

Many Cheerful Facts

Organizer: Jeffrey Galkowski, Alex Kruckman
Wednesday, 2:00pm-3:00pm, 1015 Evans

October 12.

Speaker: Ralph Morrison, UC Berkeley
Title: *(Infinitely) Many Cheerful Primes*

From Euclid being old school and crafty to Furstenberg being topological and sassy, mathematics abounds with proofs that there are infinitely many prime numbers. In addition to showcasing some of the slicker and sillier proofs, this talk will build up some basic analytic number theory (Riemann zeta function, all that jazz) to reach an even nicer result: that there are infinitely many primes in any arithmetic sequence $\{a + bn\}$, so long as $\gcd(a, b) = 1$. No background in number theory required; if you haven't done much with L-functions before, this is a great chance to see them in action!

I am the very model of a modern Major-General,
I've information vegetable, animal, and mineral,
I know the kings of England, and I quote the flights historical
From Marathon to Waterloo, in order categorical;
I'm very well acquainted, too, with matters mathematical,
I understand equations, both the simple and quadratical,
About binomial theorem I'm teeming with a lot o' news,
With many cheerful facts about the square of the hypotenuse.
I'm very good at integral and differential calculus;
I know the scientific names of beings animalculous:
In short, in matters vegetable, animal, and mineral,
I am the very model of a modern Major-General.