UNIVERSIDADE DE ÉVORA
ESCOLA DE CIÊNCIAS E TECNOLOGIA
DEPARTAMENTO DE MATEMÁTICA

Centro de Investigação em Matemática e Aplicações
Departamento de Matemática
Programa de Doutoramento em Matemática

Seminário / Seminar

Date: 18.10.2024, Room: 150 CLAV, Time: 15h00

Zoom address: https://videoconf-colibri.zoom.us/j/5664652821?pwd=WXJBSWUxL25vR3hJUWRhWHpoWENSdz09

Existence of Heteroclinic Solutions in Nonlinear Differential Equations of the Second-Order Incorporating Generalized Impulse Effects with the Possibility of Application to Bird Population Growth

Robert de Sousa
Professor na Universidade de Cabo Verde
Membro do CIMA

Abstract: This presentation considers the existence of solutions of the heteroclinic type in nonlinear second order differential equations with phi-Laplacians, incorporating generalized impulsive conditions on the real line. For the construction of the results, it was only imposed that phi be a homeomorphism, using Schauder's fixed point theorem, coupled with concepts of L^1-Carathéodory sequences and functions, along with impulsive points equiconvergence and equiconvergence at infinity. Finally, a practical part illustrates the main theorem, and a possible application to bird population growth.

Keywords: Heteroclinic solutions; impulsive points; equiconvergence and equiconvergence at infinity, L^1-Carathéodory sequences and functions.

Acknowledgements: This talk has been partially funded by national funds through the FCT – Fundação para a Ciência e a Tecnologia, I.P., under the scope of the project UIDB/04674/2020 (https://doi.org/10.54499/UIDB/04674/2020), Centro de Investigação em Matemática e Aplicações (CIMA).

CIMA Centro de Investigação em Matemática e Aplicações
UNIVERSIDADE de ÉVORA · UNIVERSIDADE da MADEIRA · ISEL

fct Fundação para a Ciência e a Tecnologia