

FIM Nachdiplomvorlesung

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The value distribution of L-function and multiplicative number theory

27 February - 28 May 2020

Thursdays, 10:15 - 12:00

HG G 43, ETH Zürich, Rämistrasse 101

Abstract

The broad theme for the lecture series is the value distribution of zeta and L-functions. This is related to several important questions concerning (i) the maximal size of L-functions, (ii) asymptotics for moments of L-values, (iii) the distribution of zeros, and non-vanishing of L-functions at special points. Further, some of the techniques used in the study of moments have close counterparts in the understanding other problems in multiplicative number theory --- for instance, the recent results of Harper on random multiplicative functions, and the breakthroughs of Matomaki and Radziwiłł on multiplicative functions in short intervals. Much of this work has a strong probabilistic flavor, and in particular we shall discuss connections with random matrix theory, branching Brownian motion, etc.

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