Celebration of the 150th anniversary of the Riemann Hypothesis

Bernhard Riemann (1826-1866)

$$\zeta(s) = \sum_{n=1}^{\infty} \frac{1}{n^s}$$
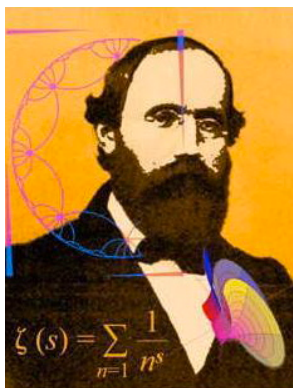
# Riemann's zeros and the rhythm of the primes

## Wednesday, 18 November 2009
at 4pm in MSC W201

Speaker: Professor David Borthwick

Graph of the real and imaginary parts of the zeta function on the critical strip

$$\Re\left(\zeta\left(\tfrac{1}{2}+ix\right)\right) \quad \Im\left(\zeta\left(\tfrac{1}{2}+ix\right)\right)$$
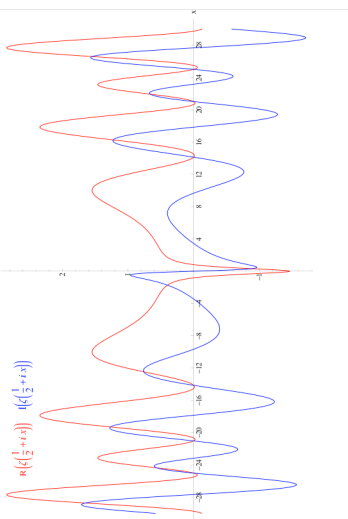
**Abstract:** Exactly 150 years ago, Riemann published a short paper (in German) called "On the Number of Primes Less Than a Given Magnitude". In it, he speculated that the zeros of the zeta function all lie on a certain line called the critical strip. This conjecture, now called the Riemann Hypothesis, is the greatest unsolved problem in all of mathematics. In this talk we'll introduce the Hypothesis and try to explain why mathematicians find this arcane sounding problem so compelling.