

Probabilistic Operator Algebra Seminar

Organizer: Dan-Virgil Voiculescu

March 28 **James Mingo and Josue Vazquez-Becerra**, Queen's University and UAM Iztapalapa

Title: *The Infinitesimal Law of a Real Wishart Matrix*

The asymptotic infinitesimal law of real Wishart matrices was given by Dumitriu and Edelman in 2006. As has been known for some time the leading order in the $1/N$ expansion can easily be described by non-crossing partitions; in fact this observation leads directly to the combinatorial approach to free probability. We show that the subleading term, the one that gives the infinitesimal law, can also be described by non-crossing partitions, but this time on an annulus.