

ÉCOLE D'ÉTÉ SMS 2012 « COMBINATOIRE PROBABILISTE »
25 JUIN - 6 JUILLET 2012

SMS 2012 SUMMER SCHOOL "PROBABILISTIC COMBINATORICS"
JUNE 25 - JULY 6, 2012

Cliques, colourings and discrepancy (7.5 hours)

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Many questions in combinatorics concern the relationship between the local and global structure of a graph or set system. For instance, what can we say about the subgraphs of a graph with large chromatic number? What about graphs without large cliques or independent sets? How uniformly is it possible to distribute edges in a graph?

Topics will include the Erdos-Hajnal Conjecture, the Gyarfás-Sumner Conjecture, discrepancy for graphs and hypergraphs, and VC-dimension. Along the way, we will look at graphs, hypergraphs and tournaments, both from an extremal and a probabilistic perspective.

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