1096-37-1749 **Kevin McGoff*** (mcgoff@math.duke.edu) and **Ronnie Pavlov**. *Random $\mathbb{Z}^d$ subshifts of finite type.* Preliminary report.

For an integer $d \geq 1$ and a finite set $\mathcal{A}$, let $\mathcal{A}^{\mathbb{Z}^d}$ denote the full shift on $\mathcal{A}$. Let $B_n = \mathcal{A}^{[1,n]^d}$ be its set of words with shape $[1,n]^d \subset \mathbb{Z}^d$. Define a random subset ω of B_n by independently choosing each word from B_n with some probability α. Let X_ω be the (random) SFT built from the set ω. For $0 \leq \alpha \leq 1$ and n tending to infinity, we compute the limit of the likelihood that X_ω is empty. For $d \geq 2$, there is no algorithm that decides in finite time whether a given SFT is empty; nonetheless, we find an exact representation of the limiting probability of emptiness in terms of α and the zeta function of $\mathcal{A}^{\mathbb{Z}^d}$. (Received September 17, 2013)