DMat
Universidade de Aveiro

CIDMA
CENTRO DE I&D EM MATEMÁTICA E APLICAÇÕES
CENTER FOR R&D IN MATHEMATICS AND APPLICATIONS

# SEMINAR

## Grupo de Análise Funcional e Aplicações

## Functional Analysis and Applications Group

# Asymptotic behaviour for some structured population systems of delay differential equations


**Teresa Faria**

Departamento de Matemática and CMAF-CIO, Faculdade de Ciências, Universidade de Lisboa, Portugal



### Abstract

We study the global asymptotic behaviour of solutions for some families of $n$-dimensional non-autonomous delay differential equations (DDEs), which encompass a large number of structured population models. Sufficient conditions for both the extinction or the permanence of all the populations are given [2]. The case of periodic systems is further analysed [1].



[1] T. Faria, Periodic solutions for a non-monotone family of delayed differential equations with applications to Nicholson systems, *J. Differential Equations* 263 (2017), 509–533.

[2] T. Faria, R. Obaya, A.M. Sanz, Asymptotic behaviour for a class of non-monotone delay differential systems with applications, *J. Dyn. Diff. Equ.*,30 (2018), 911–935.


**Room *Sousa Pinto***
**June 7, 2019 - 16:10**


**This seminar is supported in part by the Portuguese Foundation for Science and Technology (FCT - Fundação para a Ciência e a Tecnologia), through CIDMA - Center for Research and Development in Mathematics and Applications, within project UID/MAT/04106/2019.**


FCT Fundação para a Ciência e a Tecnologia