

Quantum Disordered Systems, Glassy Low-Temperature Physics and Physics at the Glass Transition

March 13 - 24, 2006

Scientific coordinators:

Christian Enss Universität Heidelberg Germany	Heinz Horner Universität Heidelberg Germany	Siegfried Hunklinger Universität Heidelberg Germany	Reimer Kühn King's College London Great Britain
--	--	--	--

Organisation:

Mandy Lochar
MPIPKS
Dresden, Germany

The quantum mechanical origin of the low temperature properties of glasses has become clear with the proposal of the standard tunnelling model more than 30 years ago. Recent experiments have revealed that extensions of this model are necessary in order to explain properties of glasses at very low temperatures. For instance the observed strong magnetic field dependence can only be understood if the magnetic moments of the tunnelling particles are taken into account. Other experiments have revealed memory and aging effects similar to those observed in spin glasses. This is a hint on the importance of interactions among tunnelling systems and resulting collective behaviour. Other topics to be discussed include universality of glassy behaviour, common aspects of the glass transition in structural and spin glasses and possible connections between low and high temperature properties of glasses.

The first week, seminar (March 13 to 18), is devoted to promoting existing research collaborations and to instigate promising new ones within the community. There will be a restricted number of talks and extended discussion sessions on selected topics, to be chosen with an eye towards their potential for promoting collaborations. The second week, the main workshop (March 20 to 25), will primarily feature talks and extended discussions, and the full spectrum of topics will be covered.

INVITED SPEAKERS INCLUDE (* TO BE CONFIRMED):

J. R. Beamish* (Canada)	L. Berthier* (France)	D. Bodea* (Germany)	U. Buchenau (Germany)
A. L. Burin (USA)	L. F. Cugliandolo* (France)	J. Friedrich (Germany)	P. Fulde* (Germany)
H. Grabert* (Germany)	A. Heuer (Germany)	D. Huse* (USA)	J. Kurchan* (France)
C. Learmans* (Belgium)	M. Meißner (Germany)	M. Mézard* (France)	J. M. van Mourik (UK)
P. Nordblad (Sweden)	M. A. Moore (UK)	G. Parisi* (Italy)	J. Parpia (USA)
M. Parchine (Belgium)*	D. D. Osheroff (USA)	D. Parshin (Russia)	R. O. Pohl (USA)
I. Polishchuk* (Russia)	M. A. Ramos (Spain)	A. K. Raychaudhuri* (India)	H. Rieger (Germany)
E. Rössler (Germany)	K. Samwer* (Germany)	W. Schirmacher* (Germany)	H. Schober (Germany)
D. Sherrington (UK)	J. C. Smith (Germany)	P. Strehlow (Germany)	M. Turlakov* (UK)
E. Vincent* (France)	G. Weiss* (Germany)	U. Weiss* (Germany)	P. Wolynes* (USA)
A. Würger (France)	P. Young (USA)	C. Yu (USA)	

Applications are welcome and should be made by using the application form on the conference web page. Please note that the number of attendees is limited. The registration fee is €100, costs for accommodation and meals will be covered by the Max Planck Institute. In exceptional cases, limited funding is available to partly cover travel expenses.

Deadline for applications is October 31, 2005.

For further information please contact:

Visitors Program

Max-Planck-Institut für Physik komplexer Systeme,

Nöthnitzer Str. 38, D-01187 Dresden

Tel.: +49-351-871-2105 / Fax: +49-351-871-2199

qds-06@mpipks-dresden.mpg.de

<http://www.mpipks-dresden.mpg.de/~qds-06>

