

MATHEMATICS SEMINAR
of the
UNIVERSITY OF LUXEMBOURG
in cooperation with the
LUXEMBOURG MATHEMATICAL SOCIETY

April 2009

~~7 April 2009, at 5 pm~~

Room 3.04 bs

please note: talk cancelled

~~Christian Pauly
Université de Montpellier~~

Dualities for principal G -bundles over curves

Abstract

In this talk I will survey a couple of new results and open problems in the area of principal G -bundles over a smooth projective curve C . The space of global sections of a line bundle over the moduli space of principal G -bundles over C , also called Verlinde space or space of generalized G -theta functions, can be described as quantization space of a symplectic manifold, as well as a space of conformal blocks arising in conformal field theory. I will give a brief outline of the following dualities

1. Strange Duality or “rank-level” Duality for the Verlinde spaces associated to various classical and exceptional groups G .
2. Langland’s Duality for the cameral Prym varieties of the Hitchin system.

21 April 2009, at 5 pm

Room 3.04 bs

Fulvio Ricci
Scuola Normale Superiore Pisa

An uncertainty principle for semigroups

Abstract

We present a general principle showing that hypercontractive estimates for a semigroup of operators on L^2 imply uncertainty inequalities for its generator. We give examples in different geometric contexts, like Riemannian symmetric spaces, Carnot groups and graphs.