

## Steady state problems in structured population dynamics

Jozsef Farkas (UK)

In this talk we will discuss the question of existence of non-trivial steady states of some partial differential equations, which are intended to model structured populations. We reformulate the steady state problem as an abstract eigenvalue problem coupled with a fixed-point problem. This approach allows us to formulate biologically relevant conditions for the existence of a positive steady state. We will discuss the steady state problem for models with monotone infinite dimensional nonlinearities, as well as for models with non-monotone finite dimensional nonlinearities.

This talk is based on joint work with Angel Calsina (Universitat Autònoma de Barcelona).