

UNIVERSITY of HOUSTON

Department of Mathematics

Scientific Computing Seminar

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Deep Learning Enhanced Subsurface Imaging

Thursday, November 9, 2023

1 PM- 2 PM

Room 646 PGH

Abstract: Subsurface imaging and characterization are typically nonlinear ill-posed inverse problems facing many challenges such as scarcity of data, high uncertainties, and nonuniqueness of solution. In recent years, there has been a surge of research efforts leveraging machine learning and artificial intelligence to overcome those challenges. In this talk, I will share our group's recent work on physics guided deep learning for solving inverse problems and its applications in subsurface characterization for oilfield exploration and underground carbon storage. Examples will include electromagnetic well logging data processing, seismic full waveform inversion, and multi-physics joint inversion.

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