



**DIPARTIMENTO DI FISICA "E.Fermi"**  
UNIVERSITÀ DI PISA  
**CORSO DI DOTTORATO IN FISICA**  
Largo B.Pontecorvo,3 - Edificio B-C  
56127 PISA - ITALY

# **CORSO DI DOTTORATO IN FISICA** **AVVISO DI SEMINARIO**

**Giovedì 24 Maggio 2007**  
ore 15:30

**Dipartimento di Fisica**  
Largo B.Pontecorvo, 3  
**Sala 131 - piano terra - Ed. C**

**Dr. Stefan Rotter**

*Department of Applied Physics, Yale University, USA*  
*and*

*Institute for Theoretical Physics, Vienna University of Technology*

## **" Mesoscopic Transport in the Quantum-to-Classical Crossover "**

*Abstract:*

Recent results on shot noise and full electron counting statistics in phase-coherent transport through quantum dots will be presented. By numerically simulating transmission through ballistic and disordered two-dimensional cavities, we find that the shot noise power in the current through regular systems is surprisingly similar to the noise in chaotic or disordered cavities. I will discuss how this finding can be understood in terms of diffractive scattering at the cavity openings, which act as very strong noise sources. Furthermore I will address the emergence of 'noiseless scattering states' in the quantum-to-classical crossover of transport.

**G.Grosso**