

**Manuel Saenz**

**Maximum independent sets of random graphs with given degrees**

In this talk we will establish results that characterise the asymptotic size of maximum independent sets of a large class of random graphs with given degrees. This is done through the characterisation of the scaling limit of a simple sequential algorithm. In the special case of sparse Erdős-Rényi graphs, our results allow us to give a simple proof of the so-called  $e$ -phenomenon, identified by Karp and Sipser, and to give an alternative characterisation of their asymptotic independence number.