Westfälische Wilhelms-Universität Münster

Fachbereich Physik

› Allgemeines Physikalisches Kolloquium

› Donnerstag, 02.06.2016 um 16 Uhr c.t.

Professor Sir John Pendry

Imperial College London

Transformation optics: a universal design tool

Our intuitive understanding of light has its foundation in the ray approximation and is intimately connected with our vision: as far as our eyes are concerned light behaves like a stream of particles. Here we look inside the wavelength and show how the new concept of transformation optics that manipulates electric and magnetic field lines rather than rays can provide an equally intuitive understanding of sub wavelength phenomena and at the same time be an exact description at the level of Maxwell's equations. Examples will be given of applications to plasmonic structures with dimensions of just a few nanometers: a tenth or even a hundredth of the wavelength of visible light, and at the other extreme to cloaking of static magnetic fields. In both instance the ray picture fails utterly.

Kolloquiums-Kaffee
ab 16 Uhr vor dem Hörsaal

Wilhelm-Klemm-Straße 10
Institutsgruppe 1 Hörsaal HS 2