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

# Seminar
# Systems and Control Group - CIDMA

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Departamento de Matemática, Universidade de Aveiro
Sala Sousa Pinto

## Fractional output stabilization problem of infinite dimensional semilinear systems


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**Abstract**

The purpose of this talk is to investigate the question of the state fractional spatial derivative stabilization, using Riemann Liouville derivative of order $\alpha \in ]0, 1[$, for a class of semilinear distributed systems. Firstly, sufficient conditions for the strong and the weak stabilization of the fractional output are provided. Moreover, the stabilizing control which minimizes a given performance cost is characterized. Finally, an example with numerical simulations to illustrate the effectiveness of the given stabilization theorems is presented.



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