



Karl Friedrich Bonhoeffer Lecture

Wednesday, 28th January 2015 - 5 pm
Manfred Eigen Hall,
Max Planck Institute
for Biophysical Chemistry

Am Faßberg 11, 37077 Göttingen



Prof. Mordechai (Moti) Segev

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Structure-based sub-wavelength imaging and super-resolution in time, frequency, and quantum systems

The last few years have witnessed important progress on developing concepts borrowed from information sciences for increasing the resolution of measurement systems beyond their fundamental physical limits. On the intuitive level, these concepts can be employed wherever the information (image, spectrum, temporal shape of a pulse, or a quantum state) has structure, that is, the information is not random. The talk will describe the basic concepts and provide examples taken from imaging, spectroscopy, ultrashort pulses, and quantum state tomography, with applications in various domains such as microscopy, microelectronics, biology, and quantum information.