JULIEN ARINO, McMaster University, 1280 Main Street West, Hamilton, Ontario L8S 4K1 Mathematical aspects of metapopulation disease models

Metapopulation disease models describe the spread of an infectious disease in a population that is, typically, spatially fragmented. Such models consist of systems of differential equations that are embedded in graphs. The resulting large dimensionality renders their mathematical analysis difficult. I will present some of the problems that arise when dealing with this type of models, and some of the solutions that were proposed to these problems.