Anticoncentration via the strong perfect graph theorem

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In this talk we shall address anticoncentration inequalities for sums of random vectors. In particular, we shall asymptotically establish two conjectures: one by Lee Jones (1978) and another by Leader-Radcliffe (1994). Perhaps surprisingly, the main ingredient to establish the latter result is the Strong Perfect Graph Theorem by Chudnovsky, Robertson, Seymour and Thomas (2002).
The talk is based on recent joint work with V. Kurauskas (Vilnius University).