
SHIHENG FAN, Memorial University of Newfoundland

Traveling waves and spreading speed for a Lotka-Volterra competition model in a periodic discrete habitat

In this talk, I will report our recent research on the propagation dynamics of a Lotka-Volterra competition model in a periodic discrete habitat. Under appropriate assumptions, we first show that a semi-trivial equilibrium is globally stable for the spatially periodic initial value problem. Then we establish the existence of the rightward spreading speed and its coincidence with the minimal wave speed for the spatially periodic rightward traveling waves. We further obtain some sufficient conditions for the linear determinacy of the rightward spreading speed.