

1133-46-140

Frederic Latremoliere* (frederic@math.du.edu). *The Modular Gromov-Hausdorff Propinquity.*

I will introduce in this talk a new distance between Hilbert modules equipped with some metric data which generalize, for my purpose, the idea of a connection. My new distance extends the quantum Gromov-Hausdorff propinquity, a noncommutative analogue of the Gromov-Hausdorff distance which I introduced as a well-behaved distance with respect to the C^* -algebraic structure of quantum metric spaces — notions which I will briefly review in this talk as well. I will then discuss how my modular distance can be applied to prove the continuity of families of Heisenberg modules over quantum 2-tori when the modules are equipped with their natural connections. The modular propinquity represents an exciting step in my program of extending metric geometry to noncommutative geometry, opening the possibility to approximate not only (quantum) spaces, but their vector bundles as well, and is new even in the classical setting. (Received July 20, 2017)