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Computational Mathematics Seminar Series

A Discontinuous Galerkin Least-squares Finite Element Method for Reaction-diffusion Problems with Singular Perturbation**Runchang Lin, Texas A&M**

Associate Professor of Mathematics

Digital Media Center 1034
September 27, 2016 - 03:30 pm**Abstract:**

A discontinuous Galerkin least-squares finite element method is proposed to solve reaction-diffusion equations with singular perturbations. This method produces solutions without numerical oscillations when uniform meshes are used, where neither special treatments nor manually adjusted parameters are required. This method can be applied to linear and nonlinear reaction-diffusion problems with strong reactions. Numerical examples are provided to demonstrate the efficiency of the method.

Speaker's Bio:

Dr. Runchang Lin received Ph.D. in Mathematics and M.A. in Statistics from Wayne State University, Detroit, MI, and M.S. in Computational Mathematics and B.S. in Mathematics from Tongji University, Shanghai, China. He is an Associate Professor of Mathematics at Texas A&M International University, Laredo, TX. Dr. Lin's research interest is in Numerical Analysis and Applied Mathematics.

This lecture has a reception.

