## A single-cell based model for tissue growth and mechanics

ROBERT DILLON

Department of Mathematics Washington State University Pullman, WA 99164 dillon@math.wsu.edu

We present a model for tissue growth and mechanics based on a simplified model for individual cells. The fluid-elastic structure of the cells and extracellular matrix are represented within the framework of the immersed boundary method. Numerical simulations of the model will be presented in the context of tumor growth, ductal carcinoma, biofilm growth and biofilm rheology.