Probabilistic Operator Algebra Seminar

Organizer: Dan-Virgil Voiculescu

May 11 **Uwe Franz**, U. Franche Comte, Besancon

Title: *On bijections between monotone increment processes, classes of classical Markov processes and Loewner Chains*

We prove one-to-one correspondences between quantum processes with monotonically independent additive increments, certain decreasing Loewner chains in the upper half-plane, and a special class of real-valued Markov processes, which possess a deformed translation invariance. The marginal distributions of these processes are probability measures on the real line with univalent Cauchy transform. An anologous result holds for decreasing Loewner chains in the unit disk, which correspond to quantum stochastic processes of unitary operators with monotonically independent multiplicative increments, and to a certain family of Markov processes with values in the unit circle.