The workshop will be focused on recent achievements and theoretical aspects of the field of quantum gases and its connections with other fields of physics. Due to the multidisciplinary character of the field of quantum gases, we expect theorists coming from various fields (condensed matter physics, atomic physics/quantum optics, non-linear phenomena, high-energy and nuclear physics, mathematical physics).

Scheduled lectures

Boris ALTSHULER : Disordered systems.
Alain ASPECT : Quantum optics with cold atoms.
Yvan CASTIN : The unitary gas.
Ignacio CIRAC : Quantum entanglement and its measures.
Claude COHEN-TANNOUDJI : Fundamental concepts for atomic gases.
Jean DALIBARD : Quantum vortices in Bose gases.
Dominique DELANDE : Disorder and atomic gases.
Antoine GEORGES : Quantum phase transitions and Hubbard models.
Thierry GIAMARCHI : Systems of reduced dimensionality.
Mike GUNN : Quantum Hall physics (bosons).
Jason HO : Physics of strongly interacting Fermi gases.
Thierry JOLICOUR : Quantum Hall physics (fermions).
Anthony LEGGETT : Fundamental concepts of many-body physics.
Maciej LEWENSTEIN : Perspectives for the quantum gases.
Elliot LIEB : Exact results on interacting quantum gases.
Dima PETROV : Few-body physics.
William PHILLIPS : Atom optics with BECs.
Lev PITA EVSKII : Bose-Einstein condensation and supraconductivity.
Christophe SALOMON : BEC-BCS crossover: experiments.
Gora SHLYAPNIKOV : Dipolar systems.
Sandro STRINGARI : Dynamics and modes of quantum gases.
Peter ZOLLER : Quantum information with cold atoms.

Guests of honour

Gordon BAYM, Eugene DEMLER, Alexander FETTER, Wolfgang KETTERLE, Mikhail LUKIN, Alexey TSVELIK

Co-directors

Anthony Leggett (University of Illinois, Urbana-Champaign), Jason HO (Ohio State University), Gora Shlyapnikov (LPTMS, Orsay) and Yvan Castin (LKB-ENS, Paris)

***** Conference *****

« Recent progress in the studies of quantum gases »
June 27th – 30th, 2007

Organizers : Anthony Leggett, Jason Ho, Gora Shlyapnikov and Yvan Castin

Those interested in participating in the program are invited to contact the Centre Emile Borel.
Participation of postdocs and PhD students is strongly encouraged.
Registration is free but mandatory, directly from the web site : www.ihp.jussieu.fr

For further information, contact the manager of the Centre Emile Borel : Sylvie Lhermitte
Tel : (33/0)1 44 27 67 75 Fax : (33/0)1 44 07 09 37 e-mail qg@ihp.jussieu.fr

To receive updates of the scientific program of the session, send to infog-request@ihp.jussieu.fr an e-mail containing the single word subscribe (in the message body).