Christina Cobbold
UNIVERSITY OF GLASGOW
e-mail: cc@maths.gla.ac.uk

Emerging spatio-temporal patterns in a model of insect invasion

Recent empirical studies of insect invasions have provided evidence for invasive waves with endogenously generated variance in spread rates. Integrodifference equations provide a general framework to model the spread of an invasive species when the species has distinct growth and dispersal phases. Many insects from temporate climates satisfy this description. In this talk I will present an integrodifference model of insect host-parasitoid co-invasion which exhibits endogenously generated variance in spread rate. The emerging spatio-temporal patterns which form in the wake of the pulsed wavefront may provide insight into the mechanisms that lead to collapse and generation of insect outbreaks at the landscape scale.