1154-60-2102 **Galyna V. Livshyts**, **Konstantin Tikhomirov*** (`ktikhomirov6@gatech.edu`) and **Roman Vershynin**. *Invertibility of inhomogeneous random matrices.*

Let A be an $n\times n$ random matrix with independent entries such that $\mathcal{L}(a_{ij},1)\le b$ for some $b\in(0,1)$, and $\mathbb{E}\|A\|_{HS}^2\le Kn^2$ for $K\ge 1$. We show that the smallest singular value $\sigma_n(A)$ of A satisfies

$$\mathbb{P}\Big\{\sigma_n(A)\le\frac{\varepsilon}{\sqrt{n}}\Big\}\le C\varepsilon+2e^{-cn},\quad \varepsilon\ge 0,$$

where $c,C>0$ may only depend on b and K. (Received September 17, 2019)