

ACI Workshop : Front propagation and PDEs

Rouen, France, 17, 18 June 2004

Thursday 17 June 2004

Morning session. Chair : Jean-Michel Roquejoffre

9h30 - 10h00 Participants' welcome

10h00 - 10h15 Introductory speeches

10h15 - 11h00 **Elisabeth Rouy** (ECL, Lyon), **Régis Monneau** (ENPC, Paris) : Presentation of the ACIs

11h00 - 11h15 Break

11h15 - 12h00 **Sylvia Serfaty** (Courant Institute): A deterministic-control based approach to motion by mean curvature.

12h00 - 12h45 **Fabrice Béthuel** (U. Paris 6) : Mean curvature motion and Ginzburg-Landau parabolic equations.

12h45 - 14h00 : Lunch

Afternoon session. Chair : Danielle Hilhorst

14h00 - 14h45 **Jean-David Benamou** (INRIA, Paris) : GO++ : a generic programming tool for the numerical resolution of Hamilton-Jacobi problems

14h45 - 15h30 **Philippe Hoch** (CEA, Paris) : Geometric PDEs and their numerical approximations

15h30 - 16h15 **Elisabetta Carlini** (ENPC) : A large time step scheme for Mean Curvature Motion

16h15 - 16h45 Break

16h45 - 17h30 **Elisabeth Logak** (Cergy) : Fronts in population dynamics models with degenerate diffusion

17h30 - 18h15 **François Hamel** (Marseille) : Propagation and quenching for the thermodiffusive system with a heat loss

Dinner offered by the organizers.

20h00 Restaurant : L'Orangerie, 2 rue Thomas Corneille, Rouen, tél : 02 35 88 43 97

Friday 18 June 2004

Morning session. Chair : Fabrice Béthuel

9h15 - 10h00 **Jean-Michel Roquejoffre** (Toulouse) : Singular limits in models for diffusion flames

10h00 - 10h45 **Olivier Ley** (Tours) : On some flows in shape optimization

10h45 - 11h15 Break

11h15 - 12h00 **Francesca Da Lio** (Turin) : Nonlocal Front Propagation Problems in Bounded Domains with Neumann-Type Boundary Conditions

12h00 - 12h45 **Danielle Hilhorst** (Paris 11) : The singular limit of the Allen-Cahn equation

12h45 - 14h00 Lunch

Afternoon Phd students' session. Chair : Regis Monneau

14h00 - 14h20 **Jérôme Coville** (Paris 6) : On a nonlocal reaction diffusion equation arising in population dynamics

14h20 - 14h40 **Guillaume Frejaques** (Marseille) : Ondes progressives pulsatoires pour des équations de réaction-diffusion avec coefficients périodiques en temps

14h40 - 15h00 **Sébastien Collin** (ECL, Lyon) : Homogénéisation en temps sur le bord d'un domaine

15h00 - 15h30 Break

15h30 - 15h50 **Nathael Alibaud** (Montpellier) : Existence and Uniqueness for Nonlinear Parabolic Equations with Nonlocal Terms

15h50 - 16h10 **Adrien Blanchet** (ENPC, Paris) : On the regularity of the exercise region for american options

16h10 - 16h30 **Annalisa Cesaroni** (Padova, Italy) : Almost sure stabilizability of controlled degenerate diffusions