

CENTRE DE PHYSIQUE DES HOUCHES

74310 LES HOUCHES
FRANCE



European High Level Scientific Conference

Frontiers in Number Theory, Physics and Geometry March 9-21, 2003

Scientific Program: This Winter school includes basic courses on Dynamical systems, Number theory and Random matrices, on Perturbative Physics and Polylogarithms and finally on Symmetries and non-Perturbative Physics. A large number of seminars will cover active and more advanced domains of research. They will be organized in Working groups for senior participants and young specialists, these include Zeta functions, Euler products in Quantum Field Theory, Modular forms and generalizations... This format will allow Mathematicians and Physicists to share insights as well as tools.

Scientific Coordinator and Organizing Committee: Bernard JULIA (ENS Paris) and Pierre MOUSSA (CEA Saclay), Thierry PAUL (ENS Paris), Pierre VANHOVE (CERN Geneva)

Main Lecture series:

E. Bogomolny: Quantum and arithmetic chaos.

A. Connes: Galoisian symmetries and renormalisation.

R. Dijkgraaf: String dualities and automorphic forms.

P. Di Vecchia: Gauge theories from D-branes.

E. Frenkel: Vertex algebras and algebraic curves.

G. Moore: String theory and Number theory

W. Nahm: Physics and dilogarithms.

B. Conrey: L-functions and random matrix theory

C. Soulé: Introduction to arithmetic groups.

JC. Yoccoz/A. Zorich: Diophantine approximation and dynamics.

D. Zagier: Polylogarithms

Scientific Committee:

Frits Beukers(Utrecht, Neth.)

P. Cvitanovic (Atlanta, USA)

Patricio Leboeuf (Orsay, Fr.)

Claire Voisin (Jussieu, Fr.)

Jean-Benoît Bost (Orsay, Fr.)

Michel Duflo (Jussieu, Fr.)

Werner Nahm (Dublin, Ir.)

M. Waldschmidt (Jussieu, Fr.)

Pierre Cartier (IHES, Fr.)

G. Gallavotti (Roma, It.)

I. Todorov (Vienna, Aust.)

J.C. Yoccoz (Collège de Fr.)

and **Jean-Bernard Zuber** (Saclay Fr.)

Many additional **seminars** will be given during Working groups. The list of speakers includes:

Z. Bern, P. Candelas, J. Conway, P. Cvitanovic, X. de la Ossa, H. Gangl, G. Gentile, A. Goncharov, D. Kreimer, J. Lagarias, J. McKay, B. Pioline, A. Voros, D. Voiculescu, S. Weinzierl, M. Pollicott, E. Vasserot, G. Henniart

Registration can be made at the website: <http://www.lpt.ens.fr/~H03/> (recommended)

or by contacting: Marcelle MARTIN, LPT-ENS, 24 rue Lhomond, 75005 Paris, France.

Phone: 33 1 44 32 25 43 – Fax: 33 1 43 36 76 66 e-mail: marcelle.martin@lpt.ens.fr

Registration forms are due before

January 9, 2003.

The number of participants is limited to 70, grants are available for selected europeans under 35.

Les Houches is a resort village in the Chamonix valley in the French Alps. Established in 1951, the Physics School is located in a group of chalets surrounded by meadows and woods, at an altitude of 1150 m facing the Mont-Blanc range - a very favourable environment for intellectual activity in ideal surroundings for hiking, mountaineering and sight-seeing.

The Physics School is affiliated with Université Joseph Fourier of Grenoble and Institut National Polytechnique de Grenoble, and is supported by the Ministères de l'Education Nationale et de la Recherche, by the Centre National de la Recherche Scientifique (CNRS) and by the Direction des Sciences de la Matière of the Commissariat à l'Energie Atomique (CEA/DSM).

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