

Abstract

Chang, Der-Chen (Georgetown University)

“Heat Kernel Asymptotic Expansions for the Heisenberg SubLaplacian and the Grushin Operator (joint work with Yutian Li)”

The subLaplacian on the Heisenberg group and the Grushin operator are typical examples of subelliptic operators. Their heat kernels are both given in the form of Laplace type integrals. In this talk, we derive the small-time asymptotic expansions for these heat kernels by using Laplace’s method, the method of stationary phase and the method of steepest descent, which are related to the geodesic structure of the induced geometries.