

1083-17-140

Vyacheslav Futorny and **Dimitar Grantcharov*** (grandim@uta.edu), Department of Mathematics, UT Arlington, Arlington, TX 76021. *Weight modules of infinite dimensional Weyl algebras.*

We provide a classification and explicit realization of the simple weight modules of the infinite dimensional complex Weyl algebra. The realization of these modules is in terms of shifted Laurent polynomials. The injective envelopes and the projective covers of the simple objects in the category of weight modules are obtained as well. (Received August 26, 2012)