מכון ויצמן למדע

THE WEIZMANN INSTITUTE OF SCIENCE

FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Algebraic Geometry and Representation Theory Seminar

Room 261 ,Ziskind Building
on Wednesday, Nov 25, 2015
at 11:00

Andrey Minchenko
Weizmann Institute of Science

Simple Lie conformal algebras

Abstract:

The notion of a Lie conformal algebra (LCA) comes from physics, and is related to the operator product expansion. An LCA is a module over a ring of differential operators with constant coefficients, and with a bracket which may be seen as a deformation of a Lie bracket. LCA are related to linearly compact differential Lie algebras via the so-called annihilation functor. Using this observation and the Cartan's classification of linearly compact simple Lie algebras, Bakalov, D'Andrea and Kac classified finite simple LCA in 2000.

I will define the notion of LCA over a ring R of differential operators with not necessarily constant coefficients, extending the known one for R=K[x]. I will explain why it is natural to study such an object and will suggest an approach for the classification of finite simple LCA over arbitrary differential fields.

Email: hanni.naor@weizmann.ac.il * Phone: (08)9343349 * Fax: (08)9344308