DANIEL KORYTOWSKI, Fields Institute / McMaster University

Permanence and Stability of a Kill the Winner Model in Marine Ecology

Focus on the long term dynamics of "Killing The Winner" Lotka-Volterra models of marine communities consisting of bacteria, virus, and zooplankton. Under suitable conditions, it is shown that there is a unique equilibrium with all populations present which is stable, the system is permanent, and the limiting behavior of its solutions is strongly constrained.