

Random subcube intersection graphs

Victor Falgas–Ravry*

Abstract

In this talk we introduce two model of *random subcube intersection graphs*: given a vertex set V , we associate to each $v \in V$ a randomly chosen subcube $A_v \subseteq Q_d$ of the d -dimensional hypercube, and set an edge between $v, w \in V$ if $A_v \cap A_w \neq \emptyset$. Our motivation is to study random ‘compatibility’ between vertices.

We describe the clique behaviour of our models, covering of the ambient hypercube, degree distribution and some open problems on independence and connectivity.

This is joint work with Klas Markström (Umeå).

*Institutionen för matematik och matematisk statistik, Umeå Universitet, 901 87 Umeå, Sweden. Supported by a postdoctoral grant from the Kempe foundation, and by travel grants from the Magnuson Foundation and Svenskamatematikersamfundet. Email: victor.falgas-ravry@math.umu.se