

Colloquium Notice

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Controlling of the energy density beneath the surface of opaque samples

The transmission matrix provides the fullest account of transmission through multichannel samples. The distribution of transmission eigenvalues gives the degree to which the transmission can be controlled. Remarkably, open and closed channels exist in the diffusion regime in contrast to the diffusion picture of incoherent transmission. This means that an incident wavefront can be shaped so that the energy is completely transmitted or completely reflected. I will show that those channels make it possible to tailor the energy density inside the sample and provide a way to achieve a deep penetration of the energy. Those results extend our knowledge of the waves from the interfaces to the interior of random samples.

Wednesday
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Starts at 12:15 PM
Physics Conference Room, SB B326