

SFB 680

MOLECULAR BASIS OF
EVOLUTIONARY INNOVATIONS

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Statistical analysis and anomalous diffusion: application in biology

After a brief review of some of my past works, I will make a short introduction to anomalous diffusion. The main focus will be on subdiffusion of heavy tracers in viscoelastic media. I will present our theoretical model which relies on the generalized Langevin equation in which we consider inertial and hydrodynamic effects at short times, subdiffusive scaling at intermediate times, and finally optical trapping at long times. I will show how this developed theory can be applied to the analysis of individual trajectories of micron-sized spherical tracers in actin gels and living cells using optical tweezers single-particle tracking technique

April 10, 16:30

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

Host: Michael Lässig and Johannes Berg

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