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

Seminar

15/05/2024, online, 14h30
Zoom address: https://videoconf-colibri.zoom.us/j/98650312699

An investigation on the existence, uniqueness and Ulam-Hyers stability of solution for a fractional differential problem

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Abstract: In this seminar, we will analyse a fractional differential problem in terms of existence, uniqueness and stability of its solution. Specifically, we will consider an initial value problem with a Riemann-Liouville fractional derivative. Using some techniques of Functional Analysis, as the fixed point theory, and some integral inequalities, we will obtain sufficient conditions that guarantee that the solutions of the problem exist and sufficient conditions for its uniqueness. We also obtain a stability result by Ulam-Hyers and Ulam-Hyers-Rassias.