# Opinion on disease dynamic influence: notes on background work analysed in Peng et all 2021 article(AKA Bertozzi)

Further works analysed:

* How awareness spread can stop spread of disease, coevolution 24
* Simplified of 24 is in 23, SIS structure
* SIR + threshold model for information transmission 34-35
* SIR + Maki Thompson rumour model 14

Influence of social behaviour on disease transmission, peers to peers contact are strongly influencing on dynamic: S. Funk, M. Salathè and V. A. A. Jansen, Modelling the inuence of human behaviour on the spread of infectious diseases: A review, F. Verelst, L. Willem and P. Beutels, Behavioural change models for infectious disease transmission: A systematic review (2010{2015)

Social contagion that resemble or not the disease spread: N. O. Hodas and K. Lerman, The simple rules of social contagion, Scientic Reports L. Weng, F. Menczer and Y.-Y. Ahn, Virality prediction and community structure

in social networks

Influence of Global information and Mass media C. Granell, S. G\_omez and A. Arenas, Dynamical interplay between awareness and epidemic spreading in multiplex networks, X. Qian, J. Xue and S. V. Ukkusuri, Modeling

disease spreading with adaptive behaviour considering local and global information dissemination

C. Granell, S. G\_omez and A. Arenas, Competing spreading processes on multiplex

networks: Awareness and epidemics, Physical Review

Dissemination of information 10  
Adoption of behaviours 4

Relative speed of dynamics for spreading information and disease 14,67

The perception of risk is heterogeneous 56,75

Time varying network on combined spread of disease and information. The activity driven info layer is coupled with time-independent disease layer. 35

Time independent info layer with an adaptive physical layer 59

Social media dissemination of transparent and accessible information, crucial ways to advocate guidance such as mask wearing and physical distancing, 48

Misinformation and disinformation through social media, the *infodemics* 27,73

Effecto of competing opinion 37

Opinion model with continuous valued opinions to study the beliefs od different communities 65

Fear of epidemics and fear of vaccines 19

Dynamical interplay between awareness and epidemic spreading in multiplex networks

Consequences that awareness can have on the outbreak of the epidemics and its incidence

Use of the Microscopic Markov Chain Approach (MMCA), to understand the interplay between an epidemic spreading process, and a cyclic spreading of awareness process in quenched multiplex networks.

Competing spreading processes on multiplex networks: awareness and epidemics

Is a further development of the article above. Here is inserted also the effect of a media broadcast on the multi-layer network. It is modelled as third layer with only a node, that can communicate with all the others nodes in the information layer. There is then a probability associated with this layer that Unaware nodes become Aware after the broadcast transmission.

This function is implemented in Matlab to calculate the difference between the 2 methods

Immagine che contiene testo, schermata, Carattere, linea

Descrizione generata automaticamente

Here is presented a function for a shape similar to the one I found in the opinion model simulation

<https://it.mathworks.com/matlabcentral/answers/1570003-smooth-step-function-with-rise-time>

La funzione risetime di matlab permette di trovare intervallo di tempo in cui passo da low level a upper level