

Colloquium

University of Texas at Arlington- Mathematics Department
Proudly presents

Dr . Sze- Bi Hsu

Professor

Department of Mathematics
National Tsing-Hua University, Taiwan

“On a nonlocal parabolic PDE arising from the
Phytoplankton Species Competition for Light”

Friday, August 28, 2009

2:30pm

304 Pickard Hall

Abstract:

In this talk we present a mathematical model of two phytoplankton species competing for light under an environment with abundant nutrients. The model takes a form of parabolic equations with nonlocal terms. First we present the results of bifurcation and uniqueness of steady state for the case of one species. Then we prove the global asymptotic behavior for the parabolic PDE. Next we consider the case of parabolic PDE of two species competing for light. We apply uniform persistent technique to obtain the coexistence of two species. This is the joint work with Du Yihong, University of New England.

Refreshments & Socializing at 2pm

<http://www.uta.edu/math/pages/main/seminar.htm>