

Formation and structure of singularities

March Monday 10th-Friday 21st 2008

Program

The spring school will take place (except where otherwise noticed) at the Amphitheater Darboux, Henri Poincaré Institute, 11 rue Pierre et Marie Curie, Paris 05. Two long lectures and an informal session are scheduled for the first week, while four lectures (shown in blue) and shorter presentations for the second week.

Monday March 10th

10h-12h30 : "Weak and wave turbulence" : informal session (main speakers : W. Craig, C. Bardos and U. Frisch).

12h30-14h : Lunch

14h-15h30 : Gilles Francfort (Institut Galilée) and Michaël Marder (Univ. Texas, Austin) "Modeling of fractures in a solid."

15h30-16h : Coffee Break.

16h-17h30 : "Modeling of fractures in a solid."

Tuesday March 11th

10h-12h30 : "Weak and wave turbulence" : informal session (main speakers : W. Craig, J. Rauch and A. Newell).

12h30-14h : Lunch

14h-15h30 : Gilles Francfort (Institut Galilée) and Michaël Marder (Univ. Texas, Austin) "Modeling of fractures in a solid."

15h30-16h : Coffee Break.

16h-17h30 : "Modeling of fractures in a solid."

Wednesday March 12th

10h-12h30 : "Weak and wave turbulence" : informal session (main speakers : M. Escobedo, I. Gallagher and S. Rica).

12h30-14h : Lunch

Warning : afternoon sessions at Amphitheater **Hermite**

14h-15h30 : Gilles Francfort (Institut Galilée) and Michaël Marder (Univ. Texas, Austin) "Modeling of fractures in a solid."

15h30-16h : Coffee Break.

16h-17h30 : "Modeling of fractures in a solid."

Thursday March 13th

10h30-12h30 : "Modeling of fractures in a solid."

12h30-14h : Lunch

14h-15h30 : Claude Bardos (IMJ, Paris VII) and Paul Clavin (IRPHE, Marseille) "Interfaces and hydrodynamic instabilities."

15h30-16h : Coffee Break.

16h-17h30 : "Interfaces and hydrodynamic instabilities."

Friday March 14th :

Warning Amphitheater **Hermite**

10h30-12h30 : "Modeling of fractures in a solid."

12h30-14h : Lunch

14h-15h30 : "Interfaces and hydrodynamic instabilities."

15h30-16h : Coffee Break.

16h-17h30 : "Interfaces and hydrodynamic instabilities."

Monday March 17th

10h00-10h30 : Welcome coffee

10h30-12h00 : [Keith Moffatt \(Cambridge\)](#) : "Magnetic Relaxation and the formation of current sheet singularities."

12h00-12h30 : Yoshifumi Kimura (Nagoya) : "Self-similar collapse of 3D vortex filament model."

12h00-14h00 : Lunch

14h-14h45 : Michael Moseler (Freiburg) : "The atomistic view of capillary singularities : nanoscale necks and wedges."

14h45-15h30 : Lucas Biferale (Roma) "Wetting failure and contact line dynamics in a Couette flow"

15h30-16h00 : Coffee break

16h00-17h00 : Günther Grün (Univ. Erlangen) "Thin film flow influenced by thermal fluctuations"

Tuesday March 18th

9h-10h30 : [Keith Moffatt \(Cambridge\)](#) : "Magnetic Relaxation and the formation of current sheet singularities."

10h30-11h : Coffee Break.

11h-12h30 : Michaël Brenner (Harvard) : "Some singularities of current interest."

12h30-14h : Lunch

14h-14h45 : Benoît Roman (ESPCI, Paris) "The frustrating tearing of adhesive tape".

14h45-15h30 : Michael Marder (Austin) "Mysteries of popping balloons"

15h30-16h : Coffee Break.

16h-17h : Yves Pomeau (Paris) : "Moving contact line in theory and experiments."

Wednesday March 19th

9h-10h30 : [Franck Merle \(Cergy-Pontoise\)](#) : "Description of blow-up behavior for the critical NLS in space dimension $N < 6$ "

10h30-11h00 : Coffee Break.

11h00-12h30 : Michaël Brenner (Harvard) : "Mathematical challenges of self assembly"

12h30-14h45 : Lunch

14h45-15h30 : Elie Raphaël (ESPCI) : "Swimming in circles."

15h30-16h : Coffee Break.

16h-17h : [Len Pismen \(Haifa\)](#) "Resolving the contact line singularity"

Thursday March 20th

9h-9h45 : Daniel Bonn (LPS-ENS, Paris) : "Evaporating droplets, dewetting and pattern formation"

9h45-10h30 : Stephen Garoff (Carnegie Mellon) : "Looking for the Inner Scale Physics Near a Moving Contact Line."

10h30-11h : Coffee Break.

11h-12h30 : [Franck Merle \(Cergy-Pontoise\)](#) : "Description of blow-up behavior for the critical NLS in space dimension $N < 6$ "

12h30-14h : Lunch

14h-14h45 : Sergio Rica (LPS-ENS) : "Wave condensation."

14h45-15h30 : Jens Hoppe (Stockholm) : "The problem of singularity formation in relativistic membrane theories".

15h30-16h : Coffee Break.

16h-17h : [Len Pismen \(Haifa\)](#) : "Resolving the contact line singularity"

Friday March 21st

10h00-10h15 : Coffee Break.

10h15-11h : Stephen Garoff (Carnegie Mellon) : "Hydrodynamics Near Moving Contact Lines : Can the Fluid Ever Be Newtonian?"

11h-12h : Russel Caflisch (UCLA) : "Complex Singularities for the 3D Euler Equations"