哈爾濱工業大學 数学研究院
Institute for Advanced Study in Mathematics of HIT

Functional Analysis Seminar

Quantum differentiation and integration for the quantum plane

Fedor Sukochev
University of New South Wales

Abstract
We explain recent results concerning (quantum) differentials and integrals on the noncommutative (Moyal) plane. We give full characterisation of elements on the noncommutative (Moyal) plane such that their quantum derivatives belong to the weak Schatten class $\mathcal{L}_{d,\infty}$, which means that these derivatives are d-times integrable in the quantum integration sense. We then calculate the quantum integration of these derivatives by adapting Connes' integration formulae to the noncommutative (Moyal) plane. This is a joint work with E. McDonald and X. Xiong.

Time: Wednesday, June 1, 2022, 16:00-17:30 (UTC+8)
Place: Mingde Building, B201-1
Zoom ID: 824 7045 6491 (Password: 123399)
Link: https://zoom.us/j/82470456491?pwd=dGswU3d3RGd1L1d4a3ZvSXdnakVkUT09

More information on the Functional Analysis Seminar:
http://im.hit.edu.cn/en/2022/0414/c8931a271838/page.htm