
THERESE LANDRY, Fields Institute for Research in Mathematical Sciences

Noncommutative Solenoids, Length Functions on Twisted Group C^ -Algebras, and Inductive Limits of Spectral Triples*

Noncommutative solenoids are inductive limit algebras built from rotation algebras. By viewing noncommutative solenoids as twisted group C^* -algebras, we construct compact quantum metric spaces, as well as spectral triples. Building on the work of Christ and Rieffel, Long and Wu defined length functions on twisted group C^* -algebras. Both of our constructions rely on such length functions. In particular, our spectral triples on noncommutative solenoids can also be shown, in the sense of Floricel and Ghorbanpour, to be inductive limit spectral triples on rotation algebras. This is joint work with C. Farsi, N. Larsen, and J. Packer.