11th Conference on Dynamical Systems Applied
to Biology and Natural Sciences DSABNS 2020
Trento, Italy, February 4-7, 2020

REINFECTION THRESHOLDS DETERMINED BY THE MAXIMUM CURVATURE OF THE ENDEMIC STATE

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The reinfection SIRI model describes the spreading of an epidemics in a population of susceptible, infected and recovered individuals, where after an initial infection the recovered individuals only have partial immunity and may be infected again. Using the SIRI model, Gomes et al. introduced the reinfection threshold concept for epidemic models. Here, we extend the notion of reinfection threshold. Our extension is based on the maximum curvature of the endemic state graph, that can be used to define the beginning point and the end point of the reinfection region.

Acknowledgements
This work is financed by National Funds through the FCT - Fundao para a Ciłncia e a Tecnologia (Portuguese Foundation for Science and Technology) within the project PTDC/MAT-APL/31753/2017.

 ISBN: 978-989-98750-7-4