
Barcelona Analysis Seminar**2021–2022****URL** (*provisional*). <https://sites.google.com/view/seminari-analisi-barcelona/2021-2022>**Date.** January 24, 2022**Time.** 15:00 CET**Room.** CRM A1 (Universitat Autònoma de Barcelona)**Online streaming** (Microsoft Teams). [Click here to join](#).

Pointwise descriptions of nearly incompressible vector fields with bounded curl

Banhirup Sengupta

Universitat Autònoma de Barcelona

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 $b : \mathbb{R}^n \rightarrow \mathbb{R}^n$ 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 $b : \mathbb{R}^2 \rightarrow \mathbb{R}^2$ for which $|\operatorname{div} b| + |\operatorname{curl} b| \in L^\infty$.