

NONCONVENTIONAL RANDOM MATRIX PRODUCTS.

YURI KIFER

HEBREW UNIVERSITY OF JERUSALEM

ABSTRACT. Let ξ_1, ξ_2, \dots be i.i.d. random variables, $F : \mathbb{R}^\ell \rightarrow SL_d(\mathbb{R})$ be a Borel matrix valued function and $X_n = F(\xi_{q_1(n)}, \xi_{q_2(n)}, \dots, \xi_{q_\ell(n)})$ where, for instance, $q_i(n) = in$. We prove that under certain conditions the limit $\lim_{N \rightarrow \infty} \frac{1}{N} \log \|X_N \cdots X_2 X_1\|$ exists. Since this is a product of long range dependent nonstationary sequence of matrices the standard approach is not applicable here. The work is joint with Sasha Sodin from QMUL.