

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research  
Department of Mathematics*

## **GEOMETRY SEMINAR**

# **Twisted Cohomology of $A$ -infinity Algebras**

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### **Abstract**

The notion of  $A$ -infinity algebras was introduced by Stasheff in the 1960s for studying associativity up to homotopy. It has since played an important role in homotopy theory and more recently in many branches of algebra, geometry and mathematical physics, such as the homological mirror symmetry of Kontsevich. In this talk, I will review the concept of  $A$ -infinity algebras and their morphisms. Using the bar construction, I will define twisted cohomology of an  $A$ -infinity algebra with a twisting element and describe a spectral sequence converging to it. This is a joint work with Weiping Li (Oklahoma State U and CUHK).

**Date: October 6, 2009 (Tuesday)**

**Time: 3:00 - 4:00pm**

**Place: Room 210, Run Run Shaw Bldg., HKU**

*All are welcome*