Single eigenvalue fluctuations of sparse Erdős-Rényi graphs

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Abstract: We will first review some universality results for Wigner matrices and sparse random graphs, and then talk about some recent development on the fluctuation of individial eigenvalues of these models. In particular, we show that the bulk eigenvalues of sparse matrices fluctuate on a scale different from Wigner matrices, i.e. they exhibit a non-universal behaviour.