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Katsunori Wakabayashi

National Institute of Material Science,
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* Confirmation Awaited



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International Conference
on
Quantum Effects in Solids of Today
(I-ConQuEST)



&



K.S. Krishnan Discussion Meeting

on

Frontiers in Quantum Science (FQS2010)

Quantum Science Centre

Institute of Mathematical Sciences, India

December 20 to 23, 2010



National Physical Laboratory, New Delhi

OVERVIEW & SCOPE

Condensed matter systems display a rich variety of quantum effects when subjected to low temperatures. The study of quantum phase transitions tuned by high magnetic fields, pressure and/or injected charge carriers is a field of contemporary interest. The discovery of new compounds; the ability to synthesize clean interfaces, heterostructures, tunnel junctions and field effect devices, which allow manipulation of carrier density in the material; clever ways of nano-structuring and advanced imaging techniques have permitted visualization of quantum phenomena and simultaneously have opened up avenues for their technological usage.

The purpose of this conference is to review recent development in the studies of quantum processes in bulk materials, surfaces, interfaces, nano materials and nanostructured materials. Both theoretical and experimental aspects of quantum processes such as electron-electron correlations, correlations driven phase transitions, superconductivity and magnetism in correlated electronic systems; electron, spin- polarized-electrons and superconducting condensate transport in mesoscale and nanoscale planar structures and tunnel junctions; integral and fractional quantum Hall effect in new class of materials such as graphene, oxide interfaces and other novel 2D systems; topological insulators in two and three dimensional systems, design and synthesis of such system which show robust topological states at ambient temperature, spin Hall effect and other quantum transport phenomena in such systems, and applications of these phenomena in quantum metrology.



Conference Chair : R. C. Budhani

Co-Chair
Hari Kishan
R. Shankar (IMSc.)

Secretaries
Govind
H.K. Singh

Important Dates

Abstract Submission : October 15, 2010

Abstract Decision : October 31, 2010

(Young researchers and graduate students are encouraged to participate even without an abstract)

REGISTRATION IS MANDATORY

Last Date of registration is 31st October, 2010

Registration Fee :

- ◆ Foreign Faculty Members \$ 300
- ◆ Foreign Students \$ 100
- ◆ Indian Faculty Members Rs. 5000
- ◆ Indian Students Rs. 2000

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