



THE WEIZMANN INSTITUTE OF SCIENCE  
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Algebraic Geometry and Representation Theory Seminar

Room 261 ,Ziskind Building  
on Wednesday, Oct 28, 2015  
at 11:00

Dimitri Gurevich  
Valenciennes University

From Quantum Groups to Noncommutative Geometry

Abstract:

Since creation theory of Quantum Groups numerous attempts to elaborate an appropriate differential calculus were undertaken. Recently, a new type of Noncommutative Geometry has been obtained on this way. Namely, we have succeeded in introducing the notions of partial derivatives on the enveloping algebras  $U(\mathfrak{gl}(m))$  and constructing the corresponding de Rham complexes. All objects arising in our approach are deformations of their classical counterparts. In my talk I plan to introduce some basic notions of the theory of Quantum Groups and to exhibit possible applications of this type Noncommutative Geometry to quantization of certain dynamical models.