# Oleg Samoylov

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## OBJECTIVES

particle physics, neutrino, oscillations, nucleon structure, cross-sections, strange and charm quarks, pentaquark, dark matter, detector simulation, cloud computing, remote control

## EDUCATION

*09.1999 - 06.2004* **Student-Physicist** at Irkutsk State University, Irkutsk, Russia
*Department of Radio-Physics and Electronics and Department of Theoretical Physics*

*10.2003 - 06.2004* **Diploma of Physicist** performed at Dzhelepov Laboratory of Nuclear Problems
*Search for an exotic baryon state (pentaquark) $\Theta^+(1530)$ in the NOMAD experiment*
*Advisors: Prof. A.N. Vall (ISU) and Dr. D.V. Naumov (JINR)*

*11.2004 - 06.2007* **PhD Student** at Irkutsk State University, Irkutsk, Russia

*11.2004 - 05.2011* **PhD thesis** performed at Dzhelepov Laboratory of Nuclear Problems
*Charm dimuon production and search for pentaquark +(1530) in neutrino-nucleon interactions in the NOMAD experiment*
*(defended on May 24, 2011)*
*Advisor: Dr. D.V. Naumov (JINR)*
*Consultant: Prof. R. Petti (Univ. of SC, USA)*

## WORK EXPERIENCE

### Irkutsk State University, Irkutsk, Russia

*2002 - 2003* **Laboratory Assistant** at Faculty of Physics

### Joint Institute for Nuclear Research, Dubna, Russia

*2003 - 2010* **Junior Scientific Researcher** at Dzhelepov Laboratory of Nuclear Problems
*2010 - 2013* **Scientific Researcher** at Dzhelepov Laboratory of Nuclear Problems
*2013 - 2015* **Senior Scientific Researcher** at Dzhelepov Laboratory of Nuclear Problems
*2015 - till now* **Head of Sector** at Dzhelepov Laboratory of Nuclear Problems

Total list of publication in iNSPIRE-HEP:
https://inspirehep.net/literature?sort=mostrecent&size=25&page=1&q=find%20a%20samoylov%2C%20o

## PARTICIPATION IN EXPERIMENTS

*2003 - 2014* **NOMAD (Neutrino Oscillation MAgnetic Detector) experiment** at CERN, Geneva, Switzerland

Participation within JINR group since Oct-2003 in the following activities:

Monte Carlo simulations

- Neutrino-nucleon inclusive interactions for both charged and neutral currents for the Drift Chambers (Carbon)
- Neutrino-nucleon inclusive interactions for charged current including charm production for the Front Calorimeter (Iron)

Data analysis

- Proton identification to search for pentaquark $\Theta^+$
- Developing the fake-pair technique to predict background in an analysis of the resonance
- Selection of dimuon events in the Front Calorimeter
- Calculation of background from semi-leptonic decay of mesons
- Selection of charged pions for fragmentation functions

Physics analysis

- Search for pentaquark +
- Background technique for the K*+- signal in the spin alignment analysis
- Pion production analysis
- Charm Dimuon production analysis

Student supervising.

PUBLICATIONS: 9 papers, 5 internal notes, 9 papers in Conference Proceedings, 3 posters

*2013 - till now* **NOvA (NuMI Off-axis $\nu_e$ Appearance) experiment** at Fermilab, Batavia, USA

Participation within JINR group since Oct-2013 in the following activities:

- Deputy on the Project at JINR, Dubna
- Co-convener of the detector simulation group
- Management and development of Remote operation center for the NOvA experiment at Dubna, Russia (ROC-Dubna)
- Test and assembly of the NOvA detectors, detectors running
- Software development
- Physics analysis
- Student supervising

PUBLICATIONS: 9 papers, 8 internal notes, 9 conference talks and proceedings, 11 posters

*2016 - till now* **DarkSide experiment** at LNGS, Assergi, L'Aquila, Italy

Participation within JINR group since Aug-2016 in the following activities:

- A study of signal formation in liquid argon dual-phase time projection chamber and nonlinearity of that signal
- An analysis to compare contributions 39Ar in atmospheric and underground argons (AAr / UAr)

PUBLICATIONS: 12 papers

*2010 - 2014* **A bit of Theory** at JINR, Dubna, Russia

- Phenomenology of the fragmentation processes in e+e- collisions and in the lepton-nucleon deep inelastic scattering
- Matter effect in neutrino oscillations for long-baseline experiments

PUBLICATIONS: 2 paper, 3 conference proceedings

## OTHER ACTIVITIES IN PARTICLE AND NEUTRINO PHYSICS

*2015 - till now* **Member of scientific and technical council** at Dzhelepov Laboratory of Nuclear Prob
*2015 - till now* **Expert at neutrino physics** Russian Foundation for Basic Research (RFBR)

## ORGANIZING WORK

*2006 - 2007* **Scientific secretary** of the DLNP Seminar on Nobel Prize
*2006 - 2014* **Scientific secretary** of the Baikal summer School on Physics of elementary particles and
*2012 - 2012* **Scientific secretary** of the Pontecorvo Neutrino Physics School
*2012 - 2013* **A member of the Local Organizing Committee** of the 17/18 AYSS conferences
*2013 - 2015* **Scientific secretary** of the DLNP Seminar on Neutrino Physics and Astrophysics
*2013 - 2016* **A member of the AYSS council** from DLNP at JINR

## SKILLS AND QUALIFICATIONS

### Programming Languages

*Advanced skills* Unix-based systems, C/C++, ROOT, Fortran, Shell scripts, JS, Python

### Languages

*Native tongue* Russian
*Spoken* English

## AWARDS

2002 – Irkutsk State University fellowship for students
2003 – Grant of ≪Dynasty Foundation≫ for students
2005 – Moscow Prize for Innovative Researches
2006 – 1st premium of scientific work DLNP JINR
2006 – Bruno Pontecorvo fellowship DLNP JINR
2009 – Fellowship JINR for junior researchers
2010 – 3rd premium of scientific work JINR for junior researchers
2012 – 1st premium of scientific work JINR for junior researchers
2012 – Best poster presentation on PAC of Particle Physics at JINR
2012 – Bruno Pontecorvo fellowship DLNP JINR
2013 – Fellowship JINR for junior researchers with PhD
2013 – Grant of Russian President for young scientists with PhD
2014 – 2nd premium of scientific work DLNP JINR
2016 – 2nd premium of scientific work DLNP JINR

## PERSONAL INFO

Birth: February 16, 1982 (Kirensk, Russia)
Marital Status: Married (to Nataliya Samoylova)
Daughter: Agata, January 12, 2015
Son: Mark, May 01, 2019