L Ma* (lina.ma@trincoll.edu), MECC 251, Trinity College, Hartford, CT 06106, and X Li and C Liu. Model Reduction Technique on Langevin Dynamics.

Langevin equation is the generic equation that can give rise to Fokker Planck equation. In this talk, we will look at the numerical treatment in the microscopic system. Techniques such as coarse graining and model reduction will be employed to solve the common challenges. Also, the important fluctuation dissipation theorem is carefully studied to make sure the new system has correct equilibrium result. (Received July 30, 2018)