

Další seminář z algebry se koná 15.4.2021 od 13.00 online na platformě [ZOOM](#). Informace pro připojení a další program semináře je [zde](#).

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Independence Relations in Abstract Elementary Categories

Abstrakt:

In Shelah's classification of first-order theories we classify theories using combinatorial properties. The most well-known class is that of stable theories, which are very well-behaved. Simple theories are more general, and then even more general are the NSOP₁ theories. We can characterise those classes by the existence of a certain independence relation. For example, in vector spaces such an independence relation comes from linear independence. Part of this characterisation is canonicity of the independence relation: there can be at most one nice enough independence relation in a theory.

Lieberman, Rosický and Vasey proved canonicity of stable-like independence relations in accessible categories. Inspired by this we introduce the framework of AECats (abstract elementary categories) and prove canonicity for simple-like and NSOP₁-like independence relations. This way we reconstruct part of the hierarchy that we have for first-order theories, but now in the very general category-theoretic setting.