Joint LLC Seminar

Monday September 24, 15:15

The Rydberg Lecture Hall, Dep. of Physics

Clemens Kaminski

University of Cambridge, UK

Optical superresolution microscopy of molecular mechanisms of disease

The self-assembly of proteins into ordered macromolecular units is fundamental to a variety of diseases. For example, in Alzheimer's and Parkinson's Diseases, proteins that are usually harmless are found to adopt aberrant shapes or 'misfold'. I will give an overview of research techniques that allow to gain insights into the aggregation of neurotoxic proteins. I will show how stochastic optical reconstruction microscopy, dSTORM, and developments of high speed structured illumination microscopy, are capable of tracking amyloidogenesis *in vitro*, and *in vivo*, and how we can correlate the appearance of certain aggregate species with toxic phenotypes of relevance to Alzheimer's Disease and Parkinson's Disease.

Coffee and cakes will be served at 15.00!

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