

## **Effects of time-reversal asymmetry in the vertex coupling of quantum graphs**

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The talk concerns the effects coming from a violation of time-reversal symmetry in the vertex coupling of quantum graph, focusing on the situation when the asymmetry is maximal at a fixed energy. It is shown that such a coupling has a topological property: the transport behaviour of such a vertex in the high-energy regime depend substantially on the vertex parity. We explore consequences of this fact for several classes of graphs, both finite and infinite periodic ones. The results come from a common work with Marzieh Baradaran, Jiří Lipovský, and Miloš Tater.