

# **Quantum information, computation and complexity**

**January 4th - April 7th, 2006**

**« Trimester devoted to developments in the field of quantum information and communication, quantum computers, and algorithms for complex problems »**

Organizing committee:

Philippe Grangier (Orsay, IOTA),  
Miklos Santha (Orsay, LRI),  
Dima Shepelyansky (Toulouse, UPS)

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## The Organizers



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Philippe Grangier  
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Orsay, France

## PROGRAM OVERVIEW

- \* **Two lectures each day (at 14:00 and 16:00)**
- \* **Mixture of « long » courses (6 lectures) and « short » courses (3 lectures)**
- \* **Mornings are free**  
for discussions, individual or « team » work,  
seminars (to be organized later, see Miklos),  
other courses...
- \* **Each Monday morning at Collège de France  
(30 jan to 13 march 2006) :**  
9:30 : Course by Serge Haroche (in french)  
11:00 : Research Seminar (in english)

## Program Part 1 (5 jan - 17 feb)

## Charlie Bennett

## Richard Cleve

# Daniel Gottesman

**Dorit Aharonov**

## Ignacio Cirac

## Raymond Laflamme

## Nicolas Cerf

## David DiVincenzo

## Eugene Polzik

# Gilles Brassard

## Nicolas Gisin

[illegible]

## Program Part 2 (20 feb - 6 april)

**Dmitri Averin   Richard Cleve   Daniel Gottesman   Umesh Vazirani   Peter Zoller   Daniel Esteve   Raymond Laflamme   Tomaz Prosen**

Harry Buhrman    Artur Ekert    J.-M.Raimond    Andreas Winter    Giuliano Benenti    Bertrand Georgeot    Maciej Lewenstein

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## PARALLEL EVENTS

**Kick-off Meeting of SCALA Integrated Project (parallel)**

January 12 - 13, 2006 (IHP)

Contact : P. Grangier

<http://www.scala-ip.org/>

**Quantum Information Processing**

January 16 - 20, 2006 (Carré des Sciences)

Contact : M. Santha

<http://www.lri.fr/qip06/>

**QIPC Cluster Review and Conference 2006**

February 13 - 15, 2006 (IHP)

Contact : D. Shepelyansky

<http://www.ihp.jussieu.fr/ceb/Trimestres/T06-1/C2/>

**Quantum Computation and Coherence**

March 22 - 24, 2006

Contact : D. Shepelyansky

## FILMING AT IHP

The lectures will be filmed by  
**Peter Rapcan and Michal Sedlak**  
from Bratislava.

- The video equipment is provided by the European **Research Training Network « CONQUEST »**, coordinated by Vladimir Buzek (Bratislava, Slovakia)



- The tapes will be managed by CCSD (« Center for Direct Scientific Communication », french mirror site of arXiv + many other things, see <http://www.ccsd.cnrs.fr/> )

- **Institut Henri Poincaré** ( Host Institution :  
<http://www.ihp.jussieu.fr/index.html> )

The Institute is open **8:30** am to **6:00** pm, Monday to Friday.

Outside working hours, you need the magnetic card and the codes to get inside.

- **Centre Emile Borel** (Organization of the Semester :  
<http://www.ihp.jussieu.fr/ceb/> )

The Centre Emile Borel is located on the second and third floor.

The secretary's office is on the second floor = office **205**.

Office hours : from **9:00** am to **12:00** and **2:00** pm to **5:45** pm,  
Monday to Friday.



- **Photocopy**

The photocopy machine is in room **218** on the second floor.

To use it, you need a magnetic card provided by the secretary's office **205**.

The first copycard is charged with 250 copies, it is free.

If you need more, we reload the card with **250** more copies, and charge **8 Euros** for it (fixed price, no refunds).

- **Fax**

The machine is in the office **208** .

From France : **01 44 07 09 37**.

From abroad to receive a fax : **33 - 1 44 07 09 37**

- **Office supplies**

You can get office supplies (chalk, pencils, transparencies, envelopes, etc....) in office **205**.

## • Telephone

- Every office has a telephone + directory + instructions.
- For local outgoing call (= inside Paris, free of charge) press **0** and then dial normally (**10** numbers, 01 xx xx xx xx).
- The secretary's office phone number is : **01 44 27 67 78**.  
From your office, you may just dial **7 67 78**.
- For long distance calls, use public phones on the ground floor. (prepaid phone cards are available in any tobacco shop or post office, ex : Kertel...)

## • Paper mail

You can put your outgoing letters in office **205** before 2:30 pm. Only small letters will be sent. For big packages, there is a post office : *47 rue d'Ulm 75005 Paris*.

- **Library**

On the 1st floor, accessible only by the stairs on the left when you enter the IHP.

Opening hours : from **9:30** am to **6:00** pm, Monday to Friday.

You can get registration forms in the secretary's office **205**.

- **Cafeteria**

Opening hours : from **8:30** am to **4:00** pm, Monday to Friday.

The cafeteria (ground floor of the Institute) sells snacks, salads and sandwiches, hot drinks and soft drinks as well.

You can also get drinks from a machine.

*Note also that two kitchens located on the 2<sup>nd</sup> and 3<sup>rd</sup> floor are available for use by all participants.*

- **Transportation & subway**

The Parisian public transportation company (R.A.T.P.) sells "cartes oranges" ("orange card" passes ) which allow one to take a bus and/or the subway as often as wanted, within a week or a month. The price depends on how far within the suburbs of Paris one wants to go.

As an indication, a weekly pass limited to Paris and the immediate suburb costs **15,40** Euros. A monthly pass for the same area cost **50,40** Euros.

To get further information on RATP : <http://www.ratp.fr/>

## Useful Web addresses

Tourism, accommodation : <http://www.paris-tourisme.com/>

Tourism, maps : [http://www. cybevasion.com](http://www.cybevasion.com)

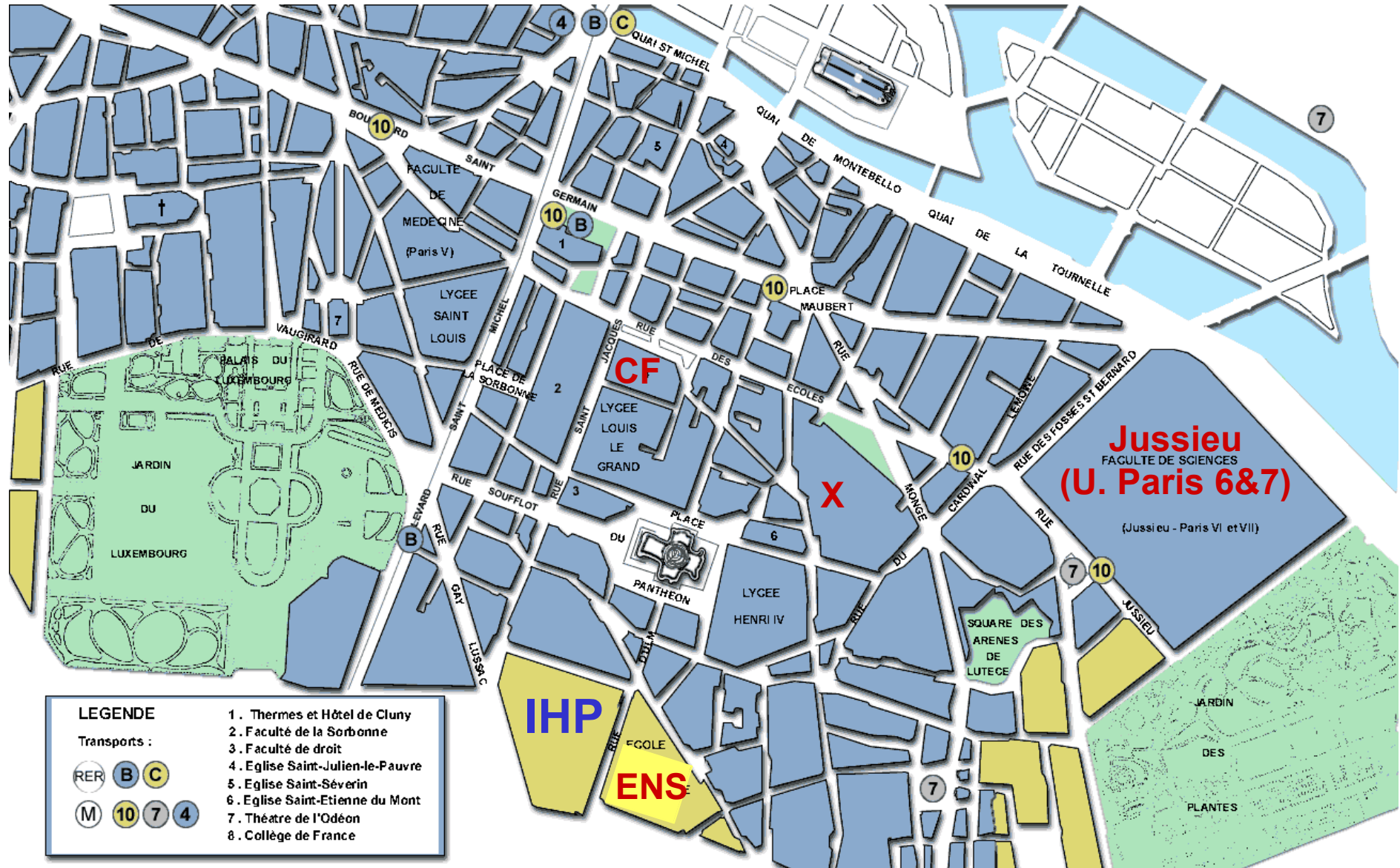
Tourism, restaurants : <http://www.lri.fr/qip06/>

Website of the **Alfred Kastler Foundation**, containing practical informations related to your stay in France :

<http://www.cnrs.fr/fnak>

Transportation in Paris : <http://www.ratp.fr/>

# The Quartier Latin





# THANKS

and have a nice stay at IHP !

**And thanks to our sponsors !**

- IHP / Centre Emile Borel
- Universités Paris 6, Paris 7, Paris 11.
- Centre National de la Recherche Scientifique (CNRS)
- European Commission (Marie Curie program)