



Special Colloquium

DR. ZHENGHE ZHANG

RICE UNIVERSITY

"LYAPUNOV EXPONENTS AND SPECTRAL ANALYSIS OF ERGODIC SCHRÖDINGER OPERATORS "

One dimensional discrete Schrödinger operators arise naturally in modeling the motion of quantum particles in a disordered medium. The medium is described by potentials which may naturally be generated by certain ergodic dynamics. We will begin with two classic models where the potentials are periodic sequences and i.i.d. random variables (Anderson Model). Then we will move on to potentials with intermediate randomness such as quasi-periodic ones or hyperbolic dynamics generated ones for which the phenomena may become more subtle. We will show how the dynamical object, the Lyapunov exponent, plays a key role in the spectral analysis of these types of operators.

Tuesday, March 14th, 2017

Room 347, the 3rd Floor of the Surge Building

Tea Time @ 3:40 p.m.

Talk Begins @ 4:10 p.m.

Ends @ 5:00 p.m.

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