

Další seminář z algebry se koná 19.9.2019 od 13.00 v posluchárně M5.

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Ultrafilters in Locally Presentable Categories

Abstrakt:

For a number of locally finitely presentable categories K we describe the codensity monad of the full embedding of all finitely presentable objects into K . We introduce the concept of D -ultrafilter on an object, where D is a “nice” cogenerating object of K .

Example: in Pos we choose the 2-chain as D . A D -ultrafilter on a poset X is a prime up-set, closed under finite intersections, in the poset of all up-sets of X .

We prove that the above codensity monad assigns to every object an object representing all D -ultrafilters on it. Our result covers e.g. the categories of sets, vector spaces, posets, semilattices, graphs and M -sets for finite commutative monoids M .