

DYNAMIC NETWORKS IN GROWING POPULATIONS AND EPIDEMICS THEREON

Tom Britton, Stockholm University and University of Florida, tomb@math.su.se

Tatyana Turova, Lunds University, tatyana@maths.lth.se

Pieter Trapman, Stockholm University, ptrapman@math.su.se

In the talk we define and analyse a model for a (growing) dynamic population in which a social network evolves: individuals create new connections and old connections disappear randomly in time. We also study what might happen if an infectious disease is introduced into the community and show that three different behaviors may happen: the epidemic dies out, the epidemic grows but slower than the community grows, or it grows faster and an endemic equilibrium appears.