Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

The stochastic dynamics of filopodial growth YUEHENG LAN, GAREGIN PAPOIAN, Univ. of North Carolina at Chapel Hill — We build stochastic models for filopodial growth and retraction that combine mechanical and spatiotemporal signaling components to elucidate the mechanisms of filopodia dynamics. We explicitly model the tip signaling and diffusion process while the membrane and retrograde flow are modeled implicitly. The results are compared with experiments to verify the model effectivness.

Yueheng Lan
Univ. of North Carolina at Chapel Hill

Date submitted: 20 Nov 2006 Electronic form version 1.4