

We will continue on Thursday, **April 18, in M5 at 1pm** by the talk

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Agreeable and topologically agreeable abelian categories

Abstract:

In the category of modules over an associative ring, there is a notion of a summable family of morphisms between a given pair of objects. The sum of such an (infinite) family of morphisms is well-defined.

In fact, there is a natural topology on the group of morphisms between two modules, and the summable families are simply the families of morphisms converging to zero in this topology. Generalizing to additive categories, one comes to the definition of an agreeable additive category, which was suggested in a 1973 unpublished manuscript of A.L.S. Corner, and to a more narrow class of topologically agreeable categories.

All Grothendieck abelian categories are agreeable, and all nearly finitely presentable Grothendieck categories are topologically agreeable; but nondiscrete spectral Grothendieck abelian categories are not topologically agreeable.