



Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

Dienstag, 25. Juni 2024

17 Uhr, Geom H4

Dr. Kobi Kremnitzer
(University of Oxford)

Title:

Functional analysis over the integers, L-functions and global Hodge theory

Abstract:

In this talk I will explain what are bornologies and how using bornological methods one can develop functional analysis over the integers unifying Archimedean and non-Archimedean analysis. I will give examples of algebras of functions and distributions defined over the integers which base change to the usual algebras over the reals and p-adics. Using these it is possible to write some version of L-functions over the integers. I will also discuss how this approach gives global analytic geometry and global Hodge structures. I will relate the integral L-functions to global Hodge structures. I will also explain how to define a cohomology theory for schemes valued in global Hodge structures and speculate on the relation between the determinant of cohomology and L-functions.

**Vor dem Vortrag (ab 16.30 Uhr) stehen im Foyer vor Hörsaal H4
Kaffee und Tee bereit.**