慶應義塾大学 21世紀COEプログラム
「統合数理科学：現象解明を通した数学の発展」

Integrative Mathematical Sciences 統合数理科学

Keio University
1858
CALAMVS GLADIO FORTIOR

Pathways Lecture Series in Mathematics, KEIO

Speaker : Prof. Giuseppe Dito
(Université de Bourgogne)

Lecture 1 15:00 ～ 16:00 June 28, 2006 (Wednesday)
Place: 14-217 (Discussion Room 7), Yagami Campus

Lecture 2 16:30 ～ 17:30 June 28, 2006 (Wednesday)
Place: 14-217 (Discussion Room 7), Yagami Campus

Lecture 3 16:30 ～ 17:30 June 30, 2006 (Friday)
Place: 14-218 (Discussion Room 8), Yagami Campus

Some aspects of deformation quantization

Deformation quantization consists in deforming the algebra of functions on a Poisson manifold into a noncommutative algebra. The whole subject underwent major developments during the past decade. The purpose of these elementary lectures is to provide an introduction to fundamental notions and tools needed for accessing the research literature in this field.

We shall essentially cover the following topics:

A) Physical origin of deformation quantization and key concepts.

B) Gerstenhaber's theory of deformation of algebraic structures.

C) Kontsevich's construction of deformation quantization on a Poisson manifold.

I will try to keep the lectures self-contained and no prior knowledge of these topics will be assumed.