

## Implemented changes

- The Sensibility analysis is now based on the maximum of the 2 norm, for a variable (but desecrate values of  $t$ )
- The algorithm also calculates the time of the maximum (which could be used as relevant function for the sens. analysis)
- The ODE system has been corrected, s.t. it represents the ODE System of the paper correctly  
(I compared the plots to the Matlab plots in the paper)
- The Condition of the Experiment can be changed through variables similarly to the Matlab implementation.

## Problems with the implementation

- ODEintWarning: Excess work done on this call  
“solved” by using `solve_ivp`
- The restrictions on the number of sampling vectors in the master thesis seems incorrect. It says that the number of sampling vectors has to be a power-of two, while the cited paper says: “with  $N$  a sufficiently large number (500 or higher)”  
Additionally the paper notes that the cost of the analysis is  $N \cdot (k + 2)$  where  $N$  is the number of Sampling vectors while the master thesis as far as I understand, denotes the number of Sampling vectors with  $k$  and as a result the formula  $(2 + n) * k$  “Modellauswertungen” also seems incorrect. The SALib Package also accepts values of  $k$  which are not a power-of-two without any issues.

## Questions for the parameters

I copied the Intervals for the parameters from the master thesis, and only checked for the Parameters from Table 2 of the Research paper. Should I also include the parameters from table 1 which were determined using sensitivity analysis?

The Intervals as far as I can tell have either been  $+ - 25\%$  or standard deviation around the value, is there any reason to this, especially in regards to when each of the methods is used?

In the Matlab Code there is a variable `degrinhi` which I did not find in the Paper, and therefore also have not implemented. If I looked correctly the variable is also always set to 0, can I neglect it?