

SEMINARIO IMAC DE ANÁLISIS



Conferencia a cargo de Marina Murillo Arcila

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Linear Dynamics and its applications to solution C_0 -semigroups of PDE's

ABSTRACT: This talk is divided in two parts. In the first one, we show some applications of the C_0 -semigroups' theory to ensure Devaney and distributional chaos for the solution C_0 -semigroups of different partial differential equations that appear in fields such as physics or traffic modelling. In the second part, we show the existence of ergodic probability measures for operators and C_0 -semigroups which satisfy the Frequent Hypercyclicity Criterion. Moreover, we establish links between the fact of satisfying dynamical properties such as being chaotic on certain invariant sets, and the corresponding property on the closed linear span of the invariant set. Particular attention is given to the case of positive operators and semigroups on lattices. We also provide some interesting examples that illustrate these results.

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