Abstract:

While the sequence of primes is very well distributed in the reduced residue classes (mod q), the distribution of pairs of consecutive primes among the permissible pairs of reduced residue classes (mod q) is surprisingly erratic. We propose a conjectural explanation for this phenomenon, based on the Hardy-Littlewood conjectures, which fits the observed data very well. We also study the distribution of the terms predicted by the conjecture, which proves to be surprisingly subtle. This is joint work with Kannan Soundararajan.

Special Note:
The speaker will give a prep talk for graduate students in AP&M 7421 at 1:15 pm. All graduate students interested in number theory are strongly encouraged to attend.