

ALGEBRA SEMINAR

PBW deformations of graded algebras and generalized Koszul algebras

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The classical Poincare-Birkhoff-Witt Theorem can be interpreted as a statement about non-homogenous deformations of a polynomial algebra. In the early 90's the PBW Theorem was generalized to Koszul algebras, and last year it was generalized to N-Koszul algebras. I will discuss recent work with Brad Shelton (U. of Oregon) extending these results to arbitrary graded algebras. It has been shown for Koszul and N-Koszul algebras that a deformation is PBW if and only if its defining relations satisfy a Jacobi type condition. By translating the Jacobi condition into the setting of central extensions, we uncover a natural generalization of Koszul.

Monday, April 30, 2007, 1:40 – 2:30 pm,
Wachman 617