The Riemann zeta function, introduced by Bernard Riemann in 1859, plays a significant role in prime number theory. The Riemann hypothesis, the conjecture that all non-trivial zeros of the zeta function have real part \(1/2\), is one of the most important unsolved problems in mathematics. In this talk, I will discuss what we currently know about this function. In particular, I will focus on the distribution of the zeros of the zeta function and on the moments of the Riemann zeta function.

Graduate students are welcome.