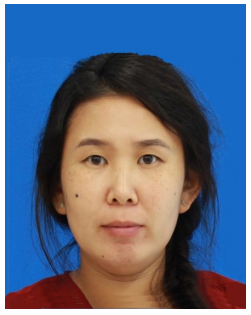




Mathematical Sciences Spring 2024 Colloquium Series



Dr. Maria Vasilyeva

Texas A& M University – Corpus Christi



Friday, April 5 at 3:00pm
Bell Hall 130 and online via Zoom
Scan the QR-code to access the link

Decoupling schemes for multiscale multicontinuum problems

Abstract

This work presents an efficient way to decouple the multicontinuum problems. To construct decoupled schemes, we propose Implicit-Explicit time approximations and study them for the fine-scale and coarse-scale space approximations. We use a finite-volume method for fine-scale approximation, and the nonlocal multicontinuum (NLMC) method is used to construct an accurate and physically meaningful coarse-scale approximation. We show that combining the decoupling technique with multiscale approximation leads to developing an accurate and efficient solver for multicontinuum problems.

Host: Dr. M. Christina Mariani (mcmariani@utep.edu)

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