CURRICULUM VITAE

PERSONAL DATA:

Name:	Polina P. Kuzhir
Date of Birth	16th October, 1969
Place of Birth	Minsk , Belarus, USSR
Nationality:	Belarus
Marital Status:	Married
Business address:	Belarusian State University, Research Institute for Nuclear Problems, 11 Bobruiskaya Str., app. 316 220030 Minsk, Belarus
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EDUCATION:

- Ph.D. in Physics (Candidate of Science in Phys. and Math.), 1996, Inst. of Physics, Belarus Academy of Science, Minsk, Belarus. Thesis title: “Analysis of the observables in the processes of (anti)neutrino scattering on polarized nucleon target”
- M. Sc. in Physics, June 1991, Belarus State University, Physical Department, Minsk, Belarus. Subject of examination: general Physics, Theoretical Physics, High Energy and Particle Physics

EXPERIENCE:

Institute for Nuclear Problems, Belarus State University, Minsk, Belarus

09/1991 – 09/1992 (Junior Researcher).

National Center of Particle and High Energy Physics, Belarus State University, Minsk, Belarus

10/1992 – 08/2000 (Junior Researcher, Researcher, Senior Researcher)

Belarus State University, Minsk, Belarus

06/1993 – 12/1996 (PhD Student).
09/2000 – 03/2006 (Head of Research Development and Coordination Department, General Directorate of Sciences)

Institute for Nuclear Problems, Belarus State University, Minsk, Belarus

04/2005 – 04/2006 (Senior Researcher, Part time job)

04/2006 – 12/2012 (Senior Researcher)

01/2013 – ***Present*** (Head of NanoElectroMagnetics Lab)

Specialization

(i) **main field** electromagnetic waves interaction with condensed matter

(ii) **other fields** quantum field theory, high energy and particle physics

(iii) **current research interest**

Electromagnetic materials for microwave and THz: The theoretical and experimental research of electromagnetic response of graphene, graphene/polymer sandwich structures, ultrathin carbonateous films, carbon nanotubes, nanocarbon based composites, carbon porous structures (foams, periodic cellular architectures, aero- and hero-gels) in wide frequency range (from radio frequency to THz).

Materials and structure for high current electronics (explosive electron emission cathodes on the basis of carbon nanotubes arrays, graphene-like materials, etc)

Nanocarbon and graphene based nanoelectronic devices: monomolecular light emitter in THz frequency range (nano-sized traveling wave tube, backward wave tube, nano-scaled free electron laser).

Honours, Awards, Fellowships, Membership of Professional Societies

- **Diploma of Ministry of Education** of the Rrepublic of Belarus, 2005
- **Honour Diploma of Belarusian state University,** 2007
- **Honour Diploma of National Academy of Science of Belarus,** 2011
- **Belarus State University Award named by Academician A.N.Sevchenko for the work "Electromagnetics of nanostructures"** (2011)
- **Acknowledgement of BSU Rector, 2015**

INTERNATIONAL RESEARCH GRANTS (on current research activity):

- **Nanocarbon based composite materials for electromagnetic applications,** from ISTC project B-1708, 2009-2012, Project manager S.A.Maksimenko, participants: A. Gusinskii (BSUIR, Belarus) I. Larionova (Biysk, Russia), V.L. Kuznetsov (Novosibirsk, Russia), A. Okotrub (Novosibirsk, Russia); collaborators: O. Shenderova (Raleigh, USA), Ph. Lambin (Namur, Belgium)
- **Nano carbon based components and materials for high frequency electronics,** EU FP7 CACOMEL project FP7-247007, Call ID "**FP7-PEOPLE-2009-IRSES**", 2010-2013, Principal Researcher: Prof. Ch. Thomsen (Institut fuer Festkoerperphysik, TUB, Berlin, Germany), team leaders S. Maksimenko, Y. Svirko (University of Joensuu,Finland), Yu.N. Shunin (University of Latvia, Institute of Solid State Physics). E. Obrazcova (A.M. Prokhorov General Physics Institute of RAS), P. Dyachkov (Kurnakov Institute of General and Inorganic Chemistry, RAS) G. Miano (Università degli Studi di Napoli Federico II, Italy)
- **Carbon nanotubes based composite materials for electromagnetic shielding in microwaves,** Collaborative Linkage Grant under project PST.CLG. 983910, 2010-2011, Principal Researchers: J. Banis, (Vilnius, Lithuania) and S.A. Maksimenko.
- **Institutional Development of Applied Nanoelectromagnetics: Belarus in ERA Widening,** EU FP7 BY-NanoERA project FP7-266529, Call ID FP7-INCO-2010-6, 2010-2013. Coordinator Prof. S. Maksimenko, partners: A. Hoffmann (Institut fuer Festkoerperphysik, TUB, Berlin, Germany); Central Laboratory of Physico-Chemical Mechanics, Bulgarian Academy of Sciences, Sofia (Bulgaria); Frascati National Laboratory, National Institute of Nuclear Physics, Frascati (Italy), Institute of Electronic Structure and Laser (IESL), Heraklion, Crete (Grece), Belarusian Institute of System Analysis and Information Support of Scientific and Technical Sphere (Belarus); Science & Technology Park "Metolit" at Belarusian National Technical University (Belarus)
- **Fundamental and Applied Electromagnetics of Nano-Carbons,** EU FP7 project FP7- 318617 FAEMCAR, Call ID FP7-PEOPLE-2012-IRSES, 2012-2017, Principal Researcher: **Ph. Lambin** (Facultes Universitaires Notre-Dame de la paix de Namur, Belgium**), team leaders:** Y. Banis (Vilniaus Universitetas, Lithuania), S. Bellucci (Istituto Nazionale di Fisica Nucleare, Frascati, Italia), L. P. Biró (Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary), L.A. Chernozatonskii (Institute for Biochemical Physics RAS, Moscow, Russia), G. I. Dovbeshko (Institute of Physics, NASU, Kiev, Ukraine), P. Kuzhir (INP BSU).
- **Carbon-nanotube-based terahertz-to-optics rectenna,** EU FP7 project FP7-612285 CANTOR, Call ID FP7-PEOPLE-2013-IRSES, 2013-2017, Principal Researcher: M. Portnoi (University of Exeter, UK), team leaders S. Maksimenko (INP BSU), G. Slepyan (Tel Aviv University, Israel)

- **Nano-Thin and Micro-Sized Carbons: Toward Electromagnetic Compatibility Application,** project FP7-610875 NAMICEMC, Call ID FP7-PEOPLE-2013-IRSES, 2013-2017, Principal Researcher: A. Celzard (ENSTIB, Universite de Lorraine, Epinal, Franse), team leaders: S. Bellucci (Istituto Nazionale di Fisica Nucleare, Frascati, Italia), P. Kuzhir (INP BSU).
- **Collective Excitations in Advanced Nanostructures**, Project ID 644076 CoExAN Call H2020-MSCA-RISE-2014 Programme H2020, Coordinator: University of Rome Tor Vergata (URTV), University of Exeter (UNEXE), UK, University of Eastern Finland (UEF), Finland, University of Iceland (UI), Iceland, Research Institute for Nuclear Problems of Belarusian State University (INP BSU),Belarus, Yerevan State University (YSU), Armenia, De La Salle University (DLSU), Philippines, V.Lashkaryov Institute of Semiconductor Physics, National Academy of Sciences of Ukraine (ISP), Ukraine.
- **GRAPHENE FLAGSHIP** EU FP7 project FP7- 604391 – H2020 (2014-2020), work package 4 High frequency electronics.