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Comparing Hodge spectra of manifolds and orbifolds: Part 1

We address the question: To what extent does spectral data encode information about the singularities of a closed Riemannian orbifold? Following a brief introduction to orbifolds and a partial history of results on the question above, we will focus on the Hodge Laplacian acting on differential forms. We address the small time heat asymptotics, paying particular attention to the contributions of the orbifold singularities to the heat invariants.

This talk is based on joint work with Katie Gittins, Magda Khalile, Ingrid Membrillo Solis, Mary Sandoval and Elizabeth Stanhope.