Abstract

dynamics this discuss In talk, shall the of we reaction-diffusion-advection models for single and two competing species in one dimensional periodic habitat. We establish the monotone dependence of the principal eigenvalue on diffusion and drift rates. As applications, we first establish the critical threshold for the persistence and the monotone dependence of the minimal wave speed on the drift rate. We also consider two competing species model and study the local and global stability of semi-trivial steady states.