Recent trends in harmonic and complex analysis



ID de Contribution: 11

Type: Non spécifié

A limiting case for the divergence equation and related problems

mardi 4 avril 2017 10:45 (45 minutes)

Let $d \geq 2, \Omega \subset \mathbb{R}^d$ be a smooth bounded domain and $f \in L^d(\Omega)$ with $\int_{\mathbb{R}} f(x) dx = 0$. Bourgain and Brezis proved that there exists a vector field $X \in W^{1;d}(\Omega) \cap L^{\infty}(\Omega)$ such that divX = f and $||f||_{W^{1;d}} + ||f||_{L^{\infty}} \leq C||f||_{L^d}$. We will discuss various extensions of this result to more general functions spaces, and present some related inequalities. This talk is based on results obtained in collaboration with P. Bousquet, P. Mironescu, Y. Wang and P. L. Yung.

Orateur: M. RUSS, Emmanuel (Université Grenoble Alpes)