

Abstract: In the 19th century, the zeta and the L-functions were introduced to understand the distribution of prime numbers. Over the last two centuries mathematicians have found several different sources of L-functions, and they have related them with other problems in mathematics and beyond. The Riemann hypothesis is the central problem in this field. In this talk I will present a brief survey of the L-function theory - starting from the work of Dirichlet and Riemann, and ending by showing how Riemann hypothesis answers certain question of Einstein regarding quantum mechanics.