

<b>Oberseminar Geometrie</b>	<b>Wednesday 17th October 2012</b>
Department of Mathematics	<b>10:20–12:00</b>
University of Fribourg	Seminar room, Math. II (Lonza)

RODOLPHE RICHARD (EPF Lausanne)

**Some Arithmetic Geometry and Ergodic theory on the complex plane as a hyperbolic surface.**

*I will introduce the theory of elliptic curves and the modular curve, in order to present Duke's theorem as equidistribution of Galois orbits of CM points. This will be the occasion to meet geometrical, arithmetical, and dynamical features of the modular curve.*

*In the second part, I will discuss generalisations to non singular invariants and Shimura varieties, and some of the tools used in the proof of these generalisations (Ratner's theory of rigidity of unipotent flows, Serre's open image theorem on Galois representations).*