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# BOUSSINESQ SYSTEMS FOR WATER WAVES

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## **Abstract**

In this talk, I will present joint works over the years on the existence and stabilities of special solutions, which include solitary wave solutions, cnoidal wave solutions, standing wave solutions and two-dimensional wave patterns, for a class of Boussinesq systems. The techniques used in the existence results include, but not limited to, perturbation theory and topological index theory. Numerical simulations designed to gain more understanding on tsunami and wave patterns will be carried out and compared with theoretically results and fields data.

**Date:** Wednesday, June 29, 2011

**Time:** 11:30

**Place:** IMBM Seminar Room, Boğaziçi University