
XINGFU ZOU, University of Western Ontario

On some R-D models for the sterile insect release method

Sterile insect release method (SIRM) is a biological control method for troublesome insects. As the fast advancement in genetic techniques and other biological techniques, its range of applications has been greatly enlarged. In this talk, I will begin with a basic ordinary differential equation model for SIRM, and then, move forward to a some reaction diffusion models on a bounded domain. Two releasing strategies for the sterile strain will be be discussed, one is domain-wise release and the other is release only on the boundary. By analyzing the models, we obtain some conditions that ensure the success of the sterile release method in eradicating the insects.