# Laboratório de Computação e Visualização Científica

## 2020/2021

## Trabalho do módulo 4: escolha dos temas

#### 1. João Vieira

SEIRD epidemic model for COVID-19

https://doi.org/10.1016/j.jeconom.2020.07.038

#### 2. Marcos Mendes

A SEIR MODEL FOR CONTROL OF INFECTIOUS DISEASES WITH CONSTRAINTS artigo "seirMRPaims.pdf" do E-learning

doi:10.3934/mbe.2014.11.761

#### 3. Francisco Resende

Monitoring Italian COVID-19 spread by a forced SEIRD model

https://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0237417

#### 4. Joana Martins

Modelo apresentado na secç ao 3.1 (Incorporating drug therapy) do artigo In-host modeling.

Stanca M. Ciupe, Jane M. Heffernan, In-host modeling, Infectious Disease Modelling 2 (2017).

5. Carlota Moreira A Modified SIRD Model to Study the Evolution of the COVID-19 Pandemic in Spain

https://www.mdpi.com/2073-8994/13/4/723

6. **José Pinto** A Modified SIRD Model to Study the Evolution of the COVID-19 Pandemic in Spain

https://www.mdpi.com/2073-8994/13/4/723

#### 7. Dmytro Ostapchuk

An epidemiological MSEIR model described by the Caputo fractional derivative https://doi.org/10.1007/s40435-018-0492-1

#### 8. Yurii Pitenko

Salvo combat model for naval warfare

https://en.wikipedia.org/wiki/Salvo\_combat\_model

#### 9. Rúben Rodrigues

Optimal control of the COVID-19 pandemic: controlled sanitary deconfinement in Portugal https://www.nature.com/articles/s41598-021-83075-6

### 10. Bruna Lopes

Modelo apresentado na secç ao 3.2.3 (Antibody mediated immune responses) do artigo In-host modeling.

Stanca M. Ciupe, Jane M. Heffernan, In-host modeling, Infectious Disease Modelling 2 (2017).

#### 11. Pedro Silva

Modeling and optimal control of HIV/AIDS prevention through PrEP

### 12. Rodrigo Carvalho

Optimal control of HIV treatment and immunotherapy combination with state and control delays