

Early Career Talk

Kekeya-Brascamp-Lieb Inequalities in the Heisenberg Group

Yannis Galanos

Recent work on the Kekeya and isoperimetric problems in the first Heisenberg group has revealed connections with aspects of restricted projection theory, as well as circular maximal function estimates and planar incidence geometry. I will explain the nature of these connections and how they can be exploited to prove a natural bilinear analogue of a sharp Kekeya-type estimate in the first Heisenberg group. I will also discuss the limitations of these methods in higher dimensions.