Abstract:

The distribution of prime numbers has been one of the central topics in number theory. It has a deep connection with the zeros of the Riemann zeta function. The concept of “primes” also arises in other context. For example, in a compact Riemann surface, as introduced by Selberg, primitive closed geodesic cycles play the role of primes; while in a finite complex arising as a quotient of a building, for each positive dimension, there are primes of similar nature. In this talk we shall discuss the distributions of such primes and their connection with the analytic behavior of the associated zeta and L-functions.