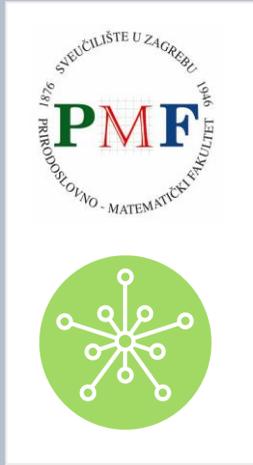


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Physics of Low-Dimensional Conductors:

Problems and Perspectives

March, 25-28, 2012

Institute of Physics



Zagreb, Croatia



Scope

The conference intends to provide an overview of modern investigations into low-dimensional conductors, with an emphasis on open problems. Both in one and two dimensions, the underlying main theme is the competition of collective degrees of freedom, sometimes leading to physically relevant crossover regimes, coupling (super)conductivity, magnetism, and elasticity.

The occasion is to celebrate the 70th birthday of Professor Slaven Barišić (University of Zagreb), whose contributions to this subject matter over the past four decades have become standard textbook and reference material in condensed matter theory



Chair Persons

A. Smontara (Institute of Physics, Zagreb)

D. K. Sunko (University of Zagreb)

Contact

Ana Smontara
pldc-pp@ifs.hr

Denis K. Sunko
pldc-pp@ifs.hr

Further Development

<http://pldc-pp.ifs.hr>

Invited speakers

A. Sasha Alexandrov (Loughborough)

Theory of high temperature superconductivity in doped polar insulators

Henri Alloul (Orsay)

Evidence for distinct ranges and gaps for the superconductivity and the pseudogap from high field transport measurements of the superconducting fluctuations in $YBa_2Cu_3O_{6+x}$

Sergey N. Artemenko (Moscow)

Non-stationary regime of conduction in one-dimensional system of interacting electrons pinned by a defect

Antonio Bianconi (Rome)

The role of elasticity in high temperature superconductivity and its implication on T_c amplification: scale invariant ordering of oxygen interstitials in cuprates

Aleksa Bjeliš (Zagreb)

Field induced density waves: orbital quantization, Pauli splitting, magnetic breakdown...

Claude Bourbonnais (Sherbrooke)

Anomalous quantum criticality in unconventional superconductors: what can be learned from organics

Ivan Božović (Brookhaven)

Solving the puzzle of high- T_c superconductivity in cuprates - one atomic layer at a time

Serguei Brazovskii (Paris)

Lessons from theory of organic conductors since Zagreb 1980

Robert Comès (Orsay)

Strong 1-D effects in single layered Hg cuprates

John R. Cooper (Cambridge)

Some recent experimental studies of cuprate and pnictide superconductors

Martin Dressel (Stuttgart)

Charge order and superconductivity in low-dimensional organic conductors

László Forró (Lausanne)

Quo vadis organic conductors

Thierry Giamarchi (Geneva)

Transport in Luttinger liquids

Nikolay M. Plakida (Dubna)

Spin excitations and mechanism of superconductivity in cuprates

Jean-Paul Pouget (Paris)

$BaVS_3$: a model system for the interplay between charge, spin, orbital and structural degrees of freedom

Alfréd Zawadowski (Budapest)

Theory of Raman scattering by localized excitations in metallic glasses: boson peak