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**Using heat invariants to study the Laplace spectral
geometry of orbifolds in dimensions 3 and up**

A Riemann orbifold is a mildly singular generalization of a Riemannian manifold. In this talk we examine the Laplace spectrum of an orbifold in order to learn about the orbifold's topological structure. Our main tool is the list of heat invariants of the orbifold. From the heat invariants we detect the local orientability of an orbifold in any dimension. We also discuss work in progress that focuses on what the heat invariants reveal in dimension 3.