1116-46-1902 **Stephen Avsec*** (savsec@math.tamu.edu), Department of Mathematics, Mailstop 3368, Texas A&M University, College Station, TX 77843-3368. *Noncommutative Gaussian Spaces.*

Classically, Gaussian linear space is an $\mathbb{R}$-linear space of random variables on a probability space (Ω, Σ, μ) such that each variable in the space is a centered Gaussian. Typically, such a space is viewed as a subspace of $L^2_{\mathbb{R}}(\Omega, \Sigma, \mu)$. In this talk, we shall discuss a noncommutative analogue of these spaces, replacing a commutative L^2 space with L^2 of a finite von Neumann algebra. We shall also discuss the (quantum) symmetry groups of these spaces. This will include some joint work with Marius Junge. (Received September 21, 2015)