1104-60-222 **Konstantin Tikhomirov*** (ktikhomi@ualberta.ca), 632 Central Academic Building, Edmonton, Alberta T6G2G1, Canada. *The limit of the smallest singular value of random matrices with i.i.d. entries.* Preliminary report.

For a two-dimensional array $\{a_{ij}\}$ $(1 \leq i, j < \infty)$ of i.i.d. real valued random variables with zero mean and unit variance, we prove the following: Let $(N_m)_{m=1}^{\infty}$ be an integer sequence satisfying $m/N_m \longrightarrow z$ for some $z \in (0,1)$. Further, for each $m \in \mathbb{N}$ and for the $N_m \times m$ random matrix $A_m = (a_{ij})$ $(1 \leq i \leq N_m, 1 \leq j \leq m)$, let $s_{\min}(A_m)$ denote its smallest non-trivial singular value. Then the sequence $\left(\frac{s_{\min}(A_m)}{\sqrt{N_m}}\right)_{m=1}^{\infty}$ converges to $1 - \sqrt{z}$ almost surely. This result generalizes a well known theorem of Bai and Yin which was proved under the additional assumption of a bounded fourth moment of the entries. (Received September 02, 2014)