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Spectral properties of random banded Hessenberg matrices

In this talk I will consider a class of random, banded lower Hessenberg matrices and discuss its spectral asymptotic properties. Each diagonal of the matrices is formed by i.i.d. random variables, with distributions that may be different for different diagonals. We prove convergence in expectation of the moments of the empirical spectral distribution of the matrices considered as their size tends to infinity. An important tool we use is the Hermite-Padé property for a system of resolvent functions of the limiting Hessenberg operator. This is a joint work with Vasiliy A. Prokhorov.