Quaternionic Brownian windings

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Time **Thursday, Dec 19, 2019 at 16:30**
Place **Campus Belval, MNO 5A (fifth floor)**

We define and study the 3-dimensional windings along Brownian paths in the quaternionic Euclidean, projective and hyperbolic spaces. In particular, the asymptotic laws of these windings are shown to be Gaussian for the flat and spherical geometries while the hyperbolic winding exhibits a different long time-behavior. The corresponding asymptotic law seems to be new and is related to the Cauchy relativistic distribution.

This is joint work with N. Demni and Jing Wang