



Mathematical Biology Seminar



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3 pm – 457 CAB

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Predator-prey equations with constant terms produce beautiful patterns.

We propose Lotka-Volterra type predator-prey equations which include small constant terms. Depending on its sign, the constant may model various things. To see the effect of the constants clearly we drop all other functional responses except the ones in the original Lotka-Volterra equations. We add a small negative constant for the harvesting or the Allee effect. A positive constant is added to model the planting or external influx. We find the predator-prey equations with constant terms produce most of dynamic and static patterns observed from other predator-prey models with various functional responses.