Bulletin of Parana's Mathematical Society

Editor-in-Chief: Marcelo Moreira Cavalcanti
Departamento de Matemática da Universidade Estadual de Maringá, Brasil.

Corresponding author: Prof. Jacson Simsen
Instituto de Matemática e Computação, Universidade Federal de Itajubá
Av. BPS, 1303, Pinheirinho, 37500-903, Itajubá - Minas Gerais - Brazil.

August 31, 2013

Dear Professor Marcelo Cavalcanti

I am directing the manuscript "Existence and upper semicontinuity of global attractors for a p-Laplacian inclusion" for possible publication in Bulletin of Parana's Mathematical Society.

In this work we prove the existence and upper semicontinuity of global attractors for the problem

$$(P_\lambda)\begin{cases} \dfrac{\partial u_\lambda}{\partial t} - div(D^\lambda|\nabla u_\lambda|^{p-2}\nabla u_\lambda) + |u_\lambda|^{p-2}u_\lambda \in F(u_\lambda) + h,\ t>0 \\ u_\lambda(0) = u_{0,\lambda} \end{cases}$$

where $p > 2$, $\Omega \subset R^n$, $n \geq 1$, is a bounded smooth domain, $h, u_{0,\lambda} \in H := L^2(\Omega)$, $D^\lambda \in L^\infty(\Omega)$, $\infty > M \geq D^\lambda(x) \geq \sigma > 0$ a.e. in Ω, $\lambda \in [0,\infty)$ e $D^\lambda \to D^{\lambda_1}$ in $L^\infty(\Omega)$ as $\lambda \to \lambda_1$, $F : D(F) \subset L^2(\Omega) \to P(L^2(\Omega))$, given by $F(y(\cdot)) = \{\xi(\cdot) \in L^2(\Omega) : \xi(x) \in f(y(x))$ x-a.e. in $\Omega\}$ with $f : R \to C_v(R)$ ($C_v(R)$ is the set of all nonempty, bounded, closed, convex subsets of R) be a multivalued map.

Best regards,

Jacson Simsen