

no sentido das distribuições, isto é,

$$\int_{\Omega} \nabla u \cdot \nabla \eta \, dx \leq \int_{\Omega} f(x, u) \eta \, dx, \quad \forall \eta \in W_0^{1,2}(\Omega),$$

IMECC-UNICAMP
 Campinas-SP, Brazil
 August 03rd, 2015

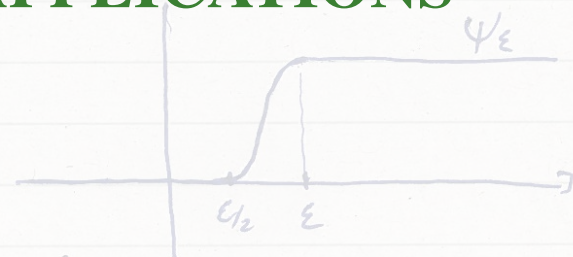
$$f(x, 0) = 0,$$

Mini-Workshop on

PDE METHODS AND APPLICATIONS

Seja $\phi \in C^0(\Omega), \phi \geq 0$

Seja $\psi_{\varepsilon}: \mathbb{R} \rightarrow \mathbb{R}$ dada por:



$$\psi_{\varepsilon}(t) = 0, \quad t < \varepsilon/2, \quad \psi_{\varepsilon}(t) = 1, \quad t > \varepsilon, \quad \psi'_{\varepsilon}(t) \geq 0, \quad 0 \leq \psi_{\varepsilon} \leq 1$$

Tomemos $\eta = \psi_{\varepsilon}(u) \cdot \phi$.

$$\nabla \eta = \psi'_{\varepsilon}(u) \cdot \nabla u \cdot \phi + \psi_{\varepsilon}(u) \cdot \nabla \phi, \quad \eta \in W_0^{1,2}(\Omega)$$

- Speakers**
 Gabriela Planas (IMECC)
 Levon Nurbekyan (KAUST)
 Matheus Santos (IMECC)
 Paulo Amorim (UFRJ)
 Ricardo Alonso (PUC-RJ)

Usando esta η como função teste:

$$\int_{\Omega} |\nabla u|^2 \cdot \psi'_{\varepsilon}(u) \cdot \phi \, dx + \int_{\Omega} \psi_{\varepsilon}(u) \nabla u \cdot \nabla \phi \, dx \leq \int_{\Omega} f(x, u) \cdot \psi_{\varepsilon}(u) \phi \, dx$$

Support:
 Pós-Graduação - IMECC
 Sub-CPG Matemática
 PPGM-UFSCar



- Organizers**
 Anne C. Bronzi (IMECC)
 Edgard A. Pimentel (UFSCar)
 Olivaine S. de Queiroz (IMECC)

All presentations will take place at room 321

Further information:
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peço T da convergência dominada $\varepsilon \rightarrow 0$

$$\int_{\Omega} \nabla u \cdot \nabla \phi \, dx = \int_{\Omega} \nabla(u^+) \cdot \nabla \phi \, dx = \int_{\Omega} \nabla u^+ \cdot \nabla \phi \, dx$$