

PRIZES AND GRANTS

The **2004 Humboldt Research Award** was conferred to Professor R. Jolos (JINR) for outstanding achievements in science, educational activities and large contribution to the development of cooperation with research centres of Germany.

The **2004 Bruno Pontecorvo Prize** was awarded to Professor A. MacDonald (Royal University, Kingston, Canada) for the evidence of solar neutrino oscillations in the SNO experiment (Neutrino Observatory, Sudbury, Canada).

The **European Physics Society Award (EPS)** was conferred to RAS Corresponding Member I. Meshkov (JINR) for outstanding work in the field of charged particle accelerators.

The **2004 N. Bogolubov Golden Medal of the Russian Academy of Sciences** was awarded to Academician D. Shirkov (JINR) for a cycle of papers on the extension of the renorm group method, developed in the 1950s by N. Bogolubov and D. Shirkov for the solution of quantum field theory issues, to the boundary-value problems in mathematical physics.

PRIZEWINNERS OF JINR'S ANNUAL COMPETITION FOR BEST RESEARCH – 2004

I. Theoretical Physics Research

First Prize

«Manifestation of Cluster Degrees of Freedom in Fusion Reactions and Structure of Heavy Nuclei».

Authors: G. Adamian, N. Antonenko, V. Volkov, R. Jolos, A. Zubov, S. Ivanova, A. Nasirov, Yu. Palchikov, E. Cherepanov, T. Shneidman.

Second Prize

«Supersymmetric Gauge Models of Quantum Field Theory Free from Ultraviolet Divergences».

Author: D. Kazakov.

II. Experimental Physics Research

First Prize

«Investigation of Mu-Catalysis of Nuclear Fusion Reactions in Hydrogen Isotope Mixtures at DLNP».

Authors: Yu. Vinogradov, N. Grafov, S. Grischekin, K. Gritsaj, V. Zinov, V. Klevtsov, A. Konin, A. Rudenko, V. Filchenkov, A. Yukhimchuk.

Second Prizes

«Non-Stationary Influence on the Neutron Wave at Diffraction on the Moving Grating: Prediction, Observation and Demonstration of Possible Application».

Authors: A. Frank, I. Bondarenko, G. Kulin, S. Balashov, S. Masalovich, V. Nosov, A. Strepetov, P. Geltembort, R. Gähler, P. Høghøj.

«Chemical Identification of Dubnium as a Decay Product of Element 115 Produced in the Reaction $^{48}\text{Ca} + ^{243}\text{Am}$ ».

Authors: S. Dmitriev, Yu. Oganessian, V. Utenkov, S. Shishkin, A. Eremin, E. Sokol, M. Itkis.

III. Physics Instruments and Methods

First Prizes

«The PIBETA Detector for Precise Measurements of Rare Pion and Muon Decays».

Authors: V. Kalinnikov, V. Karpukhin, A. Korenchenko, S. Korenchenko, N. Kravchuk, N. Kuchinsky, D. Mzhavia, V. Sidorkin, N. Khomutov, Z. Tsamalaidze.

«Construction and Start-up of the New Movable Reflector MR-3 of Heterogeneous Type for the Reactors IBR-2 and IBR-2M».

Authors: V. Ananiev, V. Voronkin, L. Edunov, V. Ermilov, A. Zatsepin, Yu. Pepelyshev, A. Rogov, V. Sizarev, I. Tretyakov, E. Shabalin.

Second Prize

«Real-Time Detection Mode of Ultra Rare Decays of Superheavy Nuclei: Idea – Models – Realization».

Authors: Yu. Tsyganov, A. Polyakov, A. Sukhov, V. Subbotin, S. Iliev, A. Voinov.

IV. Applied Physics Research

First Prize

«Application of Jet Pumps for Liquid Helium in the Nuclotron Cryogenic System».

Authors: N. Agapov, V. Batin, V. Belushkin, Yu. Vaseneva, P. Pyatibratov.

Second Prizes

«Irradiation Complex ALFA for Track Membrane Production».

Authors: Yu. Alenitsky, A. Glazov, Yu. Denisov, V. Dmitrievsky, N. Zaplatin, V. Kalinichenko,

G. Karamysheva, N. Morozov, L. Onishchenko, E. Samsonov.

«New Method of Production of Micro- and Nanopore Structures».

Authors: P. Apel, I. Blonskaya, S. Dmitriev, Yu. Ognessian, O. Orelovich.

Encouraging Prizes

«Energy and Structure of Levels in Nuclei $Z = 2-100$ ».

Authors: V. Soloviev, A. Vdovin, V. Voronov, L. Malov, V. Ponomarev, A. Storozhenko, A. Sushkov, N. Shirikova, K. Gromov, V. Fominykh.

«Thermal Multifragmentation of Hot Nuclei and Liquid–Fog and Liquid–Gas Phase Transitions».

Authors: S. Avdeev, A. Budzanowski, V. Karnaukhov, W. Karcz, V. Rodionov, P. Rukoyatkin, H. Oeschler, I. Skwirczynska.

«Neutron Activation Analysis in the Development of New Pharmaceuticals and Sorbents on the Basis of the Cyanobacterium *Spirulina platensis*».

Authors: L. Mosulishvili, M. Frontasyeva, N. Aksenova, A. Belokobylsky, S. Gundorina, E. Kirkesali, S. Pavlov, A. Khizanishvili, E. Tsybakhshvili, V. Chinaeva.

GRANTS

In 2004 a number of research projects of the JINR staff members received a financial support of the international funds CRDF (the USA), DFG (Germany), EU (European Union), ISTC, INTAS, RFBR–INTAS, RFBR–DFG (Germany), RFBR–BRFBR (Belarus), RFBR and RF Ministry of Education and Science Funds.

RFBR together with the National Scientific Research Society of Germany (DFG) financed 8 projects. RFBR together with the Belarussian–Russian Foundation for Basic Research (BRFBR) financed 2 projects.

RFBR financed 66 projects in the competition «Projects on the Initiative», 9 projects in the competition «Projects of Establishing and Developing Information, Computing and Telecommunication Resources»,

1 project in the competition «Development of Material and Technical Basis for Scientific Research», 2 projects in the competition «Regional Competition Science City 2004».

The Administration of Dubna supported 10 projects for high-qualified specialists who work in priority scientific and technical trends within the framework of the Programme of Dubna Development as a Science City of the Russian Federation.

Five grants of the President of the Russian Federation (4 for scientific schools and 1 for young scientists) were provided for JINR within the framework of the Programme of State Support of Young Russian Scientists and Leading Scientific Schools.