Seminario de Análisis y Aplicaciones

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Pointwise descriptions of nearly incompressible vector fields with bounded curl

Resumen:

In this talk I will explain a recent work, in collaboration with Albert Clop, where we provide a pointwise characterisation of nearly incompressible vector fields $b : \mathbb{R}^n \to \mathbb{R}^n$ with $|x| \log |x|$ growth at infinity for which $\operatorname{curl} b = Db - D^t b$ is bounded.

In the plane we can go further and describe still in pointwise sense, the vector fields $b : \mathbb{R}^2 \to \mathbb{R}^2$ for which $|\operatorname{div} b| + |\operatorname{curl} b| \in L^\infty$.

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