1172-65-291 **Lina Ma*** (lina.ma@trincoll.edu), **Xiaofeng Yang** and **Matthew McCurdy**. *A novel numerical approach for phase field models with dynamical boundary.* Preliminary report.

We consider an efficient numerical scheme to solve a two-phase hydrodynamics coupled phase field model with moving contact line boundary conditions. The model is a nonlinear coupling system, which consists the Navier-Stokes equations with the general Navier Boundary conditions or degenerated Navier Boundary conditions, and the Allen-Cahn type phase field equations with dynamical contact line boundary condition or static contact line boundary condition. We are able to utilize projection method to decouple the complicated system into several systems with simple boundary conditions. We could therefore develop high order and robust numerical methods for the system. (Received August 30, 2021)