Probabilistic Operator Algebra Seminar

Organizer: Dan-Virgil Voiculescu

May 21   **Patrick Oliveira Santos**, Universite Gustave Eiffel Paris

Title: *Central Limit Theorem for tensor products of free variables*

In this talk, we establish a central limit theorem for tensor product random variables $c_k :=$ $a_k \otimes a_k$, where $(a_k)_{k \in \mathbb{N}}$ is a free family of variables. We show that if the variables a_k are centered, the limiting law is the semi-circle. Otherwise, the limiting law depends on the mean and variance of the variables a_k and corresponds to a free interpolation between the semi-circle law and the classical convolution of two semi-circle laws. This is a joint work with Cecilia Lancien and Pierre Youssef.