COLLOQUE DE PHYSIQUE EPFL

EPFL PHYSICS COLLOQUIUM

Monday, May 8, 2017, 16:15

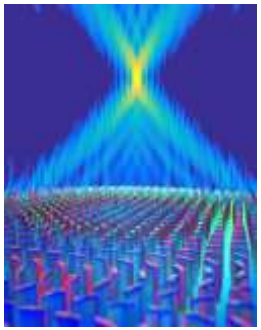
Room CE1

Prof. Federico Capasso

Harvard University

Metaoptics: Structured Light with Metasurfaces

Metasurfaces based on sub-wavelength patterning have major potential for realizing arbitrary control of the wavefront of the diffracted light by achieving local control of the phase, amplitude and polarization. High performance metalenses in the visible and applications to ultracompact spectrometers and chiral imaging will be discussed along with vortex plates, spin to orbital angular momentum converters, axicons which create arbitrary Bessel beams, and chiral holograms.



Metalenses at visible wavelengths: Diffraction-limited focusing and subwavelength resolution imaging
M. Khorasaninejad, W.T. Chen, R. C. Devlin, J. Oh, A. Zhu, and F. Capasso *Science* **352**, 1190 (2016)

Multiwavelength Achromatic Metasurfaces by Dispersive Phase Compensation
Francesco Aieta, Mikhail Kats, Patrice Genevet, Federico Capasso *Science* **0**, 0 (2015)

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