



Meiji University Global COE Program 50th Mathematical Sciences based on



Modeling, Analysis and Simulation seminar

Date: February 16, 2012, 16:30~18:00

Location: Meiji Univ. Ikuta Campus, Build 2 Annex A, Room A207.

Makoto Iima (Hiroshima University)

Title : Dynamics and Pattern formation in Binary
Fluid Convection.

Abstract: We study thermal convection of a binary fluid mixture (binary fluid convection). Unlike ordinary Rayleigh-Benard convection, binary fluid convection shows a rich variety of patterns including spatially-localized pattern in which a small number of convection cells exist in conductive state. Solutions for steady localized convection cells with different number of cells can coexist in a parameter region, and the bifurcation branch shows a snake structure. Solutions for traveling localized convection cells show a different bifurcation structure. These solutions are shown useful for understanding dynamics of the pattern formation dynamics. This work is a collaboration with Dr. Takeshi Watanabe (Hiroshima University) and Prof. Yasumasa Nishiura (Tohoku University).

Everyone is welcome to attend the MAS seminar.

Meiji institute for Advanced Study of Mathematical Science (<http://www.mims.meiji.ac.jp>)
(Organizers: M. Mimura, D. Ueyama, Y. Wakano, K. Ikeda and S.Kinoshita)

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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.