Mês de: Janeiro 2011

SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

Dia 13 de Janeiro (quinta-feira), às 13h30, na Sala B3-01

"Global stability of a general neural network model with unbounded delays"

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Abstract:

In this seminar, we consider the following neural network model with infinite distributed delays

$$x_i(t) = -a_i(x_i(t))\,[b_i(x_i(t)) + f_i(x_t)], \quad t \geq 0, \; i = 1,\dots, n, \tag{1}$$

and establish sufficient conditions for the global asymptotic, and global exponential stability of an equilibrium point. The family (1) is general enough to include, as particular cases, most of the neural network models in the literature. As illustration, we apply our results to some neural network models, and a comparison with other criteria in the literature is given. We emphasize that, contrary to the usual, we do not use Lyapunov functionals to obtain our results.
This is a joint work with Teresa Faria (CMAF).

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