

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 Dzhelpev Laboratory of Nuclear Problems
Search for an exotic baryon state (pentaquark) Θ^+ (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 Dzhelpev Laboratory of Nuclear Problems
Charm dimuon production and search for pentaquark Θ^+ (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 Dzhelpev Laboratory of Nuclear Problems

2010 - 2013 **Scientific Researcher** at Dzhelpev Laboratory of Nuclear Problems

2013 - 2015 **Senior Scientific Researcher** at Dzhelpev Laboratory of Nuclear Problems

2015 - till now **Head of Sector** at Dzhelpev 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 Θ^+
- 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 Θ^+
- Background technique for the K^{*0} 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 ν_e Appearance) experiment** at Fermilab, Batavia, USA

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

Current tasks

- Deputy of the Project at JINR, Dubna
- Co-convener of the exotics group
- Software development
- Physics analysis
- Student supervising

Tasks done and finished

- Co-convener of the detector simulation group (2016/20)
- Research and simulation of the NOvA scintillator light properties in the software (2017/19)
- ROC-Dubna liaison (2015/16)
- Management and development of Remote operation center for the NOvA experiment at Dubna, Russia (ROC-Dubna) (2015)
- FEB crosstalk measurement (2014)
- Help collaboration with oil-filling (liquid scintillator) on Near Detector (2014)
- Test and assembly of the NOvA detectors, detectors running

PUBLICATIONS: 12 papers, 8 internal notes, 10 conference talks and proceedings, 12 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 ^{39}Ar atmospheric and underground argons (AAr / UAr)

PUBLICATIONS: 12 papers

2020 - till now **DUNE experiment** at Fermilab, Batavia, USA

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

Current tasks

- Deputy of the Project at JINR, Dubna

- 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 Dzhelapov Laboratory of Nuclear Problems
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 nuclei
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