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

SEMINAIRE D'ANALYSE

➤ ***VENDREDI 13 AVRIL 2018 à 14h15 - salle MA A112***

Professeur **Giovanni CUPINI** *(*Université de Bologne, Italie) donnera une conférence sur le thème:

«RIGIDITY AND STABILITY RESULTS FOR THE GAUSS MEAN VALUE FORMULA »

The mean integral of harmonic functions on balls equals the value of these functions at the center. This is the well known Gauss mean value theorem. In 1972 Kuran proved the reverse: if D is a bounded open set containing x, such that the mean integral of harmonic functions on D equals the value of these functions at x, then D is a ball centered at x. Two questions may be raised:

(1) similar rigidity results can be proved for weighted mean integrals?

(2) is the Gauss mean value formula stable? That is: if the mean integral of harmonic functions on D centered at x is almost equal to the value of these functions at x, then D is almost a ball with center x?

In this talk I will discuss recent results on these issues obtained in collaboration with E. Lanconelli (1) and with N. Fusco, E. Lanconelli and X. Zhong (2)

Lausanne, le 5 avril 2018
BD/vl/