A weighted Poincaré inequality on the Heisenberg group

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Place **Campus Kirchberg, room B04**

Gross proved a Sobolev inequality on $\mathbb{R}^d$. That method relies solely on the central limit theorem and a universal property of thesorization for the variance. In that talk, we will motivate an adaptation of that method to the Heisenberg group. The non-commutativity translates in a weighted Poincaré inequality involving mixture of Gaussian measures. The constant is optimal. We will then present a series of natural open questions.
No previous knowledge of the Heisenberg group is needed and we will recall all the definitions and properties of the Heisenberg group during the talk.