First, I will overview two methods for constructing the heat kernel of Grushin operator. One is the eigenfunctions expansion and Mehler formula. The other is, so called, the complex Hamilton-Jacobi method invented by Beals-Gaveau-Greiner. Then by comparing these methods, I will discuss the possible formula of the heat kernel for the higher step Grushin operators with giving an explicit solution of the Hamilton-Jacobi equation associated to the higher step Grushin operators.

Literatur


Minisymposium No. 12