SFB 680

MOLECULAR BASIS OF
EVOLUTIONARY INNOVATIONS

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Competition, feedback and fluctuations in genetic regulatory modules

I will describe the modeling of several genetic regulatory modules in cells and analyze the effects of competition, feedback and fluctuations in these systems using deterministic and stochastic methods. The genetic networks to be considered involve a combination of transcriptional regulation, regulation by small non-coding RNA's and protein-protein interactions. The effects of competition, feedback and fluctuations on each one of these regulation mechanisms will be discussed. I will present results obtained using a combination of deterministic and stochastic methods, including rate equations, direct integration of the master equation and Monte Carlo simulations

July 6, 2:45 pm

Institute for Genetics, Zülpicher Str 47a , New Seminar Room, Ground Floor

Host: Joachim Krug

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