MATEMATISKA INSTITUTIONEN
STOCKHOLMS UNIVERSITET
Avd. Matematik

SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Torsdagen den december kl. 08.15–09.15 presenterar Magnus Carlsson sitt arbete "The étale homotopy type and hints of a generalization" (15 högskolepoäng, grundnivå).

Handledare: Rikard Bøgvad

Plats: Sal 31, hus 5, Kräftriket

Abstract: Artin-Mazur associated to every locally noetherian scheme X a certain invariant, the étale homotopy type. This invariant captures a lot of information, for one thing, it can be used to compute the sheaf cohomology of X for any locally constant sheaf. Recently, Harpaz-Schlank constructed a relative étale homotopy type to unify some classical obstruction theories in diophantine geometry. Later, Schlank-Barnea put this in a model categorical framework and showed that we can construct many new invariants closely related to the étale homotopy type of a scheme. In this talk, our goal is to introduce the classical Étale Homotopy type of Artin-Mazur and compute it in some simple cases. We will review some material on model categories, pro-objects and simplicial objects. We will also briefly talk about different kinds of homotopy types one can associate to a (locally noetherian) scheme and why they might not be suitable for arithmetical purposes. This talk / thesis should be seen as a preparation for a future master's thesis on the relative etale homotopy type.

Alla intresserade är välkomna!