JIANHONG WU, York University, Centre for Disease Modelling
Spatial dynamics of Asia Clam invasion

Asian clam (Corbicula fluminea) is one of the most important nonnative aquatic invasive species in freshwater ecosystem, which can rapidly spread in lakes, canals, streams, and rivers throughout many parts of the world. This species has remarkably distinct mobility pattern in different phases of its life cycle. The adult clams are hermaphroditic, making the dynamic model of Asian clams a coupled system of delay differential equations with nonlocal response. We formulate a novel mathematical model to calculate the invasive speed, describe the characteristic of the speed, and show that the invasion speed coincides with the minimal wave speed of traveling wave. This is based on joint work with Jian Fang, Kunquan Lan and Gunog Seo.