SEMINAIRE D'ANALYSE

> ***VENDREDI 27 MARS 2015 à 15h15 - salle MA A331***

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Professeur **Eric Bonnetier** (Université de Grenoble, Fr) donnera une conférence sur le thème:

« Pointwise bounds on the gradients in a composite medium and the Neumann-Poincar\'e operator »

Abstract: In composite media containing close-to-touching inhomogeneities, the gradients of the voltage potential may become unbounded in the narrow channels between the inclusions, as the inter-inclusion distance tends to 0, and as the contrast of material coefficients becomes large.
When the inclusions are discs in 2D, we show that the pointwise regularity properties of the gradients can be inferred from the study of the spectral properties of the Neumann-Poincar\'e. This operator appears in the integral formulation of the transmission problem. This is joint work with Faouzi Triki.

Lausanne, le 23 mars 2015
BD/HMN/MM