1112-46-533 **Stephen Avsec*** (savsec@math.tamu.edu), Dept. of Mathematics, Mailstop 3368, Texas A&M University, College Station, TX 77843. *Noncommutative Gaussian Functors and Their Symmetries.*

The classical the Gaussian functor affiliates a sequence of orthonormal vectors in a (real) Hilbert space to a sequence of iid standard Gaussian variables. This functor trivially proves one direction of Freedman's Theorem, which states that an infinite sequence of random variables is rotatable (invariant under the action of each orthogonal group) if and only if it is a sequence of iid standard Gaussian variables. In this talk, we will examine noncommutative analogues of the Gaussian functor as well as of Freedman's theorem. Time permitting, we will discuss the quantum rotatable case and half-liberated rotatable case. This talk will include some joint work with M. Junge. (Received August 11, 2015)