

## Seminario de Grafos

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**Título:** Almost spanning universality in random graphs.

### Resumen:

We will study embeddings of large graphs of bounded degree in  $G(n,p)$ . Johansson, Kahn, Vu determined the threshold for  $G(n,p)$  to contain a  $K_{r+1}$ -factor, i.e., a collection of  $n/(r+1)$  vertex disjoint copies of  $K_{r+1}$ . The threshold turns out to be the same as for the property 'every vertex is contained in a  $(r+1)$ -clique', which is a necessary condition for containing a  $K_{r+1}$ -factor.

Now for integers  $t, D$ , let  $H(t, D)$  be the class of  $t$ -vertex graphs and maximum degree at most  $D$ . It is conjectured that whp  $G(n, p)$  should contain every graph in  $H(n, D)$  as soon as it contains a  $K_{D+1}$ -factor. This problem was the object of interest of many researchers and it is still open for  $D > 3$ . Here we study the almost spanning version of the problem as it was done by Ferber, Luh and Nguyen. They proved that, for  $D > 4$ , whp  $G(n, p)$  contains every graph in  $H((1-o(1))n, D)$  as soon as it contains a  $K_{D+1}$ -factor.

**Martes 23 de Octubre del 2023, a las 16:00 hrs.**

Sala de Seminarios Jacques L Lions CMM, Séptimo Piso Torre Norte.

