



# Kempner Colloquium/ Lecture for Great Plains Operator Theory Special Year

University of Colorado at  
Boulder, August 24, 2009

Speaker: E. MEINRENKEN

University of Toronto

Title of Talk: Dirac structures and Dixmier-Douady theory

Time and Place: Benson 180 at 4:15 pm.

Tea and coffee in Math 350 at 3:45 pm.

**Abstract:** In their 1963 paper, Dixmier-Douady gave a geometric realization of the integral degree 3 cohomology of a space in terms of certain bundles of  $*$ -algebras, analogous to the usual interpretation of degree 2 cohomology as the isomorphism classes of complex line bundles. These Dixmier-Douady bundles define twistings of the K-theory of spaces, and in this context have been the subject of much interest in recent years. After reviewing these concepts, I will explain a functorial construction producing important examples, such as the 'spin' Dixmier-Douady bundle over a compact Lie group. (Based on joint work with A. Alekseev, arXiv:0907.1257.)

#### Local Gpots Special Year Organizers

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