מכון ויצמן למדע

THE WEIZMANN INSTITUTE OF SCIENCE

FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Algebraic Geometry and Representation Theory Seminar

Room 155 ,Ziskind Building
on Thursday, Sep 13, 2018
at 13:30

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Bounded modules for finite-dimensional Lie superalgebras.

Abstract:

Let g be a basic classical Lie superalgebra. A weight module is called bounded if the dimensions of its weight spaces are uniformly bounded. Theorems of Fernando-Futorny and Dimitrov-Matheiu-Penkov reduce the classification of irreducible bounded modules to the classification of irreducible bounded highest weight modules L(\lambda). For Lie algebras the bounded modules L(\lambda) were classified by O. Mathieu. They exist only for the series A and C. For Lie superalgebras L(\lambda) have been classified in all cases except for five series of low-rank orthosymplectic superalgebras. Using the Enright functor, I will show how the boundness of L(\lambda) over g can be reduced to the boundness over simple Lie algebras and the orthosymplectic algebra osp(1|2n). This work is a joint project with D. Grantcharov.