

GENERALIZED MULTISCALE FINITE ELEMENT METHOD FOR POROELASTICITY PROBLEM IN FRACTURED MEDIA

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Abstract

In this talk, we present Generalized Multiscale Finite Element Method for poroelasticity problem in fractured media. Mathematical models are described by the coupled system of equations for pressure and displacements. For highly permeable fracture, we use DFN model for weak discontinuity of the solution, and for displacement, we have strong discontinuity and set interface condition on the fractures. Also, we present results of numerical simulations for different number of multiscale basis functions.