The SUMO Speaker Series for Undergraduates
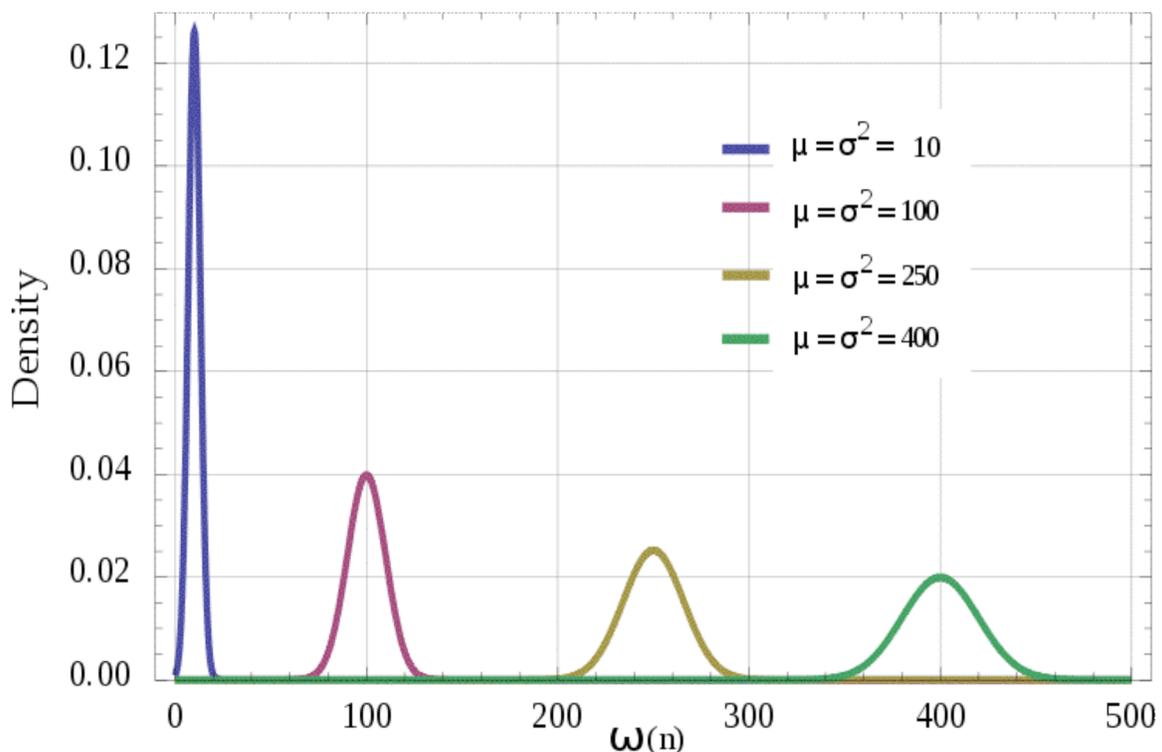
(food from Pizza Chicago)
Wednesday, April 28
4:40-5:30, room 380C

The Erdos-Kac Theorem
Bob Hough

Density

0.12
0.10
0.08
0.06
0.04
0.02
0.00

$\mu = \sigma^2 = 10$
$\mu = \sigma^2 = 100$
$\mu = \sigma^2 = 250$
$\mu = \sigma^2 = 400$

0   100   200   300   400   500

$\omega(n)$

Abstract: In 1940 Paul Erdos and Mark Kac proved that the number of prime factors of a randomly chosen large integer of size x is distributed like a normal distribution of mean log log x and variance log log x. In particular, a typical integer with 64 digits has five prime factors. I'll explain parts of the proof.

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