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SEMINÁRIO DE GEOMETRIA

Dia 4 Maio (sexta-feira), às 13h30, sala 6.2.33

Grothendieck hearts and derived equivalences

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Abstract: Both in algebra and in geometry, Grothendieck categories (e.g. quasicoherent sheaves over a scheme, modules over a ring, ...) and their derived categories play a prominent role. In this talk we approach the problem of identifying when two Grothendieck categories have equivalent derived categories. We tackle this problem using a generalisation of classical tilting theory, as set up by Happel, Rickard and Keller in the late 1980s. Our target is two-fold: identify Grothendieck categories that are nicely embedded (as hearts of t-structures) in triangulated categories of interest, and determine whether (or when) that embedding naturally extends to a derived equivalence. This is based on joint work with C. Psaroudakis and on joint work with L. Angeleri Hügel and F. Marks.

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