New England Numerical Analysis Day 2019

April 13, 2019

Salisbury Laboratory 104, Worcester Polytechnic Institute

8:00-8:35 Registration

Light breakfast will be served.

8:35-8:45 Opening

8:45-9:30 George Karniadakis, Brown University

Physics-Informed Learning Machines (PhILMs) for Physical Systems

9:30-10:00 Coffee break

10:00-10:25 Samuel Isaacson, Boston University

Jump Process Approximation of Particle-Based Stochastic Reaction-Diffusion Models

10:25-10:50 Yukun Li, The Ohio State University, Columbus

Strong Convergence of a Fully Discrete Finite Element Method for a class of Nonlinear Stochastic Partial Differential Equations

10:50-11:15 Manki Cho, Rochester Institue of Technology

*Steklov expansion method for Laplacian boundary value problems*

11:15-11:40 Victor Churchill Dartmouth College

Image reconstruction via edge-masked regularization

11:45 Group photo

11:50- 13:30 Lunch time & Poster session

13:30- 14:15 Marcus Sarkis   Capacitance Matrix Methods

14:15-14:45 Coffee break

14:45-15:10 Jiahua Jiang, Virginia Tech

Truncation and Recycling Methods for Lanczos Bidiagonalization and Hybrid Regularization

15:10-15:35 Yoonsang Lee Dartmouth College

A seamless numerical homogenization method for multi scale diffusion and advection operators

15:35-16:10 Lucia Carichino, [lcarichino@wpi.edu](mailto:lcarichino@wpi.edu) WPI

Energy-based algorithm for coupling PDEs and ODEs fluid flow models

16:10-16:35 TBD