

Math Physics Seminar, Ilya Kachkovskiy, Michigan State University, REC 225 and on Zoom

Wednesday, Mar 9th 1:30 - 2:30pm

Title: Perturbative Diagonalisation for Quasiperiodic Operators with Monotone Potentials

Abstract: We consider quasiperiodic operators on \mathbb{Z}^d with unbounded monotone sampling functions ("Maryland-type"), and construct the Rayleigh—Schrodinger formal perturbation series for the eigenvalues and eigenvectors. We discuss the combinatorial structure and cancellations in such series and sufficient conditions for their convergence. This allows to establish Anderson localization for several classes of mononone quasiperiodic operators by constructing explicit converging expansions for eigenvalues and eigenvectors. If time permits, we will discuss cases where the requirement of strict monotonicity can be relaxed.

The talk is based on the joint work with S. Krymskii, L. Parnovskii, and R. Shterenberg, both published and in progress.

Zoom Meeting

<https://purdue-edu.zoom.us/j/>

Meeting ID: **953 1862 5523**

Passcode: **184222**