Graduation Project

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1 Introduction

2 Kahn-Kalai Conjecture

2.1 Thresholds

Let $n \in \mathbb{N}$ and $0 \leq p \leq 1$. The random graph $G(n,p)$ is a probability space over the set of graphs on n labeled vertices determined by

$$\Pr[\{i,j\} \in G] = p$$

with these events mutually independent [1] Given a graph theoretic property A, there is a probability that $G(n,p)$ satisfies A which we write as $\Pr[G(n,p) \vDash A]$.

2.1.1 Threshold function for an isolated vertex

2.2

3 Numerical Semigroups

4 Probabilistic Models on Numerical Semigroups

5 Expected Frobenious Number

References

[1] N. Alon and J. H. Spencer, *The probabilistic method*. John Wiley & Sons, 2016.