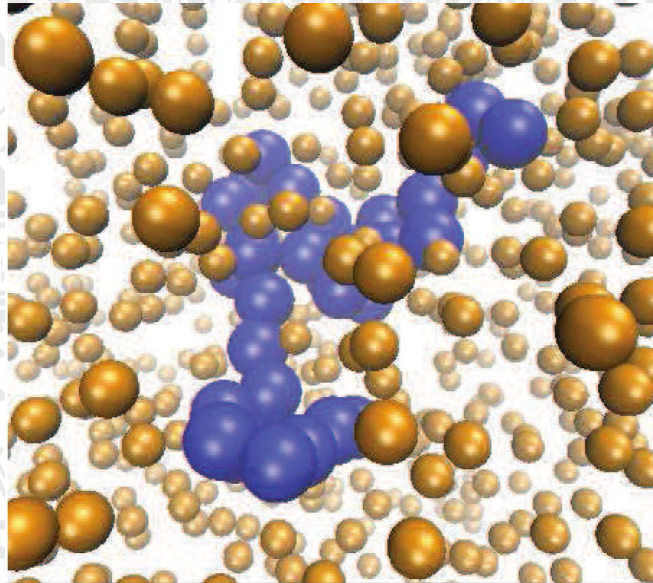




SONDERKOLLOQUIUM

AM 17. SEPTEMBER UM 9:30 UHR

IM HÖRSAAL II IM PHYSIKHOCHHAUS



Dynamics in crowded systems

PROF. DR. RALF METZLER

INSTITUTE FOR PHYSICS AND ASTRONOMY

UNIVERSITÄT POTSDAM

Living biological cells are crowded with macromolecules and structural filaments at volume fractions above 30%. This crowding drastically changes the physical properties of the solvent compared to a dilute liquid. In particular, it effects different equilibria and dynamics of tracer molecules immersed in this superdense liquid. I will address the dynamics of polymer chains in crowded environments as well as the self-diffusion of tracers. Consequences for cellular processes such as gene regulation will be addressed. Crowding by proteins in lipid bilayer membranes will be shown to equally change the behaviour of intra-membrane diffusion properties.