

Abstract

Oberwolfach Workshop:

Interplay between Number Theory and Analysis for Dirichlet Series

Dates:

29 Oct - 4 Nov 2017 (Code: 1744a)

Organizers:

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The interaction between Dirichlet series and function theory in polydiscs dates back to a fundamental insight of Harald Bohr and the subsequent groundbreaking work on multilinear forms and polarization by Bohnenblust and Hille. After the publication in 1997 of papers by Hedenmalm, Lindqvist, and Seip and by Boas and Khavinson, there has been a revival of interest in the research area opened up by these early contributions. A new field has emerged, intertwining the classical work of Bohr and Bohnenblust-Hille in novel ways with modern operator-related function theory and harmonic analysis. So far several fundamental questions have been settled, some long-standing problems have been solved, and a growing number of researchers with different backgrounds have become engaged in the area. In addition, the Bohr correspondence has recently inspired state of the art results on the growth and statistical behavior of the Riemann zeta function on the half-line. These developments have paved the way for stronger interaction between classical analysis and analytic number theory, which in turn may lead to unexpected advances in problems originating in analytic number theory. This MFO workshop will be an ideal arena for the exchange of ideas needed to nurture further progress and to solve important problems.