equation

Thursday, November 17, 2011 3:00 PM- 4:00 PM Room 646 PGH

Abstract: Two different linearization are considered for solving optimal control problems with unsteady Burgers equation. In the first approach the optimality system is transformed by linearizing the Burgers equation with the ColeHopf transformation into an elliptic equation in the space-time domain. The optimality system is then solved numerically in the spacetime cylinder using the modelling and simulation package COMSOL Multiphysics. In the second approach the optimality system is solved by the all-at-once or direct method. The linearization is realized by using the semi-implicit method for the time discreization.

This seminar is easily accessible to persons with disabilities. For more information or for assistance, please contact the Mathematics Department at 743-3500.