MATEMATISKA INSTITUTIONEN
STOCKHOLMS UNIVERSITET
Avd. Matematik

SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Onsdagen den 22 april kl. 14.00–15.00 presenterar Johan Lindberg sitt arbete "Equivariant sheaves on topological categories" (30 högskolepoäng, avancerad nivå).

Handledare: Henrik Forssell

Plats: Sal 34, hus 5, Kräftriket

Sammanfattning: An equivariant sheaf on a topological category C (category object in Sp) is a sheaf over the space of objects of C equipped with a continuous action. The category of equivariant sheaves on C, denoted $Sh_{C_1}(C_0)$, can be constructed as a colimit in the 2-category of Grothendieck toposes, and is therefore a Grothendieck topos.

In this thesis we investigate elementary properties of C-spaces and equivariant sheaves and how these properties depend on the openness of C. We give a direct proof, using Giraud's theorem, that $Sh_{C_1}(C_0)$ is Grothendieck topos, for the case of a topological category with an open codomain map, thus extending Moerdijk's brief sketch of a proof of this proposition.

For a topological groupoid G every G-space determines a topological groupoid over G in a functorial way. At the same time, when G is open, a set of generators for $Sh_{G_1}(G_0)$ can be obtained from the open subgroupoids of G. Investigating how these constructions are related reveals an adjunction which, when G is open, extend the known equivalence between the category of G-spaces and the category of topological covering morphims to G.

Alla intresserade är välkomna!