

Natalia Sergeeva

Education:

- Department of Geophysics, Faculty of Physics, M. V. Lomonosov Moscow State University (MSU), 1971;
- Post-graduate study at the Schmidt Institute of Physics of the Earth of the USSR Academy of Sciences (1977).

Foreign languages:

English.

Degrees:

Ph. D. in physics and mathematics (Schmidt Institute of Physics of the Earth of the USSR Academy of Sciences (1978).

State awards:

- Medal “Veteran of Labour”;
- Medal “850th Anniversary of Moscow” (1997).

Academic awards:

- Honorary Diploma of the Academy of Sciences of the USSR on the occasion of the 250th anniversary of the Academy;
- Honorary Diploma of the Russian Academy of Sciences For many years of hard work, a practical contribution to fundamental and applied research.

Main scientific results:

- A method for isolation of chemically homogeneous layers in the Earth and to determine the density limits in these layers based on the equation of state of matter at high pressures and temperatures. Study of the structure of the lower mantle and outer core of the Earth. Construction of a static model of the Earth, Mars and Venus, corresponding to different stages of gravitational differentiation of matter and different temperatures of their interior;
- Formed and systematized the data archive of the World Data Center for Solid Earth Physics (WDC for SEP), including the results of planetary geophysical research from 1957 to the present time and a lot of historical data. Developed a package of computer programs for data analysis, quality control and information support of data. Created a Web site of WDC for SEP, providing easy access for remote users to data and metadata for the Solid Earth Physics disciplines. The earthquake catalogs in electronic form;
- Thematic website containing the results of research in the Arctic and Antarctic in 1957 from WDC funds and the “International Polar Year 2007–2008” program and later. Developed the technologies for collection, storage and exchange of information of the

“Geophysics” section of National Information Portal IPY-info (RIHMI-WDC), designed for long-term storage and dissemination of data on all types of research conducted in the Arctic and Antarctic, and international portal “International Polar Year. Data Service” - IPYDIS;

- Studies based on seismic data, to develop and improve methods for the identification of underground nuclear explosions in areas of the world without a history of nuclear testing in the interests of monitoring the compliance with the CTB Treaty. Explored the ways and means to improve the efficiency of processing seismic data recorded in the diverse seismological conditions at regional distances;
- Geological and geophysical database for the transition zone of the Eurasian continent to the Pacific Ocean. The features of the deep structure of tectonosphere of the marginal seas – the regions of Okhotsk, Japan, the Philippines and South China Seas, the creation of geodynamic models of the structure of the Earth's crust and the upper mantle beneath seismically active areas, sedimentary basins and regions of minerageny on the basis of comprehensive interpretation of all available data.

Research and management:

- Director of the World Data Center for Solar-Terrestrial Physics, Moscow, a regular member of the World Data System of the International Council for Science (since 2013);
- Director of the World Data Center for Solid Earth Physics, Moscow, a regular member of the World Data System of the International Council for Science (since 2011);
- Member of the Scientific Council of GC RAS;
- Member of the Russian National Committee of CODATA (since 2005);
- Member of the Board of the Russian-Ukrainian segment of World Data System of the International Council for Science (since 2009);
- Director of the World Data Center for Solid Earth Physics, Moscow, a regular member of the WDC System of the International Council for Science (1989–2011);
- Head of the Laboratory of geophysical data (2005–2013);
- Junior Researcher, Senior Researcher, Head of Laboratory, Head of Department (1971–2005).

Research:

- Formation of data archives, databases, software development for data organization and access to data of WDCs for Solid Earth Physics and Solar-Terrestrial Physics;
- Project manager, “Development of information technology for data access and improving data management of WDCs for Solid Earth Physics and Solar-Terrestrial Physics”, state registration number 01201456271 (2014–2016);

- Monograph “Geodynamic Models of Deep Structure of Regions of Natural Disasters of Active Continental Margins”, RFBR grant # 14-05-01018 D (2014);
- Project “Geodynamic Simulation of Deep Structure of Regions of Natural Disasters”, RFBR grant # 12-05-00029-a (2012–2014);
- Project manager , “Development of Common Approach and Methods of System Data Harmonization in the Infrastructure of Distributed Multidisciplinary Databases of the Russian-Ukrainian Segment of World Data System to Address Fundamental Problems of Interdisciplinary Interaction of Processes in Geospheres’ System”, RFBR grant # 12-01-90418-UKR_a (2012–2013);
- Project manager, “Development of new geo-information technologies to incorporate the Russian WDCs for Geosciences in World Data System”, state registration number 01201153406 (2011–2013);
- Project participant, “Development of Fundamental Principles and Methods of Analysis of Multidisciplinary Data to Create System for Integrated Access to Information Resources of the World Data Centers in Russia and Ukraine”, RFBR grant # 10-07-90401-Ukr_a (WDC, Obninsk) (2010–2011);
- Project participant, “Geodynamic Models of Deep Structure of Active Continental Margins”, RFBR grant # 09-05-00406- a (2009–2011);
- Project manager, “Development of WDC Network to Study Global Complex Natural and Anthropogenic Systems”, RFBR grant # 09-01-90435-Ukr_f_a (2009–2010);
- Project “To develop the technology of collection, storage and exchange of geophysical data to ensure the formation of the thematic section of the IPY database”. State contract #18/2009 dated 3 August 2009 with the “All-Russian Research Institute of Hydrometeorological Information - World Data Center” (2009);
- Project manager, “Development of information resources of Russian WDCs for Geoscience”, state registration # 0120.0 800579 (2008–2010);
- Project “To develop the technology of collecting, storage and exchange of geophysical information for the use in large-scale research programs”. State contract # 9/E–08 dated 6 November 2008 with the Federal Service for Hydrometeorology and Environmental Monitoring (2008);
- Project manager, “Development of electronic information resources of the Russian segment of World Data Centers to create intelligent GIS “Earth Sciences Data for the territory of Russia”. Geoinformation grant of the “Kauffman-Fund” (2007–2008);
- Project “Study of ways and means for improving the efficiency of processing seismic data recorded in the diverse seismological conditions at regional distances in the interests

of CTBT verification” (code “Calibration”). State Contract # 5-2 / 24-07 on 03.05.2007 with the Federal Agency for Atomic Energy for the Ministry of Defense of the Russian Federation (2007–2009);

- Project “Information support of geophysical research during the International Polar Year”. The Programme for Basic Research of the Earth Sciences Branch of RAS number 14 “History of the Arctic Ocean and the mode of modern natural processes in the Arctic according to the International Polar Year 2007-2008 program” (2006–2008);
- Project “Development of methods for identification of underground nuclear explosions in the world without a history of nuclear testing in the interests of CTBT monitoring” (code "Forecast"). State Contract #240 / 65 on 19.03.2004 with the Ministry of Defense of the Russian Federation (2004–2006);
- Project manager, GEOSINET-0404-04. Meta-database of information resources in geophysics, focused on basic research in the field of geodynamics, seismology and the structure of the Earth’s interior. In the framework of the Program number 21 of the Presidium of the Russian Academy of Sciences “Digital Earth” (2004);
- Project “Geological and geophysical database for constructing models of the deep structure of the sedimentary basins of the Earth”, RFBR grant 06-05-99004-s (2006);
- Project manager, “Geological and geophysical database for constructing digital models of the deep structure of sedimentary basins of the Earth”, RFBR grant 04-07-90194-v (2004–2006);
- Project “Sedimentary basins: deep causes of their formation”, RFBR grant 03-05-99407-s (2003);
- Project manager, “Database to build digital models of the lithosphere of marginal seas”, RFBR grant 01-07-90233-v (2001–2003);
- Project “Models of deep structure of sedimentary basins of marginal seas”, RFBR grant 01-05-64400-a (2001–2003);
- Project manager, “Database of digital models of the lithosphere of the Pacific Ocean on the basis of geotraverses”, RFBR grant 98-07-90201-v (1998–1999).

Scientific research abroad:

- Participant of the international projects “InterMARGINS” (The International Margins Program) и “GeoPRISMS” (Geodynamic Processes at Rifting and Subducting Margins);
- Convenor of the symposium on geodynamics of the General Assembly of the European Geosciences Union. Vienna, April 2005;
- Co-chair of the International Conference on the Geology of the Tethys. Cairo University, Cairo, March 2007;

- Organizer and convenor of the Geodynamics Symposium on the General Assembly of the European Geosciences Union. Vienna, April 2008;
- Participant in international conferences.

Publications:

- Co-author of the monograph (2014) and a chapter in a monograph published in English by Springer (2011);
- 96 articles published in the Russian and international peer-reviewed scientific journals.