



# Seminar

## Systems and Control Group - CIDMA

**20 de março de 2019, 15h00**

Departamento de Matemática, Universidade de Aveiro  
Sala 11.3.21

Some applications of fractional optimal control problems

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### Abstract

In this talk we will present some results on optimal control problems with fractional derivative dependence. After a brief introduction to the fractional calculus, we will present three applications of the same. First, in the calculus of variations with the presentation of the necessary optimization conditions. Then, to consensus theory and we will see under what conditions we can ensure that consensus is obtained for a group of agents. Finally, to the epidemiological models where the derivatives that describe the dynamics of the disease are of the fractional type.

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