



Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

Dienstag, 23. Mai 2023

17 Uhr, Geom H4

Prof. Greg Stevenson

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Classification problems in triangulated categories

Abstract:

Starting from a commutative ring we can form its spectrum, which is a topological space whose points are given by the prime ideals. Often we approach this space, together with its associated sheaf of rings, as the starting point for algebraic geometry, i.e. for understanding the vanishing of systems of polynomial equations. However, with the Nullstellensatz in mind, we can also view the spectrum as solving a classification problem: it is the parameter space for radical ideals. From this point of view, the crucial object is the collection of all radical ideals under inclusion. These ideals form a special type of lattice, called a frame, which is dual to the spectrum.

I want to discuss some analogue of the above story where one replaces the ring by a category and tries to construct an analogue of the spectrum in order to parameterize objects up to some weak notion of equivalence. This leads us to considering lattices associated to these categories, how to approximate them by spaces, and what the corresponding notion of geometry should be.

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