



SEMINARIO DE ANÁLISIS MATEMÁTICO Y MATEMÁTICA APLICADA

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Control problems in relation to the SIR epidemiological model

We study the following two problems based on the SIR model:

1. How to minimize the peak of the infected population by acting on the contact rate under a budget constraint? The peak criterion is not in the usual form of calculus of variations, but we show how to derive the optimal solution using Green's theorem.
2. What roles the proportions of the commuting populations of two territories play in the spread of the disease? We show how to compute explicitly the global R_0 and study which restriction actions are beneficial or not when one territory has a R_0 larger than one and the other does not.

Organizado por el Departamento de Análisis Matemático y Matemática Aplicada, el Instituto de Matemática Interdisciplinar (IMI), el Grupo MOMAT y el proyecto PID2019-106337GB-I00.

**Fecha: Lunes 21 de noviembre de 2022
a las 13:00 horas**
Lugar: Aula Alberto Dou
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