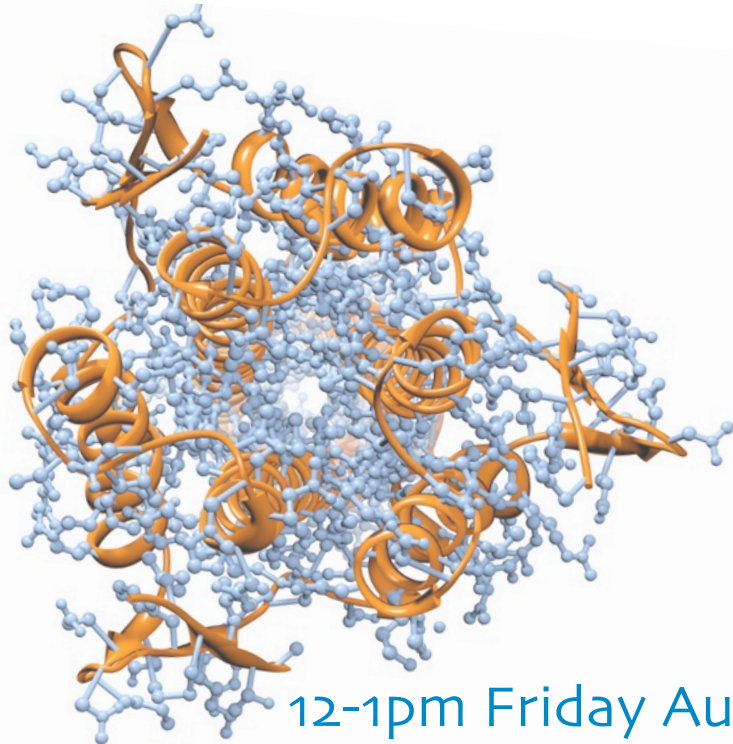


LIFE SCIENCE COMPUTATION SEMINAR SERIES



12-1pm Friday August 21

Complex models for the spread of infectious diseases: linking biology, epidemiology and social network analysis Professor Pip Pattison, School of Behavioural Science, & Dr James McCaw, School of Population Health, Melbourne Uni

12-1pm Fridays
Semester 2
Room 135
Building 26
Monash Clayton

Video link-up between
Monash, La Trobe and
Melbourne



Mathematical models of infectious disease spread are playing an increasingly important role in health policy planning, for example in influenza pandemic preparedness planning. With increasing utilisation, the tension between parsimony and complexity increases. Simple models are appealing due to their ease of interpretation. Complex models are appealing due to the details they are able to capture.

Quantitative characterisations of social networks, and in particular, the social interactions that are sufficient for respiratory disease transmission will provide the next level of realism in computer simulations of pathogen spread.

With access to high-powered supercomputing facilities, researchers will be able to simultaneously capture, for the first-time, individual level effects, social- and spatial-network effects and detailed within-human-host pathogen responses. Furthermore, the power to run many thousands of simulations will bring certainty to the outputs and ensure that interpretations of the numerical simulations are valid.

Further information:

<http://www.versi.edu.au/versi/lsc-pattison.html>

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