

Probabilistic Operator Algebra Seminar

Organizer: Dan-Virgil Voiculescu

November 6 **Raz Slutsky**, Weizmann Institute

Title: *The space of traces of the free group and free products of matrix algebras*

We will show that the space of tracial states on the maximal C^* -algebra of the free group on two generators is a Poulsen simplex, that is, the set of extreme points is dense. We will then see how a similar strategy can be used to deduce the same result for the free product of matrix algebras. This answers a question of Musat and Rørdam. Finally, we will discuss the connection between traces on this algebra and factorizable quantum channels, and ask questions about other free products. This is based on joint work with Joav Orovitz and Itamar Vigdorovich.