

Workshop on Quantum Field Theory aspects of Condensed Matter Physics

*Laboratori Nazionali di Frascati
Frascati, 6-9 Settembre, 2011*

Scientific Program

Tuesday 6th

8:45	Registration
9:30-9:45	Opening U. Dosselli (LNF Director) R. Longo (CMTP Director)
9:45-10:30	F. Guinea “ Electron-electron interactions in graphene”
<i>10:30-11:00</i>	<i>Coffee Break</i>
11:00-11:45	F. de Juan “Aharonov-Bohm interferences from local deformations in graphene”
11:45-12:30	J. Pachos “ Seeing topological order”
<i>13:30</i>	<i>Lunch at ENEA Cafeteria</i>
14:30-15:15	C. di Castro “ From Classical to Quantum Critical Phenomena in Condensed Matter Physics: a specific case, the Cuprates.”
15:15-16:00	G. Japaridze “ Spin and charge dynamics in a 1D correlated electron system with modulate spin-orbit interaction”
<i>16:00-16:30</i>	<i>Coffee Break</i>
16:30-17:15	M. Polini “ Probing the topological exciton condensate via Coulomb drag”
17:15-18:00	A. Iorio “ The Hawking-Unruh effect on graphene”

Wednesday 7th

9:30-10:15	R. Jackiw “Representation for planar zero-mode operators, both even and odd”
<i>10:15-10:45</i>	<i>Coffee Break</i>
10:45-11:30	G. Volovik “Topological semimetals: from Standard Model to flat band”
11:30-12:15	L. Del Debbio “RG flows and phase diagrams from lattice simulations”
<i>13:30</i>	<i>Lunch at Enea Cafeteria</i>
14:15-15:00	C. Mudry “Fractional topological insulators”
15:00-15:45	G. Benfatto “Rigorous construction of Luttinger liquids through Ward Identities”
<i>15:45-16:15</i>	<i>Coffee Break</i>
16:15-17:00	C. Diamantini “3D Topological States of Matter and the Vortex Quantum Hall Effect”
17:00-17:45	E. Cappelluti “Infrared phonon activity and quantum Fano interference in multilayer graphemes”
17:45-18:30	S. Bellucci “Graphene vs. carbon nanotubes, a comparative characterization”

Thursday 8th

9:45-10:30	F.D.M. Haldane “Geometric field theory ("quantum geometry") description of the fractional quantum Hall effect”
<i>10:30-11:00</i>	<i>Coffee Break</i>
11:00-11:45	V. Falko “Bilayer graphene: band topology, interaction-driven nematic phase transition, and strain effects”
11:45-12:30	G. Jona Lasinio “Magnetic pairing”
<i>13:30</i>	<i>Lunch at Enea Cafeteria</i>
14:30-15:15	I. Herbut “Order parameters and their topological defects in 2D Dirac systems”
15:15-16:00	V. Mastropietro “Solid state models and emergent relativistic symmetries”
<i>16:00-16:30</i>	<i>Coffee Break</i>
16:30-17:15	C. Castellani “Superconductivity and Pseudogap Phase close to the Mott transition”
17:15-18:00	M. M. Delgado “The KZ Anomaly in Topological Insulators: An Introduction””
18:00-19:00	Chair: M. Vozmediano Round table on Interactions in Graphene

Friday 9th

9:15-10:00	M. Katsnelson “Graphene: CERN on the desk”
10:00-10:45	E. Marino “Magnetic and Electronic Spectrum of Iron-Pnictides”
<i>10:45-11:15</i>	<i>Coffee Break</i>
11:15-12:00	T. Kovacs “Anderson localization in quark-gluon plasma”
12:00-12:45	B. Horovitz “Rings, boxes and spins with dissipative environments”
<i>13:30</i>	<i>Lunch at Enea Cafeteria</i>
14:30-15:15	L. Janssen “Quantum phase transitions in the 3d Thirring model”
15:15-16:00	S. Schierenberg “Anderson localization through Polyakov loops: lattice evidence and random matrix model”
<i>16:00-16:30</i>	<i>Coffee Break</i>
16:30-17:15	K. Miura “Thermodynamic Study for Large Flavor QCD and Conformal Window”
17:15-18:00	N. Magnoli “Non-Abelian BF theory for 2+1 dimensional topological states of matter”
18:00-19:00	Round table on perspectives and open problems