B. Buffoni – B. Dacorogna – J. Krieger - H.M Nguyên - Section Mathématiques

SEMINAIRE D'ANALYSE

➢ ***VENDREDI 13 MAI 2016 à 15h15 - salle CM010***

Professeur **YOSHIHISA MORITA** *(*Université Ryukoku, Japon) donnera une conférence sur le thème:

« Localized patterns in Reaction-diffusion systems with a conservation law»

We deal with a two-component reaction-diffusion system with conservation of mass, which comes from a biological model for the cell polarity. While this system allows a Turing type instability, the asymptotic state of solutions numerically shows a simple spatially localized pattern. We reveal some stability property for equilibria of the system by a Lyapunov function and a spectral comparison argument based on the minimax principle, in consequence the numerical observation mathematically justified. Moreover, we show a profile of the stable solution in one-dimensional space converges to a Dirac mass in a singular limit of a diffusion coefficient.

This talk is mainly based on joint works with S. Jimbo (Hokkaido Univ.) and a work with J.-L. Chern (National Central Univ.) and T.-T. Sieh (National Taiwan Univ.)

Lausanne, le 3 mai 2016
HMN/vl

Les séminaires qui ont lieu à la Section de Mathématiques sont annoncés sur Internet
http://memento.epfl.ch/maths/