B. Buffoni – B. Dacorogna – J. Krieger – M Nguyên – Section Mathématiques

SEMINAIRE D'ANALYSE

➢ **VENDREDI 3 OCTOBRE 2014 à 15h15 - salle MA A331**

➢

Professeur **Petru Mironescu** (Université de Lyon, France) donnera une conférence sur le thème:

« Complex unimodular maps: singularities and phases »

Abstract: We consider maps $u: (0,1)^n\to {\mathbb S}^1$ with a given Sobolev regularity. We will present a result describing such maps in terms of their singularities and phases. This result is the analog of the Weierstrass factorization theorem for holomorphic functions, with the singularities of the Sobolev maps playing the role of the zeroes of holomorphic maps. We will discuss some implications of this result to functional analytic questions related to manifold valued maps.
In a related direction, we will discuss the question of the control of the phases, and present some applications to some model PDEs and nonlocal problems.

Lausanne, le 25 septembre 2014
BD/HMN/MM