**Flavor:** *Small Deviations*, by Vishesh Jain

**Ingredients:** Let $X_1, \ldots, X_n$ be independent non-negative random variables, each with mean 1. What is the probability that $X_1 + \ldots + X_n$ exceeds $n+1$? I will discuss a very simple proof (due to Nazarov) of a remarkable inequality by Feige, which shows that this probability is bounded away from 1 by an absolute constant. Time permitting, I will discuss an application of this inequality to a problem in extremal hypergraph theory.

**Best Before:** April 4th 2019, 6-7pm, in Room 2-132