

Applied Dynamical Systems Seminar

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**Friday, November 18, 2011,
HH-3017, 1:00p.m.**

*Multiple Periodic Solutions in A Delay-Coupled System of
Neural Oscillators*

Abstract:

In this talk, I will report our recent research on the Hopf bifurcation in a delay-coupled system of neural oscillators. After investigating the eigenvalue problem of the corresponding characteristic equation of the system, we establish the codimension 1 and codimension 2 Hopf bifurcations under appropriate conditions. Meanwhile, without solving the equation, we obtain the form of the bifurcated periodic solutions by appealing to the representation theory of Lie group. Finally, we studied the bifurcation directions and stabilities via the center manifold theory and normal form approach. This talk is based on my joint work with Dr. S. Guo.