

# SEMINARIO DE ANÁLISIS Y APLICACIONES

Friday, January 13, 2017

11:30 h., [Aula Naranja](#) (ICMAT)

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## A Sharp Divergence Theorem with Non-tangential Pointwise Traces

**Abstract:**

The Divergence Theorem is of fundamental importance, yet no sharp version is known in higher dimensions. Works of De Giorgi and Federer established this formula for a large class of sets (of locally finite perimeter) but only with smooth integrands. However, for applications to PDE's one needs such a formula for rough integrands and rough boundaries. Ad hoc techniques have sufficed for Lipschitz domains, and also for a class of Reifenberg-flat domains, but to go beyond this one needs genuinely new techniques. In this talk I will describe recent progress in this regard, made jointly with Dorina Mitrea (Missouri, USA) and Irina Mitrea (Philadelphia, USA).

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