

Probabilistic Operator Algebra Seminar

Organizer: Dan-Virgil Voiculescu

September 21 **Christopher Schafhauser**, University of Nebraska-Lincoln

Title: *Subalgebras of simple AF-algebras*

A long-standing open question, formalized by Blackadar and Kirchberg in the mid 90's, asks for an abstract characterization of C^* -subalgebras of AF-algebras. I will discuss some recent progress on this question: every separable, exact C^* -algebra which satisfies the UCT and admits a faithful, amenable trace embeds into an AF-algebra. Moreover, the AF-algebra may be chosen to be simple and unital with unique trace and the embedding may be taken to be trace-preserving. Modulo the UCT, this characterizes C^* -subalgebras of simple, unital AF-algebras. As an application, for any countable, discrete, amenable group G , the reduced C^* -algebra of G embeds into a UHF-algebra.