Department of Mathematics, BGU

AGNT

On *Monday, March ,27 2023*

At *12:10 – 13:10*

In *101-*

Amnon Yekutieli (BGU)

will talk about

An Algebraic Approach to the Cotangent Complex (online meeting)

Abstract: Let B/A be a pair of commutative rings. We propose an algebraic approach to the cotangent complex $L_{B/A}$. Using commutative semi-free DG ring resolutions of B relative to A, we construct a complex of B-modules $LCot_{B/A}$. This construction works more generally for a pair B/A of commutative DG rings.

In the talk we will explain all these concepts. Then we will discuss the important properties of the DG B-module $LCot_{B/A}$. It time permits, we'll outline some of the proofs.

It is conjectured that for a pair of rings B/A, our $LCot_{B/A}$ coincides with the usual cotangent complex $L_{B/A}$, which is constructed by simplicial methods. We shall also relate $LCot_{B/A}$ to modern homotopical versions of the cotangent complex.

Slides: https://sites.google.com/view/amyekut-math/home/lectures/cotangent