
Talk

Speaker: Gabriel Tucci.

Affiliation: TAMU.

Title: *Limits laws for geometric means of free positive random variables.*

Time and Place: Wednesday, February 27, 2:00-2:55pm, Milner 317.

Abstract: Let $\{a_k\}_{k=1}^\infty$ be free identically distributed positive non-commuting random variables with probability measure distribution μ . In this paper we proved a multiplicative version of the Free Central Limit Theorem. More precisely, let $b_n = a_1^{1/2} a_2^{1/2} \dots a_n \dots a_2^{1/2} a_1^{1/2}$ then b_n is a positive operator with the same moments as $x_n = a_1 a_2 \dots a_n$ and $b_n^{1/2n}$ converge in distribution to positive operator Λ . We completely determined the probability measure distribution ν of Λ from the distribution μ . This gives us a natural map $\mathcal{G} : \mathcal{M}_+ \rightarrow \mathcal{M}_+$ with $\mu \mapsto \mathcal{G}(\mu) = \nu$. We study how this map behaves with respect to additive and multiplicative free convolution.

Please send comments about this page to Michael Anshelevich.