1096-05-318 **Edward R. Scheinerman*** (ers@jhu.edu), Applied Mathematics & Statistic Department, Johns Hopkins University, Baltimore, MD 21218, and **Yiguang Zhang**, Applied Mathematics & Statistics Department, Johns Hopkins University, Baltimore, MD 21218. *Random Threshold Directed Graphs.* Preliminary report.

A directed graph D is called a *threshold digraph* provided there exists a pair of weighting functions $f, g : V(G) \to \mathbf{R}$ such that for distinct $u, v \in V(D)$ we have the arc $u \to v$ exactly when $f(u) + g(v) \geq 1$. We generate a threshold digraph at random by choosing the weights $\{f(u), g(u) : u \in V\}$ independently and uniformly at random from $[0, 1]$.

We show that this model of random threshold digraphs is equivalent to another, purely combinatorial random model based on linear extensions of an associated poset. We then exploit his equivalence to derive exact and asymptotic properties of random threshold digraphs. For example, we show that the probability that a random threshold digraph on n vertices is strongly connected converges to $\frac{1}{4}$ as $n \to \infty$. (Received August 28, 2013)