UNIVERSITY of HOUSTON

Department of Mathematics

Scientific Computing Seminar

Dr. Ruipeng Li Center for Applied Scientific Computing Lawrence Livermore National Laboratory

Harnessing the Power of Accelerators: Advancing hypre's Multigrid Solvers on the Path to Exascale

Thursday, February 8, 2024 1 PM- 2 PM Room 646 PGH

Abstract: The advent of exascale computers offers unprecedented opportunities for conducting simulations on a vastly larger scale, enabling more accurate solutions. However, the intricacies associated with heterogeneous accelerators on these platforms pose significant challenges in developing sparse linear solvers that can attain optimal performance. This presentation will delve into the strategies employed for porting, recent advancements, and performance optimizations of multigrid solvers within hypre, aimed at aligning with the demands of exascale computing. The discussion will be substantiated with results obtained from real-world application codes, providing insights into the practical implications of these developments.

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