

Probabilistic Operator Algebra Seminar

Organizer: Dan-Virgil Voiculescu

March 10 **Razvan Gurau**, University of Heidelberg, Institute of Theoretical Physics.

Title: *Random tensors, from random metric spaces to free cumulants*

In this talk I will present an overview of some developments in the theory of random tensors over the past 15 years. I will first briefly review the physical motivations for considering such objects, especially in connection with models of random geometry, and implications of the $1/N$ expansion of random tensors in this context. I will then proceed to discussing some more recent developments in the field focusing on the generalization of free cumulants and free cumulants/asymptotic moments relations to random tensors.