

COLLOQUIUM DI MATEMATICA

PIERRE CARTIER

INSTITUT DES HAUTES ETUDES SCIENTIFIQUES

ABOUT A QUANTIZATION OF GALOIS THEORY

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ore 16:00

**Aula F, primo piano, edificio Aule - Largo San
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Abstract: We begin by reviewing the Picard-Vessiot theory for differential equations , in the various presentations : monodromy , geometrical presentations using principal bundles and Lie groupoids , algebraic version using differential ring extensions , tensor categories . By analogy , we consider the equations using the Jackson q-derivations . Here also , there is a Galois theory , but for this purpose , we must replace ordinary groups by quantum groups as described by I. Manin . This is a continuation of recent work by Hiroshi Umemura (Nagoya University , Japan) . We use heavily Hopf algebraic methods to access to this noncommutative world.