

Speaker: **Alain Connes**

Title: **On the spectral characterization of manifolds**

Abstract

I will show that the first five axioms I had given in '96 on spectral triples suffice in the commutative case to characterize smooth compact manifolds. I will also define a new invariant in Riemannian geometry, which when combined with the spectrum of the Dirac operator is a complete invariant of the geometry. It is an analogue of the CKM mixing matrix of the Standard model.