

Abstract Submitted  
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**Topological Singularities and Transport in Kicked Harper Model<sup>1</sup>**

INDUBALA SATIJA, George Mason Univ — Quasienergy spectrum of kicked Harper model is found to exhibit a series of diabolic crossings. These conical degeneracies reside mostly on the symmetry line of its two-dimensional parameter space and their location is found to coincide with the location of maxima of the kinetic energy of the kicked system. Additionally, there are also branch point singularities, the exceptional points, that are associated with avoided crossings and are obtained by analytically continuing the kicking parameter in the complex plane. The location of these singularities also appear to be closely correlated with the maxima and minima of the kinetic energy, suggesting a correlation between the transport and the topological characteristics of the system.

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