CHUANBIN DU, York University, 4700 Keele Street, Toronto, Ontario, M3J 1P3 *Efficient splitting and domain decomposition methods for time-dependent problems and the applications*

In this talk, we propose an efficient splitting domain decomposition method (S-DDM) for solving parabolic equations and study a splitting ELLAM for convection-dominated diffusion problems in high-dimensions. We apply the S-DDM scheme by incorporating the upstream methods to simulate the groundwater contaminant transport in porous media.