

## Showcasing research from the group of Prof. Ralf Metzler, University of Potsdam, Germany

Bayesian analysis of single-particle tracking data using the nested-sampling algorithm: maximum-likelihood model selection applied to stochastic-diffusivity data

This study sets up a Bayesian framework to rank possible stochastic processes governing single-particle trajectories, including Brownian motion, models with non-Gaussian displacements, and anomalous diffusion, also with measurement noise. We compute relative model probabilities and respective model parameters. Our emphasis is on the nested-sampling protocol for the stochastic-diffusivity model. Applications to computer-generated and single-particle-tracking data are presented. Image sources: The Royal Society (Phil. Trans. 1763, 53, 370–418) and pixabay.com.



