

SEMINAIRE D'ANALYSE

➤ **VENDREDI 25 mai 2012 à 15h15 - salle MA A110**

Monsieur **Luca MARTINAZZI** (Rutgers University, New Jersey) donnera une conférence sur le thème:

“The Moser-Trudinger equation on a disk: sharp blow-up behavior and non-existence”

We study the Moser-Trudinger equation $\Delta u = \lambda u \text{Exp}(u^2)$, $\lambda > 0$ on a 2-dimensional disk, arising from the Moser-Trudinger sharp embedding of $H_0^1(\text{Disk})$ into the Orlicz space of functions u with $\text{Exp}(u^2)$ integrable. We answer some long standing open questions:

a) The weak limit of a blowing-up sequence of solutions to the Moser-Trudinger equation on a disk is 0.

b) The Dirichlet energy of a blowing-up sequence of solutions on a disk converges to 4π .

c) For L large enough, the Moser-Trudinger equation on a disk admits no solution with Dirichlet energy larger than L .

This work is joint project with Andrea Malchiodi (SISSA - Trieste)

Lausanne, le 23 mai 2012
BD/VL