Epidemic networks - modelling the relevant structure

Ashley P. Ford

Warwick Mathematics Institute University of Warwick Coventry, England

Modelling of infectious diseases requires a balance between over simplification and models which although closer to reality contain many parameters which are unidentifiable. I will summarise some of the use of network models in epidemic modelling and some challenges that arise in the choice of distributions over the large space of possible networks. I will describe the use of bipartite networks or hypergraphs as an alternative approach to the modelling of contact structures in epidemics.



