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, Jan 07, 2015
at 11:00

Shaul Zemel
Technical University of Darmstadt

On Lattices over Valuation Rings of Arbitrary Rank

Abstract:

We show how the simple property of 2-Henselianity suffices to reduce the classification of lattices over a general valuation ring in which 2 is invertible (with no restriction on the value group) to classifying quadratic spaces over the residue field. The case where 2 is not invertible is much more difficult. In this case we present the generalized Arf invariant of a unimodular rank 2 lattice, and show how in case the lattice contains a primitive vector with norm divisible by 2, a refinement of this invariant and a certain class suffice for classifying these lattices.