Department of Mathematics, BGU

Algebraic Geometry and Number Theory

On *Mar ,15 2017*

At *15:10 – 16:30*

In *Math 101-*

Boris Tsygan (Northwestern)

will talk about

What do algebras form? (Revisited)

Abstract:

Ben Gurion University – Mathematics
Algebraic Geometry and Number Theory Seminar

Speaker **Boris Tsygan (Northwestern)**

Title **What do algebras form? (Revisited)**

Date Wednesday, 15 March 2017

Time 15:10 – 16:30 (starts 15:10 sharp)

Location Room -101 in Building 58

Abstract We will start with the observation that assocciative algebras form a two-category with a trace functor where one-morphisms are bimodules, two-morphisms are bimodule homomorphisms, and the trace of an (A,A) bimodule M is M/[M,A]. We then explain in what sense the derived version of the above is true, i.e. what happens when one replaces bimodule homomorphisms and the trace by their derived functors that are Hochschild (co)homology. We will explain how the beginnings of noncommutative differential calculus can bee deduced from the above. This is a continuation of a series of works of MacClure and Smith, Tamarkin, Lurie, and others, and a joint work with Rebecca Wei.

(updated 8 Mar 2017)