Probabilistic Operator Algebra Seminar

Organizer: Dan-Virgil Voiculescu

September 16 **Akihiro Miyagawa**, UC San Diego

Title: *Voiculescu's non-commutative divergence-free vector fields*

In the paper on cyclomorphy, Voiculescu introduced the notion of non-commutative divergence-free vector field which is the orthogonal complement of cyclic gradients of polynomials in a given tuple of operators in a tracial von Neumann algebra, and he also showed that one could have concrete formulas about this divergence-free vector fields in the case of the standard free semicircular systems. In this talk, I explain the background of this divergence-free vector field and our results about the dimensions of homogeneous parts of this vector field.