

## Combinatorics and Probability Seminar

### *Rainbow matchings in equivalence relations*

Liana Yepremyan (UIC)

**Abstract:** We show that if a multigraph  $G$  with maximum edge-multiplicity of at most  $\frac{\sqrt{n}}{\log^2 n}$ , is edge-coloured by  $n$  colours such that each colour class is a disjoint union of cliques with at least  $2n + o(n)$  vertices, then it has a full rainbow matching, that is, a matching where each colour appears exactly once. This asymptotically solves a question raised by Clemens, Ehrenmuller and Pokrovskiy, and is related to problems on algebras of sets studied by Grinblat in [Grinblat 2002]. For the solution we use the differential equation method. This is joint work with David Munhá Correia.

Wednesday, March 4 at 2:00 PM in 612 SEO