



Leibniz
Universität
Hannover

Oberseminar zur Algebra und Algebraischen Kombinatorik

Prof. Dr. Robert Marsh
(University of Leeds, visiting ETH Zurich)

"From triangulated categories to module categories via localisation"

Joint work with Aslak Bakke Buan (NTNU Trondheim)

Let C be a Hom-finite, Krull-Schmidt, skeletally small triangulated category with Serre duality and let T be a rigid object in C . We show how to obtain the module category of the endomorphism algebra of T directly from C : first form the quotient by the full subcategory of objects sent to zero by $\text{Hom}(T, -)$. The resulting category is not abelian but, on localising at (i.e. formally inverting) the class of regular morphisms (those which are monomorphisms and epimorphisms simultaneously) we obtain the module category.

In the case where T is cluster-tilting, this recovers the result that the quotient of C by the image of T under the suspension functor is equivalent to the module category of its endomorphism algebra, a result of Koenig-Zhu (see also work of Iyama-Yoshino, Keller-Reiten, Buan-M-Reiten).

An example in the case where C is a cluster category will be given.

Montag, 06.06.2011
ab 14:15 Uhr, Raum a410
Hauptgebäude der Leibniz Universität Hannover

Alle Interessierten sind herzlich eingeladen.

gez. Prof. Dr. C. Bessenrodt

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