Mathematical Models for Complex Systems

Cortona, September, 26-29, 2007

September, Wednesday 26th

09.00 – 09.30 **Dafermos C.** *Hyperbolic conservation laws with weak dissipation.*

09.30 – 10.00 **Rionero S.** *Auxiliary cross-diffusion for circumventing high non linearities.*

10.00 – 10.30 **Straughan B.** *Poiseuille flow of a fluid overlying a porous medium.*

10.30 – 11.00 Coffee break

11.00 – 11.30 **Barbu V.** *Stabilization of fluid flows.*

11.30 – 12.00 **Miara B.** *Controlability of piezo electric materials.*

12.00 – 12.30 **Carillo S.** *Rigid heat conduction with memory: evolution problems, Baecklund transformations and exponential decay.*

Lunch

15.00 – 15.30 **Gilardi G.** *Well posedness for a singular phase field system.*

15.30 – 16.00 **Favini A.** *Singular linear parabolic equations with lower order terms and Robin boundary conditions.*

16.00 – 16.30 **Gatti S.** *Phase-field models with dynamic boundary conditions.*

16.30 – 17.00 Coffee break

17.00 – 17.30 **Rodrigues J.F.** *On constrained diffusion systems for multiphase problems.*

17.30 – 18.00 **Pata V.** *Attractors for semilinear equations of viscoelasticity with very low dissipation.*

18.00 – 18.30 **Marinoschi G.** *Periodic flows in porous media.*

September, Thursday 27th

09.00 – 09.30 **Frémond M.** *The collision of a bar with a plane.*

09.30 – 10.00 **Taha T.** *Numerical Methods for Solving Nonlinear Evolution Equations.*

10.00 – 10.30 **Berti V.** *Existence and uniqueness for a phase transition model in superconductivity with critical velocity field.*

10.30 – 11.00 Coffee break

11.00 – 11.30 **Graffi S.** *Mean field quantum nonlinear equations from the N-body Schrödinger dynamics as $N \to \infty$.*

11.30 – 12.00 **Gentile M.** *On nonlinear stability of chemical reaction-diffusion systems via the auxiliary cross diffusion method.*

12.00 – 12.30 **Naso M.G.** *On the asymptotic behavior of some second-order systems with memory.*

Lunch

15.00 – 15.30 **Ruggeri T.** *Identification of an average temperature and of a new dynamical pressure in a multi-temperature mixture of fluids.*

15.30 – 16.00 **Sforza D.** *Some problems in viscoelasticity.*

16.00 – 16.30 **Guidetti D.** *An inverse problem for abstract linear wave equations.*

September, Friday 28th

09.00 – 09.30 **Rivera J.** *To be announced.*

09.30 – 10.00 **Mulone G.** *Linear and nonlinear stability problems in biomathematics and fluid-dynamics.*

10.00 – 10.30 **Capone F.** *Diffusion driven stability and Turing effect for predator-prey model with Beddington-DeAngelis functional response.*

10.30 – 11.00 Coffee break

11.00 – 11.30 **Golden J.M.** *Phase transitions in materials with thermal memory.*

11.30 – 12.00 **Bonfanti G.** *Analysis of a problem of adhesive contact with thermal effects.*

12.00 – 12.30 **Giorgi C.** *Nonlinear vibrations and regular attractors for an extensible viscoelastic beam.*

Lunch

15.00 – 15.30 **Miranville A.** *Asymptotic behavior of some triply nonlinear equations.*

15.30 – 16.00 **Crouch R.** *Stress integration strategies in large-scale elasto-plastic analysis.*

16.00 – 16.30 **Ciarletta M.** *On seismic damping through viscoelastic layer.*

16.30 – 17.00 Coffee break

17.00 – 17.30 **Grasselli M.** *Cahn-Hilliard type equations with inertial term.*

17.30 – 18.00 **Loreti P.** *Coupled Hamilton-Jacobi equations and applications.*

18.00 – 18.30 **Polidoro S.** *Path-dependent American Options.*

September, Saturday 29th

09.00 – 09.30 **Morro A.** *Phase-field models for first-order transitions.*

09.30 – 10.00 **Borrelli A.** *Steady flows induced by a rotating plane for some classes of fluids.*

10.00 – 10.30 **Pandolfi L.** *Sector condition and recursive computation of fractional Caputo derivatives.*

10.30 – 11.00 Coffee break

11.00 – 11.30 **Cimmelli V.A.** *General principles and constitutive equations in weakly nonlocal thermodynamics.*

11.30 – 12.00 **Nibbi R.** *On the energy decay of systems with dissipative boundary.*