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**Liancheng Wang\*** (lwang5@kennesaw.edu), Department of mathematics, Kennesaw State University, 1100 South Marietta Pkwy, Marietta, GA 30060. *Hopf Bifurcation Analysis for a Predator-prey Model with Two Delays.*

In this research, we consider a Predator-prey mathematical model with two delays. The stability of the unique positive equilibrium point is investigated. The Hopf bifurcation analysis is performed and the conditions for Hopf bifurcation are established. The bifurcation diagram is described in terms of the delays and numerical simulations are provided to illustrate the theoretical results. (Received September 15, 2016)