

NEXT LITE-SEMINAR

Correlation between the reflected and the transmitted light in scattering media

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Date and Time: **Friday, September 15th 2017, 14:00**

Location: **TU Wien, Institute of Solid State Electronics**

1040, Floragasse 7, 1st Floor, Seminar Room 362
Host: S. Rotter

Abstract

When monochromatic light propagates through a scattering medium, it is scrambled and produces a seemingly random speckle pattern. This randomization process prevents information to pass through a turbid material, which behaves like a screen and prevents us to see through it. Yet, linear multiple scattering is not enough to completely decouple the two sides of a turbid medium, as interference between the scattered waves can produce correlations in the speckle patterns. I will present the experimental characterization of a novel form of correlation that connects the reflected and the transmitted speckle, potentially allowing to image through a scattering medium non-invasively, measuring only the reflected light.

Further information: <http://www.jacopobertolotti.com>