ALGEBRA SEMINAR

Differential graded (co-)algebras and the (co-)bar construction

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ABSTRACT: After briefly reviewing the notion of a coalgebra, I will define differential graded algebras and coalgebras and discuss the bar and cobar constructions that are associated with such algebras. For any differential graded algebra A, I will construct a canonical map $\mathrm{Cobar}(\mathrm{Bar}(A)) \to A$ and show that this map is in fact a quasi-isomorphism. If time permits, I will also show how the resolution $\mathrm{Cobar}(\mathrm{Bar}(A))$ can be simplified for certain differential graded algebras (Koszul algebras).

MONDAY, NOVEMBER 1, 2010
1:10 – 2:30 PM
ROOM 617, WACHMAN HALL
DEPARTMENT OF MATHEMATICS