



## TOHOKU FORUM for CREATIVITY

Tohoku Forum for Creativity Thematic Program 2015

Fundamental Problems in Quantum Physics: Strings, Black Holes and Quantum Information

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Seminar

Elementary deformation quantization

Giuseppe Dito (Université de Bourgogne)

Schedule:

Tuesday, April 14, 14:00-15:00

Wednesday, April 15, 10:30-11:30

Thursday, April 16, 15:00-16:00

Place:

Aobayama Campus

Faculty of Science, Godo B building, 1023

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### **Abstract**

The goal of these lectures is to introduce the audience to basic concepts in deformation quantization. The tentative plan is as follows:

- 1) Quantum mechanical and historic background. Star-products on Poisson manifolds.
- 2) Algebraic structures in deformation theory: Gerstenhaber theory and Hochschild cohomology.
- 3) Kontsevich quantization formula.