

WINTER SEMESTER 2023/2024

RTG 2756 CYTAC SEMINAR SERIES

TUESDAY, JANUARY 23  
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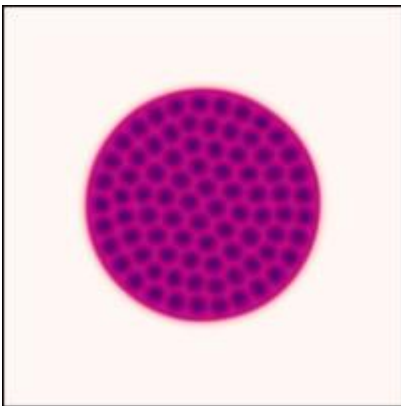
CYTAC

RTG 2756

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### MECHANOCHEMICAL PATTERN FORMATION



*The actin cortex of animal cells drives a number of vital cellular processes. It is a polymeric network composed of actin filaments that continuously turn over. This filament network is associated with proteins, notably molecular motors that can transform chemical energy into mechanical stress and proteins that regulate filament turnover. In this presentation I will discuss continuum descriptions of the actin cortex in terms of a regulated active fluid. A multitude of mechanochemical patterns can*

*form spontaneously in these systems. They include polymerization waves, lattices of topological defects, and localized states. I will discuss the potential relevance of these states for cellular processes.*