Data-Enabled Science Seminar

Prof. Dr. Arvind Krishna Saibaba
Department of Mathematics
North Carolina State University

Randomized algorithms for sensitivity analysis and model reduction

Friday, April 2, 2021
12:00PM–1:00PM
Zoom (link in email)

Abstract: Randomized Numerical Linear Algebra (RandNLA) is an emerging research area that uses randomization as an algorithmic resource to develop algorithms that are numerically robust, with strong theoretical guarantees, easy to implement, and well-suited for high-performance computing. In this talk, I will give a brief overview of RandNLA techniques for dimensionality reduction and discuss novel randomized algorithms, their performance, and analysis, in the context of two important problems in scientific computing: hyperdifferential sensitivity analysis, and nonlinear model reduction.

Joint work with Joseph Hart and Bart van Bloemen Waanders (both at Sandia National Labs)

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