

Kannan Soundararajan

What are L-functions and what are they good for?

Abstract: L-functions are analytic objects which encode arithmetical information such as prime numbers, class numbers of fields, the number of rational points on elliptic curves, etc. The prototypical example of an L-function is Riemann's zeta function. Understanding the behavior of L-functions leads naturally to an understanding of many number theoretic questions. I will give many examples of L-functions, and describe the central problems of this theory. I will also give several applications of L-functions to concrete problems in number theory.

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refreshments will be provided

<http://math.stanford.edu/~emalm/fars/>