

# Quantum Phases and Excitations in Quantum Hall Systems

June 16 - 21, 2008

*Scientific coordinators:*

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The physics of quantum Hall systems, i.e., 2D electron systems in strong magnetic fields, remains a most important research area, which strongly influences the development of contemporary condensed matter physics. The progress in nanofabrication technologies keeps bringing fascinating discoveries in the field of quantum Hall system. In turn, theoretical developments introduce remarkable concepts characterizing novel strongly correlated quantum states, quantum statistics of excitations, quantum interference, disorder, and non-equilibrium phenomena.

The goal of the workshop is to bring together leading experts in the field, including both experimentalists and theorists in order to discuss past progress and future perspectives. Topics will include but are not limited to:

- manifestations of fractional statistics in strongly correlated fractional quantum Hall states
- paired states of composite fermions and nonabelian quasiparticle statistics
- quantum Hall effect in graphene structures
- quantum Hall interferometry
- quantum Hall effect and quantum computation
- quantum Hall states of Bose-Einstein condensates
- transport properties of coupled edge states
- non-equilibrium properties of quantum Hall systems
- correlated states in bilayer and multiple-valley systems
- spin-related phenomena in quantum Hall systems
- quantum criticality in quantum Hall systems



## INVITED SPEAKERS INCLUDE:

V. Cheianov (Lancaster)	N. Cooper (Cambridge)	S. Dorozhkin (Chernogolovka)
J. Eisenstein (Pasadena)	Y. Gefen (Rehovot)	A. Geim (Manchester)
L. Glazman (New Haven)	V. Goldman (Stony Brook)	M. Grayson (Evanston)
F. Guinea (Madrid)	B. Halperin (Harvard)	Y. Hatsugai (Tsukuba)
R. Haug (Hannover)	M. Heiblum (Rehovot)	K. von Klitzing (Stuttgart)
I. Kukushkin (Chernogolovka)	L. Levitov (Boston)	M. Lilly (Albuquerque)
A. Ludwig (Santa Barbara)	C. Marcus (Harvard)	R. Moessner (Oxford)
C. de Morais Smith (Utrecht)	A. Morpurgo (Delft)	K. Novoselov (Manchester)
P. Ostrovsky (Karlsruhe)	A. Pinczuk (New York)	M. Potemski (Grenoble)
M. Raikh (Salt Lake City)	E. Rezayi (Los Angeles)	A. Savchenko (Exeter)
K. Schoutens (Amsterdam)	M. Shayegan (Princeton)	S. Simon (Murray Hill)
J. Smet (Stuttgart)	A. Stern (Rehovot)	X. Wan (Hangzhou)
A. Yacoby (Harvard)	M. Zudov (Minneapolis)	

**Application** forms can be filled online on the meeting's webpage. **The deadline for applications is March 31, 2008.** The registration fee is 100 €. Costs for accommodation and meals will be covered by the Max Planck Institute for the Physics of Complex Systems. Please note that childcare is available upon request.



**For further information please contact:**

Visitors Program

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