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**LIN WANG**, University of New Brunswick

*Effects of intraguild prey dispersal driven by intraguild predator-avoidance on species coexistence*

In this talk, I will present a novel mathematical model that couples a competition model with an intraguild predation model via dispersal of intraguild prey driven by intraguild predator-avoidance. We show that a large dispersal rate would lead to the collapse of species coexistence, which is consistent with the reported experimental results. In addition, we show that three modes of species coexistence are possible when the intraguild prey dispersal rate is not too large. Moreover, for a certain range of dispersal rates, a stable interior equilibrium can coexist with a stable positive limit cycle.