

Další seminář z algebry se koná 10.10.2019 od 13.00 v posluchárně M5.

**J. Adamek**

Finitary functors

Abstrakt:

Every finitary functor  $F$  between locally finitely presentable categories is finitely bounded, i.e., finitely generated subobjects of each  $FX$  factorize through the image (under  $F$ ) of finitely generated subobjects of  $X$ . Conversely, finitely bounded functors preserving monomorphisms are finitary.

We discuss conditions under which 'finitary = finitely bounded' holds for a  $\perp$  functors. This is true e.g. for atomic Grothendieck toposes with finitely many finitely presentable atoms.

We also study the finitely presentable objects in the categories  $[\text{Set}, \text{Set}]_{\text{fin}}$  of all finitary set functors and  $\text{Mnd}_{\text{fin}}(\text{Set})$  of all finitary monads over  $\text{Set}$ .