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Yanzhao Cao* (yzc0009@auburn.edu), 233 Park Hall, Auburn, AL 36849. *Parallel domain decomposition algorithms for Stokes Darcy interface problems.*

In this talk we present several new parallel domain decomposition algorithms for Stokes Darcy interface problems. These algorithms solve the Stokes and Darcy problems on their physical domains independently and update the boundary conditions on the interface through iterations. Analysis and numerical experiments show that our algorithms are more efficient than the existing ones for "bad" physical parameters such as hydraulic conductivity. (Received January 16, 2017)