

## Princeton Discrete Math Seminar

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Thursday, November 29th

Department of Mathematics

2:15-3:15pm

Fine Hall, Room 224

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### Induced Ramsey-type theorems

Benny Sudakov

IAS and UCLA

We present a unified approach to proving Ramsey-type theorems for graphs with a forbidden induced subgraph which can be used to extend and improve many earlier results in this area. The proofs are based on a simple lemma that can be used as a replacement for Szemerédi's regularity lemma, thereby giving much better bounds. The same approach can be also used to show that pseudo-random graphs have strong induced Ramsey properties. This leads to explicit constructions for upper bounds on various induced Ramsey numbers.

Joint work with Jacob Fox.