

Constructive Category Theory and Tilting equivalences via Strong Exceptional Sequences (1/2)

Wednesday, 9 March 2022 16:30 (30 minutes)

In this talk, we'll demonstrate how to implement categories on a computer using our software project CAP - Categories, Algorithms, and Programming. We will discuss how to construct the bounded homotopy category of an additive or Abelian category, as well as the obstacles that arise and their practical categorical solutions.

We use these homotopy categories to demonstrate some applications to homological algebra: We can verify whether a given set of objects in a bounded homotopy category forms a full strong exceptional sequence and implement the associated tilting equivalences.

Presenter: SALEH, Kamal (Universität Siegen)

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