

# MATHEMATICS SEMINAR

Sponsored by the Department of Mathematics

## Primes, binomial Coefficients, and the mysterious Way in which they relate

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Paul Erdős was a master of combinatorics and of number theory, and he combined these areas in ways that no one else ever has.

In this talk, we will walk through Erdős's proof of Bertrand's postulate which appeared in his first published paper from 1932 when he was just 19. This proof has since become known as a proof from "The Book".

The theorem states that for any natural number  $n$ , there is some prime number between  $n$  and  $2n$ . Along the way, we'll get to visit some interesting combinatorial and number theoretic ideas.

**A basic discrete background is useful but not required.**

**Friday, March 27, 3:00-4:00pm**  
**Whitaker Hall 101**

Light Refreshments will be provided