UNIVERSIDADE DE ÉVORA
ESCOLA DE CIÊNCIAS E TECNOLOGIA
DEPARTAMENTO DE MATEMÁTICA

Centro de Investigação em Matemática e Aplicações
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Seminário / Seminar

Date: 21.11.2024, online, Time: 14h30

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

Periodic orbits in conservative dynamics

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Abstract: An embedding of the $2n+1$ dimensional sphere in the real $2n+2$ dimensional vector space gives rise to a 1-parameter autonomous flow on the sphere, called the characteristic flow. If the image of the sphere by the embedding bounds a starshaped domain, the corresponding characteristic flow is an example of a Reeb flow. Reeb flows are a relevant class of conservative dynamical systems and a long standing and important conjecture, which is still very much open, states that any of these Reeb flows on the $2n+1$ dimensional sphere has at least $n+1$ geometrically distinct periodic orbits. In this talk I will present illustrative examples and some results motivated by this conjecture in the convex case, including recent joint results with Leonardo Macarini obtained using Long's index theory and Floer homology.

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).

Fundação para a Ciência e a Tecnologia