GDR PHENIX

Institut Henri Poincaré

Amphithéatre Darboux
11 rue Pierre et Marie Curie, Paris 5ème
Métro Luxembourg, Tél : 01 44 27 67 64
Entrée Libre

Wave Turbulence

8 – 10 Avril 2009

The program aims at gathering researchers working in the area of wave turbulence, both experimentally and theoretically as well as on applications in astrophysics and oceanography.

Introductory lectures to wave turbulence (10 hours) will be given by S. Nazarenko before the workshop from April 6 to 8, 2009 at Institut Henri Poincaré.

Workshop organized by T. Dauxois, E. Dormy, E. Falcon, S. Fauve, F. Petrelis.

Wednesday April 8th, 2009

14h00 Alan NEWELL
The role of the generalized Phillips' spectrum in wave turbulence.

14h35 Sergio RICA
Breakdown of weak-turbulence and nonlinear wave condensation.

15h10 Frédéric DIAS
Wave turbulence in 1D systems. Application to surface waves.

15h45-16h15 Pause

16h15 Benno RUMPF
Evolution of quasisolitons in wave turbulence.

16h50 Colm CONNAUGHTON
Dynamical Solutions of the 3-Wave Kinetic Equation.

Thursday April 9th, 2009

9h00 Sébastien AUMAITRE
Fluctuations of energy flux in wave turbulence and other dissipative systems driven far from equilibrium.

9h35 Christophe JOSSERAND
Wave turbulence in plate dynamics : can we hear a Kolmogorov spectrum ?

10h10 Olivier CADOT
Experimental study of wave turbulence in a plate set into chaotic vibration.

10h45-11h15 Pause

11h15 Nicolas MORDANT
Observation of wave turbulence in an elastic plate.

11h50 Thierry ALBOUSSIERE
Liquid sodium, turbulence and Alfven waves.

12h25-14h Lunch

14h00 Alexandros ALEXAKIS
Cascades in MHD turbulence.

14h35 Roland GRAPPIN
MHD wave turbulence : numerical results.

15h10 Joachim SAUR
Wave turbulence in the magnetosphere of Jupiter.

15h45-16h15 Pause

16h15 Sébastien GALTIER
Alfven wave turbulence : new results with applications to astrophysics

16h50
TBA

Friday April 10th, 2009

9h00 Miguel ONORATO
Turbulence in the direct cascade of the 3D Gross-Pitaevskii equation

9h35 Olga ALEXANDROVNA
Turbulence behind collisionless shocks and Alfvén vortices

10h10 Leo MAAS
Wave attractors in stratified and rotating fluids.

10h45-11h15 Pause

11h15 Fabien GODEFERD
Inertial waves dynamics in rotating homogeneous turbulence.

11h50 Nathanael SCHAEFFER
Quasi-geostrophic MHD waves in the Earth core.

12h25-14h Lunch

14h00 Eric FALCON
Wave turbulence on the surface of a fluid.

14h35 Aurélien BARBARIT
Introduction to wave energy conversion.

15h10 Mahendra VERMA
Bifurcations and chaos in Rayleigh-Bénard convection.

Participation to the workshop and to the lectures is free of charge (no registration fees), but registration is mandatory
`http://www.ihp.jussieu.fr/ceb/Trimestres/T09-2/C1/index.html`.