



TECHNISCHE
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Vienna University of Technology

INSTITUT FÜR
ANGEWANDTE PHYSIK
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IAP-SEMINAR

ANNOUNCEMENT

- Date: **Tuesday, 17.11.2015**
Time: **16:00 p.m.**
Location: **Technische Universität Wien, Institut für Angewandte Physik, E134**
yellow tower „B“, 5th floor, Seminarraum 134A (room number DB05L03)
1040 Wien, Wiedner Hauptstraße 8-10
- Lecturer: **Prof. Christian Eggeling**
MRC Human Immunology Unit & Wolfson Imaging Centre Oxford,
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- Subject: **Optical super-resolution microscopy - deeper insights into
membrane bioactivity**
- Abstract: Molecular interactions in the plasma membrane of living cells are key in cellular signalling. Protein-protein or protein-lipid complexes, the formation of lipid nanodomains (often denoted “rafts”), or diffusional restrictions by the cortical cytoskeleton are considered to play a functional part in a whole range of membrane-associated processes. The direct and non-invasive observation of such interactions in living cells is often impeded by principle limitations of conventional far-field optical microscopes, specifically with respect to limited spatio-temporal resolution. We present how novel details of molecular membrane dynamics can be obtained by using advanced microscopy approaches such as the combination of super-resolution STED microscopy with fluorescence correlation spectroscopy (STED-FCS). We will focus on new insights into the lipid “raft” theory, and on the role of plasma membrane and cytoskeleton organization in the triggering of immune cells, specifically during T-cell activation.

*All interested colleagues are welcome to this seminar lecture
(45 minutes presentation followed by discussion).*

G. J. Schütz *e.h.*
(Seminar-Chairperson)

H. Störi *e.h.*
(LVA-Leiter)