

***** Quantum Information, Computation and Complexity *****
January 4th – April 7th, 2006

A trimester at the Centre Emile Borel is devoted to modern developments in a rapidly growing field of quantum information and communication, quantum computers and algorithms for complex problems.

The Programme includes lecture courses, workshops, discussion sessions and seminar series.

MAIN TOPICS :

Quantum algorithms, communication, teleportation and cryptography, quantum error correction, quantum information with continuous variables, decoherence and quantum chaos induced by imperfections, solid state implementations of qubits, quantum computation with cold atoms and ions, entanglement with Rydberg and cold atoms, quantum measurements.

Speakers for main courses :

**D. Aharonov (Jerusalem), D. V. Averin (Stony Brook), C. Bennett (IBM NY),
H. Buhrman (CWI), N. Cerf (ULB), R. Cleve (Calgary), D. DiVincenzo (IBM NY),
A. Ekert (Cambridge), D. Gottesman (Perimeter Inst.), S. Haroche (LKB ENS), E.S. Polzik
(Niels Bohr Inst.), J.-M. Raimond (LKB ENS), U. Vazirani (Berkeley), P. Zoller (Innsbruck).**

Speakers for short courses :

**G. Benenti (Como), G. Brassard (Montreal), I. Cirac (MPQ Garching),
D. Esteve (Saclay), N. Gisin (Geneva), B. Georgeot (Toulouse),
R. Laflamme (Perimeter Inst.), M. Lewenstein (Barcelona), T. Prosen (Ljubljana).**

Organizing Committee :

Ph. Grangier (LCFIO Orsay), M. Santha (LRI Orsay), D.L. Shepelyansky (LPT Toulouse)
with the support of the GdR CNRS 2285 Information et Communication Quantiques.

******* Events *******

"Quantum Information Processing"

9th International Workshop, January 16th – 20th, 2006

Organizers : C. Durr, J. Kempe, S. Laplante, F. Magniez, M. Santha

"QIPC Cluster Review and Conference 2006"

Final Review of FP5 projects and Conference with a special session "Perspectives for QIPC in FP7"
February 13th – 16th, 2006

Organized by Future and Emerging Technologies, DG INFSO, European Commission,

Scientific officers : A. Karlson, R. Dum, G. Kalbe

(information on QIPC activities in FET is available at the web site www.cordis.lu/ist/fet/qipc.htm)

"Quantum computation and coherence"

Workshop, March 22th – 24th, 2006,

Organizers : D. Esteve, D.L. Shepelyansky, G. Wendin

Those interested in participating in the Programme are invited to contact the Centre Emile Borel,

organization assistant : Sylvie Lhermitte, e-mail : [qicc\(at\)ihp.jussieu.fr](mailto:qicc(at)ihp.jussieu.fr)

*Participation of post-docs and PhD students is strongly encouraged. The number of participants is limited by the IHP hall capacities, **registration is free but mandatory, starting September 2005, at www.ihp.jussieu.fr***

*To receive Programme updates send e-mail to infoqicc-request@ihp.jussieu.fr with the word **subscribe** (in the message body)*

See also the Programme web site : www.quantware.ups-tlse.fr/IHP2006/