



CIMAT

Centro de Investigación en Matemáticas, A.C.

Series of conferences on **Advances in Representation Theory of Algebras (ARTA)**
Guanajuato-Toruñ-Montréal
Guanajuato, Mexico. June 22-26, 2015.

NAME: Eduardo do Nascimento Marcos

INSTITUTION AFILIATION: IME-USP

TITLE: 3 Calabi-Yau Algebras are N-Koszul

ABSTRACT:

This talk is on a joint work in progress, with R. Berger and A. Solotar.

We generalize some of the results of R. Froberg, on the Poincaré and Hilbert Series to the setting of quiver algebras and we apply our result to give a characterisation of 3-Calabi-Yau algebras, when the algebra A defined by the potential w is N -Koszul of global dimension 3. We have a necessary and sufficient condition for a homogeneous potentials w of degree $N+1$ in n variables produces a 3-Calabi-Yau algebra. As an application, we study skew polynomial algebras over non-commutative quadrics and we recover two families of 3-Calabi-Yau potentials which have recently appeared in the literature.

CIMAT