1016-76-132 **Min Chen*** (chen45@purdue.edu), Department of Mathematics, Purdue University, West Lafayette, IN 47906. *Existence of two-dimensional doubly periodic wave patterns.*

The talk will report a recent joint work with Gerard Iooss. We will rigorously prove the existence of two-dimensional doubly periodic wave patterns for a Boussinesq type system which describes waves on the surface of water of finite depth, with or without surface tension. (Received February 08, 2006)