

Conference Program

Pierre Duclos Workshop

September 09, 2015

9³⁰ – 10³⁰ *Registration (Pierre Duclos Workshop and Young Researches Symposium)*

10³⁰ – 10⁴⁰ *Opening*

Chairman: I.Popov

10⁴⁰ – 11⁴⁰ **Jussi Behrndt** (*Graz, Austria*)

Self-adjoint realizations of the Laplacian on bounded Lipschitz domains

11⁴⁰ – 12¹⁰ *Coffee*

Chairman: J.Behrndt

12¹⁰ – 13¹⁰ **Jaroslav Dittrich** (*Rez near Prague, Czech Republic*)

Strong delta-interaction supported by a surface

13¹⁰ – 14³⁰ *Lunch*

Chairman: J.Dittrich

14³⁰ – 15³⁰ **Andrea Mantile** (*Reims, France*)

Selfadjoint elliptic operators with boundary conditions on not closed hypersurfaces

15³⁰ – 16³⁰ **Andrea Posilicano** (*Como, Italy*)

Limiting absorption principle and factorized formulae for self-adjoint Laplace operators with boundary conditions on hypersurfaces

16³⁰ – 17⁰⁰ *Coffee*

Young Researchers Symposium-1 (YRS-1)

Chairman: I.Popov

17⁰⁰ – 17¹⁰ **Sergey Krasavin** (*Dubna, Russia*)

Effect of Stone-Wales defects on the thermal conductivity of graphene

17¹⁰ – 17²⁰ **Evgeniy Alexandrov** (*St. Petersburg, Russia*)

Nudged Elastic Band method for systems with constraints

17²⁰ – 17³⁰ **Pavel Smirnov** (*St. Petersburg, Russia*)

On the discrete spectrum of the Dirac operator on the branching chain quantum graph

17³⁰ – 17⁴⁰ **Ilya Makeev** (*St. Petersburg, Russia*)

Benchmark solutions for Stokes flow through nanostructures.

17⁴⁰ – 17⁵⁰ **Anton Boitsev** (*St. Petersburg, Russia*)

Boundary triples approach to extensions of operator tensor products

September 10, 2015

Chairman: A.Posilicano

10⁰⁰ – 11⁰⁰ **Claudio Cacciapuoti** (*Como, Italy*)

Singular limit of a Schrödinger equation with nonlocal scaled short-range nonlinearity

11⁰⁰ – 11³⁰ *Coffee*

Chairman: C. Cacciapuoti

11³⁰ – 12³⁰ **Adil Yafyasov** (*St. Petersburg, Russia*), Boris Pavlov (*Auckland, New Zealand*)

Size quantization and the resonance concept of the low-threshold emission

12³⁰ – 13³⁰ **Boris Pavlov** (*Auckland, New Zealand*), V. Flambaum (*Sydney, Australia*), G. Martin (*Auckland, New Zealand*)

Resonance mechanism of Earthquakes

13³⁰ – 14³⁰ *Lunch*

Chairman: B.Pavlov

14³⁰ – 15³⁰ **Pavel Stovicek** (*Prague, Czech Republic*)

A construction of the propagator for two Aharonov-Bohm solenoids in a uniform magnetic field

15³⁰ – 16⁰⁰ **Alexander Alodjants** (*Vladimir and St. Petersburg, Russia*), E. S. Sedov (*Vladimir, Russia*), I. V. Iorsh (*St. Petersburg, Russia*), M.

Charukhchyan

(*Vladimir, Russia*), A.V. Kavokin (*Southampton, United Kingdom*)

Cosmological Models with Nonlinear Metamaterials

16⁰⁰ – 16³⁰ **Alexander Plachenov** (*Moscow and St. Petersburg, Russia*), Alexei P. Kiselev (*St. Petersburg, Russia*), Galina Dyakova (*St. Petersburg, Russia*)

Higher modes of the axisymmetrical waveguide with quadratic refraction index

16³⁰ – 17⁰⁰ *Coffee*

Young Researchers Symposium-2 (YRS-2)

Chairman: P. Stovicek

17⁰⁰ – 17¹⁰ **Dmitry Vavulin** (*St. Petersburg, Russia*)

Numerical solution of Shrodinger equation for biphoton wave function in twisted waveguide arrays

17¹⁰ – 17²⁰ **Alena Ivanova** (*St. Petersburg, Russia*)

Using of beam splitter and fiber splitter in quantum random number generators, based on fluctuations of vacuum

17²⁰ – 17³⁰ **Varvara Dubrovskaja** (*St. Petersburg, Russia*)

Temperature dependence of the optical fiber cable parameters in quantum cryptography systems

17³⁰ – 17⁴⁰ **Anton Kozubov** (*St. Petersburg, Russia*)

Theoretical investigation of the correlation between perturbations of linear optical CNOT gate parameters and its performance.

September 11, 2015

Chairman: A.Mantile

10⁰⁰ – 11⁰⁰ **Silvestro Fassari** (*Locarno, Switzerland*), Sergio Albeverio (*Bonn, Germany*),

Fabio Rinaldi (*Rome, Italy*)

Spectral properties of an isotropic three-dimensional quantum dot with a symmetric configuration of two identical attractive δ -impurities

11⁰⁰ – 11³⁰ *Coffee*

Chairman: S.Fassari

11³⁰ – 12⁰⁰ **Alexei D. Kiselev** (*St. Petersburg, Russia*)

Light scattering of Laguerre-Gaussian beams: Near-field structures and symmetries

12⁰⁰ – 12³⁰ **Muhammad Junaid Iqbal Khan** (*Multan, Pakistan*)

Topological effects in Graphene-like Nanosystems

12³⁰ – 13⁰⁰ **Igor Lobanov** (*St. Petersburg, Russia*)

Optical network simulation of time travel

13⁰⁰ – 13³⁰ **George Miroshnichenko** (*St. Petersburg, Russia*)

Quantum tomography of the quadratures of the microwave mode

13³⁰ – 13⁵⁰ **Irina Blinova** (*St. Petersburg, Russia*), Vadim Adamyan (*Odessa, Ukraine*), Igor Popov (*St. Petersburg, Russia*)

Modeling of chain impurity on nanoparticle surface and catalytic activity.

13⁵⁰ – 14⁰⁰ *Closing*