

Interactions and propagation of singularities

February Monday 18th-Friday 22nd 2008

Program

The workshop will stand at the Amphitheatre Hermite, Henri Poincaré Institute, 11 rue Pierre et Marie Curie, Paris 05. The three long lectures are shown in blue.

Monday February 18th

13h30-14h : Welcome coffee.

14h-15h : [Michael Berry \(H.H. Wills Physics Laboratory, Bristol\)](#) "The singularities of light : intensity, phase, polarization."

15h-15h30 : Coffee Break.

15h30-17h : [Henri Berestycki \(CAMS, EHESS Paris\)](#), "Reaction diffusion equations and front propagation in heterogenous media"

Tuesday February 19th

9h-9h45 : Luis Vega (Universidad del Pais Vasco, Bilbao) "Convexity and uniqueness for some evolution equations."

9h45-10h30 : Etienne Rolley (LPS-ENS, Paris) "Hysteresis and dynamics of liquid drops and films on rough surfaces."

10h30-11h : Coffee Break.

11h-12h30 : [Henri Berestycki \(CAMS, EHESS Paris\)](#), "Reaction diffusion equations and front propagation in heterogenous media"

12h30-14h15 : Lunch

14h15-15h : David Lannes (IMB, Bordeaux) "Wave breaking, Camassa-Holm equations and Degasperis-Procesi"

15h-15h45 : Hervé Henry (PMC, Ecole Polytechnique) "Phase field modelling of brittle fracture. Application to oscillating cracks."

15h45-16h15 : Coffee Break.

16h15-17h : Bruno Andreotti (PMMH, Paris) "A microscopic view on contact angle selection : equilibrium and out-of-equilibrium situations."

Wednesday February 20th

9h-9h45 : Thomas Alazard (Orsay) "Semi-classical analysis for the Nonlinear Schrödinger equation."

9h45-10h30 : [Michael Berry \(H.H. Wills Physics Laboratory, Bristol\)](#) "Tsunami asymptotics"

10h30-11h : Coffee break.

11h-11h45 : Régis Marchiano (IJLRA, Paris) "Singular acoustics."

11h45-12h30 : Thierry Gallay (Grenoble) : "Vortex interaction in weakly viscous planar flows."

Thursday February 21st

9h-9h45 : Matthew Paoletti (Physics Dept. U. Maryland), "Characterization of Singular Velocities in Quantum Turbulence."

9h45-10h30 : Laurent Duchemin (IRPHE, Marseille) "On some finite and infinite-time singularities in the context of Inertial confinement fusion and Rayleigh-Taylor instability"

10h30-11h : Coffee Break.

11h-12h30 : [Sijue Wu \(Math. Dept., U. Michigan\)](#), "Almost global wellposed-ness of the 2-D full water wave problem"

12h30-14h : Lunch

14h-15h : Fabrice Bethuel (LJLL, Paris) "On some special regimes for the Gross-Pitaevskii equation".

15h-15h45 : Emmanuel Villermaux (IRPHE, Marseille) "Singular and collective effects in liquid fragmentation"

15h45-16h15 : Coffee Break.

16h15-17h : Jean-Yves Chemin (LJLL, Paris) : "Vortex patches and viscous perturbations" Field"

Friday February 22nd

9h-10h30 : [Sijue Wu \(Math. Dept., U. Michigan\)](#), "Almost global wellposed-ness of the 2-D full water wave problem"

10h30-11h : Coffee Break.

11h-12h : Olivier Laffitte (Villetaneuse) : "Nonlinear solution of Euler equation with gravity in the neighborhood of a stationary density profile : Rayleigh-Taylor instability"