INSTITUTUL DE MATEMATICA "SIMION STOILOW" AL ACADEMIEI ROMANE

Conferința lunară

A Sharp Divergence Theorem with Non-Tangential Pointwise Traces

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**Conferința va avea loc Miercuri 13 noiembrie 2019, ora 13:00
la sediul IMAR, amfiteatrul "Miron Nicolescu", parter**

Abstract: The Integration by Parts Formula, which is equivalent with the Divergence Theorem, is one of the most basic tools in Analysis. Originating in the works of Gauss, Ostrogradsky, and Stokes, the search for an optimal version of this fundamental result continues through this day and these efforts have been the driving force in shaping up entire subbranches of mathematics, like Geometric Measure Theory. In this talk I will review some of these developments (starting from elementary considerations to more sophisticated versions) and I will discuss recents result regarding a sharp divergence theorem with non-tangential traces. This is joint work with D. Mitrea and M. Mitrea.