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DK Seminar

December 2, 2015, 14:15 - 15:45
University of Vienna
Oskar-Morgenstern-Platz 1, HS 2.

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Cell Movement - Zooming In

This talk is devoted to actin-dependent cell movement, in particular it is concerned with cells that crawl with the aid of a lamellipodium. This sheet-like structure consists of a network of actin filaments together with several accessory proteins. The basis of the works of this thesis with regards to this topic is the Filament Based Lamellipodium Model (FBLM). We made several modeling additions, for example detailed models describing the filament number and length regulation or adding a description of myosin. I will demonstrate that with these extensions the model is able to simulate the chemotactic behavior of cells, the movement on variable adhesion pattern, or the bistability of lamellipodial fragments.