



SFB/TRR 21 - Seminar

9. März 2016, Stuttgart

## Uriel Levy

(School of Engineering and Computer Science; Hebrew University Jerusalem)

### Chip scale nanophotonics for light-vapor interactions and measurement techniques

Following the ongoing effort for miniaturization of devices and systems, on chip nanoscale photonic and plasmonic based devices and systems are becoming a reality. In this talk I describe our recent progress towards the construction of chip scale devices for enhanced light vapor interactions and precise measurement capabilities with nanophotonics. Both dielectric and metallic structures are considered. Specifically, we present the atomic cladding waveguide as a building block in the field, and discuss some progress along this line, including the interactions of Rb vapor with nanophotonic resonators. Furthermore, we show significant progress in plasmonic-vapor interactions and discuss future opportunities, e.g. by including magnetic fields.

Bio: Prof. Uriel Levy is a professor at the Department of Applied Physics, School of Engineering and Computer Science of the Hebrew University of Jerusalem. He is the director of the center for nanoscience and nanotechnology at the Hebrew University. Prior to joining HUJI in 2006 he was a post graduate researcher at the University of California, San Diego. His major research interest is nanophotonics, with focus on silicon photonics, plasmonics, and light matter interactions for applications in communication, imaging, lithography, sensing, memory, and alternative energy.

9. März 2016, 16:00 Uhr

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