M4S4: Enhanced Coursework 2007/2008

DEADLINE: Friday 9 May

Tuckwell and Williams (2007) introduce a simple stochastic epidemic model of SIR (susceptible, infective, recovered) type.

Write a report describing their modelling methodology using notation that is consistent with that used in the M4S4 lecture notes.

You should also include in your report a brief description of the differential equation SIR model (see, for example, Hethcote (2000)).

Your report should include a discussion of potential limitations and benefits of the proposed model.

Reference:

Tuckwell, H.C. & Williams R. J. (2007). Some properties of a simple stochastic epidemic model of SIR type. Mathematical Biosciences, **208**, 76-97.

Hethcote, H.W. (2000). The mathematics of infectious diseases. SIAM Review, **42**, 4, 599-653.

N.B. Access to electronic journals is via the library website. (`www.imperial.ac.uk/library`)

E.J.McCoy, 27th February 2008.