

---

**JUPING JI**, University of New Brunswick

*Qualitative analysis on a nutrient-phytoplankton model with toxic effect of Holling-III functional*

We propose a nutrient-phytoplankton model with toxic effects governed by the Holling-type III functional and conduct qualitative analysis on the system and its steady state problem. We obtain some conditions which ensure the system undergo some bifurcations at the positive equilibria, then we will present some numerical simulations to illustrate our theoretical analysis.