1109-47-251 **Anthony Hester*** (ahester1024@gmail.com), 7027 Old Madison Pike, Suite 108, Huntsville, AL. *Fixed Points of Random Operators.*

Traditionally, analysts have demonstrated random fixed points by first proving the existence of fixed points for almost all the deterministic mappings $T_\omega : X \to X$, defined by $T_\omega x = T(\omega, x)$ for each $x \in X$, then showing measurability after glueing together the fixed points produced by the deterministic theory. Since such proofs tend to involve complicated arguments somewhat limited in generality, the question arises can deterministic fixed point theory produce random results directly when viewed from the proper function spaces? In other words, why does $Tf = f$ not follow directly from deterministic theory? In this talk, we examine a case where deterministic theory does imply the existence of a random fixed point. In particular, we shall demonstrate, by constructing an appropriate metric space and applying the Banach contraction principle, that if X is a normed space, $f > g$, and

$$P\left(f(\|Tu - Tv\|) > t\right) \leq P\left(g(\|u - v\|) > t\right)$$

for all $t > 0$ and measurable $u, v : \Omega \to X$, then T has a random fixed point. (Received February 03, 2015)