



**Mês de: Junho 2009**

## **SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS**

**Dia 25 de Junho (quinta-feira), às 14h15, na Sala B3-01**

“An invariant class of generalized sup and sub-solutions for  
the energy decreasing flow”

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**Abstract:**

We introduce a generalization of the notion of super(sub)-solution to the Dirichlet bvp  $-\Delta u=f(x,u)$ . Classical supersolutions can be seen as functions whose gradient, via Riesz Representation Theorem applied in  $H^1_0$ , is a superharmonic function. Here, we consider a class of regular functions whose gradient is a non-negative function. We prove their invariance for the energy decreasing flow. As a consequence, we re-obtain existence of a classical solution in the presence of an well-ordered pair classical sub-solution/generalized super-solution.

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