Dr. Christiaan van de Ven
Università di Trento

Title
Asymptotic equivalence of two strict deformation quantizations and applications to the classical limit.

Abstract
The concept of strict deformation quantization provides a mathematical formalism that escribes the transition from a classical theory to a quantum theory in terms of deformations of (commutative) Poisson algebras (representing the classical theory) into non-commutative C*-algebras characterizing the quantum theory). In this seminar we introduce the definitions, give several examples and show how quantization of the closed unit 3-ball $B^3\subset\mathbb{R}^3$ is related to quantization of its smooth boundary (i.e. the two-sphere $S^2\subset\mathbb{R}^3$.) We will moreover give an application regarding the classical limit of a quantum (spin) system and discuss the concept of spontaneous symmetry breaking (SSB).