

Další seminář z algebry se koná 3.10.2019 od 13.00 v posluchárně M5.

P. Arndt

Ranges of functors and geometric elementary classes

Abstrakt:

Given first order theories S, T and a functor $F: \text{Mod}(S) \rightarrow \text{Mod}(T)$ between their categories of models, one can ask whether objects in the image of F satisfy first order sentences other than those of T , or whether the essential image of F can be described as $\text{Mod}(T')$ for an extension T' of T . If $\text{Mod}(S), \text{Mod}(T)$ are k -accessible and F is a strongly k -accessible functor for some cardinal k , we can give criteria for this in the realm of Espíndola's k -geometric first order theories.

To this end we consider k -classifying toposes associated to S and T . The hypotheses ensure that the functor F is induced by a k -geometric essential morphism between them. The criteria are then obtained by factorizing this geometric morphism appropriately. We will explain the involved notions and give examples and applications.