



Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

Dienstag, 26. April 2022

17 Uhr, Geom H5

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Harmonic Maass forms in number theory and geometry

Abstract:

In this talk we give a short overview about the theory of harmonic (weak) Maass forms and their applications in number theory and (arithmetic) geometry. First, we will briefly describe how the study of generating series of number theoretic functions is related to modular forms. Then we will introduce harmonic weak Maass forms, real-analytic generalizations of modular forms. We will describe how the vanishing of the central L-derivative of rational elliptic curves is related to the properties of the Fourier coefficients of harmonic weak Maass forms. Moreover, we indicate how certain liftings of harmonic weak Maass forms can be used to extend old results of Hecke.

Vor dem Vortrag (ab 16.30 Uhr) stehen im Foyer vor Hörsaal H5 Kaffee und Tee bereit.