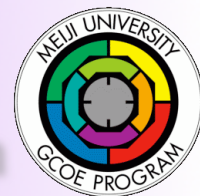




Meiji University Global COE Program

19th Mathematical Sciences based on Modeling, Analysis and Simulation seminar



Date : November 25, 2009, 16:30~17:30

Location : Meiji Univ. Ikuta Campus, Build 2 Annex A, Room A205

Tohru Wakasa (Waseda Univ.)

Title : Reaction-diffusion model
on tumour growth with contact inhibition

Abstract : For the last two decades, the mathematical modeling of tumour growth have been investigated by many researchers. In this talk I will introduce a reaction diffusion model describing spatio-temporal dynamics between two populations of normal cells and abnormal cells, which takes account of the effect of contact inhibition. The purpose of this talk is to understand the qualitative behavior of solutions of our model in one dimensional case. In particular, if the initial supports of two population densities are segregated, then there is a segregated solution in some sense. Moreover, it is observed from the numerical simulations that segregated solutions propagate with constant speed like traveling wave. Then, I will discuss the existence, uniqueness and stability of segregated traveling wave solution of our model.

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 and K. Ikeda)

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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.