

A short excursion in mathematical epidemiology

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In the first part I present a short introduction to mathematical epidemiology. I will give a few examples of topics of interest in this field that were presented in a recent conference.

In the second part I present a paper on set-membership estimations for the evolution of infectious diseases in heterogeneous populations. Here, optimal control techniques are used to give an estimate for possible states of a system with partially known initial conditions. A numerical method to calculate these sets is shown and applied to analyse the difference in outcomes of simple intervention policies.