

1069-16-51

Shiping Liu* (shiping.liu@usherbrooke.ca), Department of Mathématiques, The University of Sherbrooke, Sherbrooke, Quebec J1K 2R1, Canada. *The derived category of an algebra with radical squared zero*. Preliminary report.

This is a joint work with Raymundo Bautista. Let A be a finite-dimensional algebra with radical squared zero, whose ordinary quiver is written as Q_A . Our purpose is to study the bounded derived category $D^b(A)$ of A . Using the technique of covering and the Koszul duality, we are able to relate $D^b(A)$ to the category of finitely co-presented representations of some covering of Q_A . We shall give a complete list of indecomposable objects in $D^b(A)$. This will enable us to determine easily the derived type of A in terms of Q_A . In case A is of finite global dimension, we shall give a complete description of the Auslander-Reiten components of $D^b(A)$. (Received January 05, 2011)