



Sommerfeld Theory Colloquium

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ASC-PhD-Colloquium:

Speciation and bet hedging in heterogeneous populations

How can cells specialize to a niche and at the same time be able to survive in a variety of different environments? In recent years it has become increasingly clear that bacterial, stem cell and even tumor cell populations exhibit a surprisingly high degree of heterogeneity. For example, some bacteria dynamically switch between phenotypic states to survive antibiotic attacks. Similarly, embryonic stem cells heterogeneously express key pluripotency factors such that clonal cell populations exhibit varying capabilities to generate all cell types in a developing embryo. In this talk I will show how and under which conditions genetic diversity and phenotypic heterogeneity can develop and sustain in spatially extended populations. I will then ask how this heterogeneity is regulated on a molecular level. Giving the example of embryonic stem cells I will show that transcriptional heterogeneity goes along with an intriguing epigenetic dynamics.

Wednesday, 24 June 2015, 16:15h, Room A348/349, Theresienstr. 37/III