Conférence
« ARTA III : Avancées en théorie des représentations des algèbres »
16-20 juin 2014

Meeting
"ARTA III. Advances in Representation Theory of Algebras"
June 16–20, 2014

On nonstandard selfinjective algebras of domestic type

Rafal Bocian*

By general theory, the basic, indecomposable, finite dimensional selfinjective algebras over algebraically closed field K split into two classes: the standard algebras which admit simply connected Galois coverings, and the remaining nonstandard algebras. The standard representation-infinite selfinjective algebras of domestic type are the orbit algebras $\widehat{B}/G$, where $\widehat{B}$ is the repetitive category of tilted algebra B of Euclidean type and G is an admissible infinite cyclic group of automorphisms of $\widehat{B}$. The nonstandard representation-infinite selfinjective algebras of domestic type occur for any algebraically closed field K and are geometric socle deformations of the corresponding standard selfinjective algebras of domestic type.

We will show that every nonstandard representation-infinite selfinjective algebras of domestic type is not derived equivalent to a standard selfinjective algebra (using invariance of the Hochschild cohomologies under derived equivalence).

Joint work with A. Skowroński.

* Faculty of Mathematics and Computer Science, Nicolaus Copernicus University, ul. Chopina 12/18, Torun, 87-100, POLAND.