Mês de: OUTUBRO 2013

SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

Dia 24 de Outubro (quinta-feira), às 13:30h, na Sala B3-01

Almost-Periodic and Almost-Automorphic Dynamics for Non-Autonomous Functional Differential Equations

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Abstract:

We study the long term dynamical behaviour of the solutions of nonautonomous functional differential equations using the skew-product formalism. Some recurrence properties on the temporal variation of the FDEs are assumed, thus their solutions induce a skew-product semiflow with a minimal flow in the base.

We investigate the topological and ergodic structure of the omega limit sets and the minimal sets. The results have influence on the description of relevant aspects of the local and global dynamics of the semiflow. In particular we pay special attention to the study of cooperative familes od FDEs. In the case of almost-periodic families of FDEs we analyze the presence of almost-periodic or almost-automorphic minimal sets and their relation with the base flow. The almost-automorphic dynamics can exhibit ingredients of high complexity like sensitive dependence with respect to initial data, several ergodic measures or positive Lyapunov exponent.

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