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Izuru Mori* (imori@brockport.edu), SUNY Brockport, Department of Mathematics,
Brockport, NY 14420. *Co-point Modules over Koszul Algebras.*

Let A be a graded algebra finitely generated in degree 1 over a field. Point modules over A introduced by Artin, Tate and Van den Bergh play an important role in studying A in noncommutative algebraic geometry. In this talk, I will define a dual notion of point module with respect to Koszul duality, which I call a co-point module. Using co-point modules, I will construct counter-examples to the following conjecture due to Auslander: for each finitely generated right module M over an artinian ring R , there is a natural number n_M depending only on M such that, for any finitely generated right module N over R , $\text{Ext}_R^i(M, N) = 0$ for all $i \gg 0$ implies $\text{Ext}_R^i(M, N) = 0$ for all $i > n_M$. (Received September 16, 2005)