

Matthias Röger

A spatially coupled model for cell polarization

GTPase molecules play an important role in signal transduction in cells. They cycle between an active and inactive state and can be found both bound to the cell membrane or diffusing in the cytosol. We describe a coupled PDE model for the activation and spatial cycle of GTPase molecules and investigate possible mechanisms for the emergence of spatially heterogeneous distributions of activated GTPase at the cell membrane. (This is joint work with Andreas Rätz, Dortmund).