



Colloquium

Self-organisation of proteins in cells

Erwin Frey

Ludwig Maximilian University of Munich

Host: Gasper Tkacik

Protein pattern formation is essential for the spatial organisation of intracellular processes like cell division and flagellum positioning. A prominent example of intracellular patterns is the oscillatory pole-to-pole oscillations of Min proteins in *E. coli*, whose function is to ensure precise cell division. Cell polarisation, a prerequisite for processes such as stem cell differentiation and cell polarity in yeast, is also mediated by a diffusion-reaction process. More generally, these functional modules of cells serve as model systems for self-organisation, one of the core principles of life. Under which conditions spatiotemporal patterns emerge and how biochemical and geometrical factors regulate these patterns are major aspects of current research. In this talk, I will review recent theoretical and experimental advances in the field of intracellular pattern formation, focusing on general design principles and fundamental physical mechanisms.

Monday, March 27, 2023 11:30am - 11:30am

Raiffeisen Lecture Hall



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