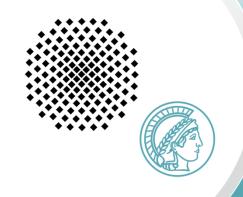
Stuttgarter Physikalisches Kolloquium

Fachbereich Physik, Universität Stuttgart Max-Planck-Institut für Festkörperforschung Max-Planck-Institut für Intelligente Systeme

Ansprechpartner: Prof. Harald Giessen E-Mail: giessen@physik.uni-stuttgart.de

Telefon: 0711 - 685-65111



Dienstag, 26. November 2024

16:15 Uhr

V57.02

Universität Stuttgart, Pfaffenwaldring 57, 70569 Stuttgart-Vaihingen

Gastgeber: Prof. Dr. Christian Holm, Universität Stuttgart, Telefon: 0711 - 685-63701

Nanoscale Dynamics of Biological Polymers

Ben Schuler University of Zürich

Abstract

Proteins are the most versatile components of the molecular machinery of life. We use single-molecule fluorescence spectroscopy to study their dynamics on timescales from nanoseconds to hours, even in complex environments, including living cells. In particular, we focus on intrinsically disordered proteins, which do not fold into a well-defined three-dimensional structure and whose behavior can often be rationalized in terms of polymer physics. A mechanistic understanding of biomolecular dynamics is becoming increasingly accessible through the synergy of biophysical experiments with polymer theory and molecular simulations.