

**SPEAKER:**

Jay Hineman, Fordham University

**TITLE:**

Very Weak Solutions for PoissonNernstPlanck System

**ABSTRACT:**

We formulate a notion of very weak solution for the Poisson–Nernst–Planck system. The Poisson–Nernst–Planck system describes the motion of ions due to diffusion and electromigration. The stationary system possesses a local monotonicity formula which reveals a local boundedness result for ion density and the gradient of electrical potential. These results are part of recent joint work with Rolf J. Ryham.