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Van Nguyen, Idun Reiten, Gordana Todorov and Shijie Zhu* (zhu.shi@husky.neu.edu),
360 Huntington Ave, 567 Lake Hall, Mathematics Department, Boston, MA 02115. *Dominant
dimension and tilting modules.*

We study which algebras have tilting modules that are both generated and cogenerated by projective-injective modules. Crawley-Boevey and Sauter have shown that Auslander algebras have such tilting modules; and for algebras of global dimension 2, Auslander algebras are classified by the existence of such tilting modules. We show that the existence of such a tilting module is equivalent to the algebra having dominant dimension at least 2, independent of its global dimension. In general such a tilting module is not necessarily cotilting. Here, we show that the algebras which have a tilting-cotilting module generated-cogenerated by projective-injective modules are precisely 1-Auslander-Gorenstein algebras. We also study the global dimension of its endomorphism algebra, and discuss a connection with the Finitistic Dimension Conjecture. (Received February 07, 2018)