We will continue on Thursday, **September 19, in M5 at 1pm** by the talk

J. Adamek

Ultrafilters in Locally Presentable Categories

Abstract:
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 intersecitions, 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.