Meiji University Global COE Program
11th Mathematical Sciences based on Modeling, Analysis and Simulation seminar

Date : July 15, 2009, 16:30〜17:30
Location : Meiji Univ. Ikuta Campus, Build 2 Annex A, Room A205

Yuki Taniguchi (Meiji Univ.)

Title : The stability of a flow on a rotating polar cap

Abstract : An analytic solution of two-dimensional, steady, linear, viscous flow on a rotating spherical cap is obtained. We calculate a nonlinear solution to the linear solution and observe the stability from the time development of the minute perturbation around the nonlinear flow. As an inflow increases, the nonlinear solution whose configuration differs from that of the linear solution is obtained. The inflow is increases more, the nonlinear solution is unstable by Hopf bifurcation. The position of the occurrence of the instability is first the outlet and second the inlet on the boundary of the spherical cap.

Everyone is welcome to attend the MAS seminar.

Access: 10 minutes on foot from Ikuta St. Odakyu line,
Or 10 minutes by bus No. 13「明治大学正門前」, get off at the last stop.
See http://www.meiji.ac.jp/koho/campus_guide/ for details.