

---

**YUCEN JIN**, Western University

*The effect of delay on a Host-parasite model.*

Latency is present in almost all real-world problems. However, the delay is often assumed to be negligible in many models in order to simplify analysis. In this presentation, a three-dimensional model that describes a Host, its competitor, and the parasite is analyzed, with the delay added in the production of the parasites. We will discuss how such latency would affect the dynamics of the model, including whether it would induce more complex bifurcations, and whether it would affect the coexistence of the species.