

## On a predator-prey competition model

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### ABSTRACT

There have been extensive studies on the ordinary differential equation models for predator-prey competition. In this talk, I shall present some aspects related to the ODE predator-prey models:

- Predator-prey competition and disease transmission,
- Geometry of the model and temporal dynamics,
- Stability and bifurcations,
- Periodically forced predator-prey competition,
- Relation to the Hilbert's 16<sup>th</sup> problem for quadratic systems?