Weekly Seminar: Fall 2010

Date: Friday October 29

Time: 11:00 AM

Location: Maryland Hall 110

Speaker: William P. Johnson (The University of Utah)

Title: *"Progress and challenges in developing theory for prediction of micro- and nano-particle transport in porous media under environmental conditions"*

Abstract

The process of particle transport in porous media governs groundwater quality, drinking water treatment by sand filtration, and subsurface remediation by nano zero-valent iron and other particulate amendments. Despite several decades of research, we are still not able to predict particle transport in porous media under environmental conditions, even for short distances and simple particles. This talk highlights new experimental insights and new mechanistic modeling approaches that support development of a new theory for predicting particle transport in porous media under environmental conditions. Experimental and numerical challenges that need to be overcome in development of such a theory are also discussed.