



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Algebraic Geometry and Representation Theory Seminar

Room 290C ,Ziskind Building
on Tuesday, Jan 10, 2017
at 11:15

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Finite-dimensional representations of quantum affine algebras

Abstract:

I will talk about finite dimensional representations of quantum affine algebras. The main topics are Chari and Pressley's classification of finite-dimensional simple modules over quantum affine algebras, Frenkel and Reshetikhin's theory of q -characters of finite dimensional modules, Frenkel-Mukhin algorithm to compute q -characters, T-systems, Hernandez-Leclerc's conjecture about the cluster algebra structure on the ring of a subcategory of the category of all finite dimensional representations of a quantum affine algebra. I will also talk about how to obtain a class of simple modules called minimal affinizations of types A, B using mutations (joint work with Bing Duan, Yanfeng Luo, Qianqian Zhang).