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SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

Dia 1 de Fevereiro (quinta-feira), às 13H30, na sala 6.2.33

Cross-diffusion predator-prey models arising by time-scale arguments

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Abstract

Starting from "microscopic models" incorporating the dynamics of handling and searching predators, or active and hidden prey, we obtain reaction-cross diffusion systems of predator-prey type involving a Holling-type II or Beddington-DeAngelis functional response, by the exploitation of different time-scales. We also provide a study of the Turing instability domain of the obtained equations and (in the case of the Beddington-DeAngelis functional response) compare it to the same instability domain when the cross diffusion is replaced by a standard diffusion. (joint work with Laurent Desvillettes, IMJ-PRG, Paris 7)

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