

Lagrangian Flows Associated to Nonstandard Singular Rough Vector Fields

Henrique Borrin de Souza, João Fernando da Cunha Nariyoshi

Postdoc at FFCLRP-USP, Ribeirão Preto, Brazil
HENRIQUEBORRIN@USP.BR

Abstract

In this presentation, we provide quantitative estimates associated to vector fields which can be written as convolution of a nonstandard singular kernel with a Besov function. The aforementioned kernels do not satisfy Calderón-Zygmund estimates, nor have cancellations in order to ensure good properties on its Fourier estimates, so we present a new technique in order to deal with this case. Moreover, we consider rough kernels, in the sense that its angular part is not Lipschitz, as previously considered in [1], but only in Sobolev spaces.

References

- [1] Henrique Borrin. Quantitative estimates for flows of Lipschitz and Dini type singular vector fields. Discrete and Continuous Dynamical Systems, accepted.