
THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE
Algebraic Geometry and Representation Theory Seminar

Room 290C ,Ziskind Building
on Wednesday, Dec 20, 2017at 11:15

NOTE UNUSUAL TIME AND ROOM
Lenny Makar-Limanov Wayne University

A Bavula conjecture

Abstract:

Abstract. As is well known and easy to prove the Weyl algebras A_n over a field of characteristic zero are simple. Hence any non-zero homomorphism from A_n to A_m is an embedding and $m \geq n$. V. Bavula conjectured that the same is true over the fields with finite characteristic. It turned out that exactly one half of his conjecture is correct ($m \geq n$ but there are homomorphisms which are not embeddings).

If we replace the Weyl algebra by its close relative symplectic Poisson algebra (polynomial algebra with $F[x_1, \dots, x_n; y_1, \dots, y_n]$ variables and Poisson bracket given by $\{x_i, y_i\} = 1$ and zero on the rest of the pairs), then independently of characteristic all homomorphisms are embeddings.