

Embedding in sparse graphs

Peter Allen

London School of Economics and Political Science, UK
p.d.allen@lse.ac.uk

Session: 27. Probabilistic and Extremal Combinatorics

Recently some tools, called sparse blow-up lemmas and regularity inheritance lemmas, were developed which allow one to prove the existence of embeddings of bounded-degree graphs into sparse (random or pseudorandom) graphs. Although the motivation for their development came from the desire to study extremal problems on sparse random graphs, these tools turn out to have applications in various other areas, such as positional games and additive combinatorics.

This talk will introduce the lemmas and sketch some applications.