

We will continue on Thursday, **October 10, in M5 at 1pm** by the talk

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Finitary functors

Abstract:

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 all 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 Set .