

# CURRICULUM VITAE

*Steven Duplij*

## PERSONAL INFORMATION

Passport name: **Stepan Douplii**

Pen/scientific name: **Steven Duplij**

Cyrillic name: Степан Анатольевич Дуплий

### **Address:**

Mathematisches Institut  
Westfälische Wilhelms-Universität  
Einsteinstrasse 62  
48149 Münster  
Germany

E-mails: **duplijs@uni-muenster.de**  
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Web pages: <http://wwwmath.uni-muenster.de/u/duplij>  
<http://homepages.spa.umn.edu/~duplij>

## DEGREES

**2002** The academic status of Senior Research Fellow is given by Higher Certifying Commission, Kiev, Ukraine

**1999** Habilitation Thesis: "*Semigroup Methods in Supersymmetric Theories of Elementary Particles*", Bogolyubov Institute of Theoretical Physics, Kiev, Ukraine,  
Doctor Habilitatus in Theoretical Physics  
(Doctor of Science in Physics and Mathematics)

**1983** Ph.D. Thesis: "*Theoretical Investigation of Hard Processes in QCD*";

**1978-1982** Post Graduate Course in Theoretical Physics, Kharkov State University;  
PhD (Candidate of Science in Physics and Mathematics); adviser M.P. Rekalov

## EDUCATION

**1994-1995** Special German Language Course, Goethe Institute, Mannheim, Germany;  
Distinguished diploma

**1974-1978** Department of Theoretical Physics, Kharkov State University;  
The Distinguished Diploma in Theoretical Nuclear Physics - M.Sc.

**1973-1976** Special English Language Course, Kharkov State University;  
The Distinguished Diploma

**1971-1973** Department of Theoretical Radiophysics, Kharkov State University

## WORK EXPERIENCE

- 2016** Lecturer in Mathematics, Bochum University of Applied Sciences, Germany
- 2014-2016** Scientific Researcher at the Mathematisches Institut, Universität Münster, Münster, Germany
- 2012** Lecturer in Mathematics, Rutgers University, Piscataway, USA
- 2011-2012** Visiting Fulbright Scholar, Rutgers University, USA
- 2000-2014** Lead Senior Staff Researcher at the Nuclear Physics Laboratory, Kharkov National University, Kharkov, Ukraine
- 2000-now** CMS collaboration, CERN, Geneva
- 1997-2000** Senior Staff Researcher at the Nuclear Physics Laboratory, Kharkov National University, Kharkov, Ukraine
- 1983-1997** Staff Researcher at the Nuclear Physics Laboratory, Kharkov State University, Kharkov, Ukraine
- 1992-1993** Staff Researcher at the Astronomic Observatory, Kharkov State University, Kharkov, Ukraine
- 1983-1992** Staff Researcher at the Nuclear Physics Laboratory, Kharkov State University, Kharkov, Ukraine
- 1978-1983** Half-time Researcher at the Radiophysics Laboratory, Kharkov State University, Kharkov, Ukraine

## FELLOWSHIPS & GRANTS

- 2015-2016** European Research Council Grant at University of Münster (Host: J. Cuntz)
- 2010** Alexander von Humboldt Fellowship at University of Münster (Host: J. Cuntz)
- 2011-2012** Fulbright Scholar Program at the Rutgers University, Piscataway, USA (Host: G. A. Goldin)
- 2010** Alexander von Humboldt Fellowship at University of Münster (Host: J. Cuntz)
- 2008** Alexander von Humboldt Fellowship at University of Köln (Host: M. Zirnbauer)
- 2007** American Physical Society Travel Grant at John Hopkins University (Host: J. Bagger)
- 2005-2006** Alexander von Humboldt Fellowship, University of Münster (Host: J. Cuntz)
- 2004** Simons Foundation Travel Grant (Stony Brook, USA)
- 2001** Alexander von Humboldt Fellowship at Max-Planck-Institute for Dynamics and Self-Organization, Göttingen (Host: F. Müller-Hoissen)
- 2001** National Natural Science Foundation of China Grant at Zhejiang University, Hangzhou (Host: Fang Li)
- 1994-1997** Alexander von Humboldt Fellowship at the Physics Department, University of Kaiserslautern, Kaiserslautern, Germany (Host: W. Rühl)

## EDITOR EXPERIENCE

- 1999-2013** Editor of *Kharkov National University Journal* (Vestnik KSU), ser. Nuclei, Particles and Fields
- 2013-now** Editor of *East European Journal of Physics*

## Editor-compiler:

**S. Duplij, W. Siegel, J. Bagger** (Eds.) "*Concise Encyclopedia of Supersymmetry and Noncommutative Structures in Mathematics and Physics*"

Dordrecht-Boston-London: Kluwer Academic Publishers, 2004, 561 pp.

(Second printing Springer Science, Berlin-Heidelberg-New York, April 2005).

**S. Duplij, J. Wess** (Eds.) "*Noncommutative Structures in Mathematics and Physics*",

Dordrecht-Boston-London: Kluwer Academic Publishers, 2001, 484 pp.

**S. Duplij, V. Zima** (Eds.) "*Supersymmetric Structures in Mathematics and Physics*",

Kiev, UkrINTI, 2000, 262 pp.

## Reviewing:

**1998-now** Reviewer of *Zentralblatt Mathematik*, Karlsruhe-Berlin, Germany

**2005-now** Reviewer of *Journal of Zhejiang University. Science*, Hangzhou, China

**2007-now**, AIP, Melville, USA

**2010-now** Reviewer of *Reports of Mathematical Physics*, Warsaw, Poland

**2012-now** Reviewer of *Advances in Mathematical Physics*, New York, USA

## LECTURE COURSES

Calculus

Elementary Particle Physics

Quantum chromodynamics

Unified theories

Supersymmetry and supergravity

## SUPERVISION

5 students received Distinguished M.Sc. Degree in Theoretical Physics

4 PhD students, 1 PhD defended

## PROFESSIONAL MEMBERSHIPS

**2014** RUSSIAN UNION OF WRITERS (Moscow, Russia)

**2008** AMERICAN PHYSICAL SOCIETY (College Park, MD)

**2002** ALEXANDER VON HUMBOLDT CLUB Ukraine

**1995** AMERICAN MATHEMATICAL SOCIETY (Providence, RI)

**1994** INTERNATIONAL ASSOCIATION OF MATHEMATICAL PHYSICS

(Cambridge, MA)

**1993** ENGLISH INTERNATIONAL ASSOCIATION (Lund, Sweden)

**1993** AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

(Washington, DC)

**1992** EUROPEAN PHYSICAL SOCIETY (Geneva, Switzerland)

**1999** INTERNATIONAL MATHEMATICAL UNION (IAS, Princeton)

## LISTED

WORLD DIRECTORY OF MATHEMATICIANS

MARQUES WHO IS WHO IN AMERICA  
ENCYCLOPEDIA OF MODERN UKRAINE  
MATHEMATICAL PORTAL (Math-Net)  
MATHSCINET (American Mathematical Society)  
ACADEMIC GENEALOGY OF THEORETICAL PHYSICISTS  
MATHEMATICS GENEALOGY PROJECT  
GOOGLE SCHOLAR  
MICROSOFT ACADEMICS  
SCOPUS

## CONFERENCE ORGANIZING

**2005** June-International Workshop “*Pseudo-Hermitian Hamiltonians in Quantum Physics*” as a member of Advisory Board

**2000** September-NATO Advanced Research Workshop "*Noncommutative Structures in Mathematics and Physics*" as a Partner Country Co-Director  
(NATO Co-Director: Julius Wess)

## CONFERENCE PARTICIPATION

Participated at numerous international conferences, workshops, schools and seminars in USA, Germany, France, UK, Poland, Spain, Czech Republic, Russia, China, Ukraine.

**2017** December Workshop SUPERGEOMETRY AND APPLICATIONS (Luxembourg)

**2016** January Workshop BANACH METHODS IN NONCOMMUTATIVE GEOMETRY (Münster, Germany)

**2015** April Workshop STRUCTURE AND CLASSIFICATION OF C\*-ALGEBRAS (Münster, Germany)

**2015** April Workshop STRUCTURE AND CLASSIFICATION OF C\*-ALGEBRAS (Münster, Germany)

**2014** May Workshop QUANTUM GROUPS AND OPERATOR ALGEBRAS (Münster, Germany)

**2011** August 3rd International Conference QUANTUM ELECTRODYNAMICS AND STATISTICAL PHYSICS (Kharkov, Ukraine)

**2010** June 26th Workshop FOUNDATIONS AND CONSTRUCTIVE ASPECTS OF QFT (Münster, Germany)

**2010** May ANALYTIC AND ALGEBRAIC METHODS IN PHYSICS VI (Prague, Czech Republic)

**2009** October ALGEBRA, GEOMETRY, AND MATHEMATICAL PHYSICS (Bedlewo, Poland)

**2009** September THE FOURTH INTERNATIONAL CONFERENCE ON P-ADIC MATHEMATICAL PHYSICS (Hrodna, Belarus)

**2009** June SYMMETRY IN NONLINEAR MATHEMATICAL PHYSICS (Kiev, Ukraine)

**2009** May ANALYTIC AND ALGEBRAIC METHODS V (Prague, Czech Republic)

**2008** December 100th STATISTICAL MECHANICS CONFERENCE (Rutgers, USA)

**2008** July SUMMER SCHOOL AND CONFERENCE ON MODERN MATHEMATICAL PHYSICS (Belgrade, Serbia)

**2007** May 97th STATISTICAL MECHANICS CONFERENCE (Rutgers, USA)  
**2004** July-August SIMONS WORKSHOP IN MATHEMATICS AND PHYSICS (Stony Brook, USA)  
**2001** July XV Max Born Symposium SCHROEDINGER OPERATORS, RANDOM POTENTIALS AND SINGULAR PERTURBATIONS (Wroclaw, Poland)  
**2000** July INTERNATIONAL CONFERENCE ON SUPERSYMMETRY AND QUANTUM FIELD THEORY 75<sup>th</sup> Birthday of D. V. Volkov (Kharkov, Ukraine)  
**1999** July INTERNATIONAL CONFERENCE ON SUPERSYMMETRY AND QUANTUM SYMMETRIES in the memory of V. I. Ogievetsky (Dubna, Russia)  
**1999** July INTERNATIONAL CONFERENCE STRINGS-99 (Potsdam, Germany)  
**1999** August INTERNATIONAL CONFERENCE ON QUANTUM GRAVITY AND SUPERSTRINGS (Dubna, Russia)  
**1998** August INTERNATIONAL CONGRESS OF MATHEMATICIANS (Berlin, Germany)  
**1997** January INTERNATIONAL SEMINAR ON SUPERSYMMETRY AND QUANTUM FIELD THEORY in memory of D. V. Volkov (Kharkov, Ukraine)  
**1996** June SUPERSYMMETRY-96 (College Park, MD)  
**1996** June INTERNATIONAL CONFERENCE ON HIGHER HOMOTOPY STRUCTURES IN MATHEMATICAL PHYSICS (Poughkeepsie, NY)  
**1995** June CRACOW SCHOOL OF THEORETICAL PHYSICS (Zakopane, Poland)  
**1995** July INTERNATIONAL CONFERENCE ON GAUGE THEORIES, APPLIED SUPERSYMMETRY AND QUANTUM GRAVITY (Leuven, Belgium)  
**1995** July EUROPEAN SCHOOL OF GROUP THEORY (Valladolid, Spain)  
**1994** July INTERNATIONAL CONGRESS ON MATHEMATICAL PHYSICS (Paris)  
**1993** June FIRST CARRIBEAN SPRING SCHOOL OF MATHEMATICS AND THEORETICAL PHYSICS (Saint-Francois, Guadeloupe)

## VISITS & TALKS (outside FSU)

**2017**

Luxembourg (Math. Research Unit)-*N.Poncin*

**2016**

Jena, Germany (Inst. Math.)-*D.Lenz*

**2014**

Münster, Germany (Inst. Math.)-*J. Cuntz, W. Werner, R. Wulkenhaar*

Salerno, Italy (Univ. Salerno, Math. Dept.)-*C.Delizia*

**2012**

Hangzhou, China (Zhejiang Univ.)-*Fang Li*

Davis, USA (UC, Math. Dept.)-*M. Mulase, A. Schwarz*

Riverside, USA (UC, Math. Dept.)-*M.Lapidus*

Honolulu, USA (Univ. Hawaii, Phys. Dept.)-*X. Tata*

Syracuse, USA (Univ. Syracuse, Phys. Dept.)-*K.Wali*

Medford, USA (Tufts Univ., Inst. Cosmology)-*A. Vilenkin*

Boston, USA (NEU, Math. Dept.)-*A.Martsinkovsky*

**2011**

Chicago, USA (UIC, Math. Dept.)-*L. Kauffman*

Minneapolis, USA (Univ. Minnesota, Phys. Dept.)-*M. Shifman*

Philadelphia, USA (UPenn, Math. Dept.)-*J. Stasheff*  
Piscataway, USA (Rutgers, Math. Dept.)-*G.A. Goldin*  
Argonne, USA (ANL, HEP Division)-*C. Zachos*  
New York, USA (CUNY Graduate Center, Math. Dept.)-*A. Douglas*

**2010**

Münster, Germany (Inst. Math.)-*J. Cuntz, W. Werner,*  
Heidelberg, Germany (Inst. Theor. Phys.)-*G. Wolschin, J. Kupsch,*  
Wien, Austria (ESI,Univ.)-*H. Grosse,*  
Prague, Czech. Rep. (Inst. Nucl. Phys.,Rez)-*M. Znojil,*  
Wien, Austria (Inst. Theor. Phys.,TUW)-*D. Grumiller,*  
Padova, Italy (Inst.Nucl.Phys.)-*M. Tonin,*  
Naples, Italy (Inst.Phys.)-*G. Esposito,*  
Florence, Italy (Inst. Nucl. Phys.)-*R. Casalbuoni, L. Lusanna,*  
Rome, Italy (Inst. Theor. Phys.)-*M. Bianchi*

**2009**

Warsaw, Poland (Inst. Math.)-*S. Woronowicz, P. Urbanski,*  
Lodz, Poland (Univ.)-*B. Broda,*  
Wroclaw, Poland (Inst. Theor. Phys.,IFT)-*J. Lukierski,*  
Zielona Gora, Poland (Inst. Phys.,IF)-*M. Dudek,*  
Szczecin, Poland (Inst. Phys.,IF)-*M. Dabrowski,*  
Krakow, Poland (Inst. Phys.,IF)-*H. Arodz,*  
Prague, Czech. Rep. (Inst. Math.)-*B. Burgstaller*  
Potsdam, Germany (AEI)  
Dresden, Germany (Forschungszentrum Dresden-Rossendorf)-*U. Günther*

**2008**

Piscataway, USA (Rutgers Univ.)-*G. Goldin,*  
Medford, USA (Tufts Univ.)-*A. Vilenkin,*  
Cambridge, USA (MIT)-*E. Lomon,*  
New York, USA (CUNY)-*S. Catto,*  
Köln, Germany (Inst. Theor. Phys.)-*M. Zirnbauer,*  
Belgrade, Serbia (Inst. Phys.,IF)-*B. Dragovich,*  
Nic, Serbia (Inst. Phys.)-*M. Ciric,*  
Trieste, Italy (SISSA)-*L. Bonora,* Bielefeld, Germany (Univ.)-*C. Ringel,*  
Bonn, Germany (Phys. Inst.)-*V. Rittenberg*

**2007**

Princeton, USA (Inst.Adv.Study)-*S. Adler,*  
Chicago, USA (Univ.Illinois,UIC)-*L. Kauffman,*  
Medford, USA (Tufts Univ.)-*A. Vilenkin,*  
Cambridge, USA (MIT)-*E. Lomon,*  
Baltimore, USA (John Hopkins Univ.)-*J. Bagger,*  
Philadelphia, USA (Univ. Penn.)-*J. Stasheff*

**2006**

Münster, Germany (Inst. Math.)-*J. Cuntz,*  
Bielefeld, Germany (Univ.)-*C. Ringel*

**2004**

Princeton, USA (Inst. Adv. Study)-*S. Adler,*  
Baltimore, USA (John Hopkins Univ.)-*J. Bagger,*

Stony Brook, USA (SUNY, YITP)-*W. Siegel*,  
Minneapolis, USA (Inst. Theor. Phys., FTPI-UMN)-*M. Shifman*,  
Krakow, Poland (Jagellonian Univ.)

**2003**

Wroclaw, Poland (Inst. Theor. Phys., IFT)-*W. Marcinek, J. Lukierski*

**2001**

Göttingen, Germany (ISF)-*F. Müller-Hoissen*,

Hangzhou, China (Zhejiang Univ.)-*F. Li*,

Shanghai, China (Inst. Phys.)-*Y.-L. Xu*,

Wroclaw, Poland (Inst. Theor. Phys., IFT)-*W. Marcinek, J. Lukierski*

Prague, Czech. Rep. (CTU)-*C. Burdik*

Rez, Czech. Rep. (Inst. Nucl. Phys., NPI)-*M. Znojil*,

Mannheim, Germany (Univ.)-*M. Schlichenmaier*

**2000**

Warsaw, Poland (Inst. Math.)-*J. Okninski*,

Wroclaw, Poland (Inst. Theor. Phys., IFT) -*W. Marcinek, J. Lukierski*

**1999** Potsdam, Germany (AI)

**1998** Berlin, Germany (HMI)-*W. Von Oertzen*,

Berlin, Germany (Tech. Univ.),

Krakow, Poland (Inst. Nucl. Phys.)

**1994-1996**

Kaiserslautern, Germany (Univ.)-*W. Rühl*

**1994**

St. Andrews, UK (Univ.)-*J. Howie*

Orsay, France (Inst. Nucl. Phys.)-*A. Comtet*

**1993**

München, Germany (Max-Planck-Inst. für Physik)-*J. Wess*,

Lyon, France (Inst. Phys.)

Kaiserslautern, Germany (Univ.)-*W. Rühl*

## PUBLICATIONS

More than 100 articles and reports including *Physical Review*, *Journal of Physics*, *Communications in Mathematical Physics*, *Journal of Mathematical Physics*, *Communications in Algebra*, *Semigroup Forum*, *Letters in Mathematical Physics*, *Theoretical and Mathematical Physics*; *Journal of Lie Theory*, *International Journal of Geometric Methods in Modern Physics*, *Linear Algebra and Applications* (full list is on homepage and arxiv.org).

Monograph: S. Duplij "*Semisupermanifolds and semigroups*", Kharkov: Krok, 2000, 220pp. (Second Print by CreateSpace Pubs.: Charleston, 2013, available from Amazon).

## RESEARCH INTERESTS

**Supersymmetry** and semigroups; supermatrix models; superconformal symmetry; super Riemann surfaces; supermanifolds; supersymmetric quantum mechanics; supergravity.

**Quantum groups** and supergroups; weak Hopf algebras and Yang-Baxter equation; representations of quantized algebras, new actions of quantum algebras on quantum spaces; polyadic algebras and groups, Cuntz algebras.

**Nonlinear methods** in (super)electrodynamics, Yang-Mills, gravity and multigravity.

**Constrained systems and gauge theories**, application of differential equations.

**Secondary:**

Symmetries of genetic code and visualization of DNA sequences;

Helicity formalism in quantum chromodynamics;

Polarization phenomena in low energy nuclear physics;

Rutherford backscattering method in ion implantation;

Nonstationary radio noise.

## SPECIAL SKILLS

**Languages:** English (perfect), German (speaking), Russian (native), Ukrainian (native), Italian (basic).

**Programming:** Perl, Mathematica, Maple, LaTeX, BibTeX, HTML.

**PC platforms:** MS-DOS, Windows XP, Windows 2003, Windows Vista, Unix, Linux.

**PC software:** Scientific Work Place, dBase, Adobe products, Microsoft Excel, Word, Photoshop, Dreamweaver, PowerPoint.

## ADDITIONAL PERSONAL INFORMATION

Date and place of birth: August 29, 1954, Chernyshevsk, Russia.

Citizenship: Ukraine.

Family status: married.



## MASS MEDIA & SOCIAL LIFE

TV programs and interviews at the Kharkov TV studios (regularly).

Scientific program “Logos” (regular interviews at the Central Kharkov radio station).

Articles about me: in USA (SCOOP USA, Gazette, Library of Congress); in Germany, in Ukrainian press (regularly).

Alexander von Humboldt Fellows meetings/workshops.

## LITERARY & MUSICAL ACTIVITY

### Writing poetry and short stories

More than 200 publications in USA/UK professional literary magazines (in English).

Poetry books - including

IN CRY (Mitez, Kharkov, 1996) bilingual English/Russian

ANGEL (1996), ALIEN (1995), DREAM (1994) (in English);

REFLEXOES 1993 (in Portuguese)

DASH-DOTTED (Cambridge, MA, 2012) bilingual English/Russian poetry  
(available from Amazon).

SUPERMANIFOLD OF LIFE (Cambridge, MA, 2014) multilingual poetry and  
short prose in 9 languages (available from Amazon).

### Playing guitar and composing songs

*CD audio albums of songs:* BLITZ (Heidelberg, 1995), MOTIFS OF YEARS  
(Heidelberg, 1996), SUPERMANIFOLD OF LIFE (Houston, 2007)

*MC audio album of songs:* BLITZ (GEMA, Berlin, 1996)

*CD audio album of poems:* SUPERMANIFOLD OF LIFE (Kharkov, 2004),  
professional reading in English by T. Kudryashova.

# Publications

by

*Steven Duplij (Stepan Douplii)*

## Books:

1. S. Duplij, Semisupermanifolds and Semigroups, (Second Edition) – 2013, Createspace Publishing: Charleston, 220pp.
2. S. Duplij, W. Siegel, J. Bagger, eds, Concise Encyclopedia of Supersymmetry and non-commutative structures in mathematics and physics, Kluwer Academic Publishers, Dordrecht-Boston-London, January 2004, 561 pp. (Second printing Springer Science, Berlin-Heidelberg-New York-Tokyo, April 2005).
3. S. Duplij, and J. Wess, eds, Noncommutative Structures in Mathematics and Physics. - Kluwer Academic Publishers, Dordrecht-Boston-London, 2001. - 493 p.
4. S.A. Duplij, Semisupermanifolds and semigroups. - Krok, Kharkov, 2000. - 220 c.
5. S. Duplij, and V. Zima, eds, Supersymmetric Structures in Mathematics and Physics. - UkrNTI, Kiev, 2000. - 262 c.

## 6. Articles:

1. S. Duplij, "Polyadic integer numbers and finite  $(m,n)$ -fields", **p-Adic Numbers, Ultrametric Analysis, Geometry**.-2017.-V.9, No.4, p. 257-281.
2. S. Duplij, "A  $q$ -deformed generalization of the Hosszu-Gluskin theorem", **Filomat**.- 2016 V. 30.- №11. -P. 2985-3005.
3. S. Duplij, "Arity shape of polyadic algebraic structures", 2017, 43 p., arXiv:1703.10132 (To appear in **Journal of Mathematical Physics, Analysis, Geometry**).
4. S. Duplij, "Formulation of singular theories in a partial Hamiltonian formalism using a new bracket and multi-time dynamics", **International Journal of Geometric Methods in Modern Physics**. - 2015.- V.12. – № 1.- 1550001 (19 pages).
5. S. Duplij, Y. Hong, F. Li, " $U_q(\mathfrak{sl}(m+1))$ -Module Algebra Structures on the Coordinate Algebra of a Quantum Vector Space", **Journal of Lie Theory**.- V. 25.- 2015, No. 2, 327-361.
6. M. L. Walker, S. Duplij, "Cho-Duan-Ge decomposition of QCD in the constraintless Clairaut-type formalism", **Physical Review D**.- 2015.- V. 91, 064022, 10 pp.
7. G. A. Goldin, V. M. Shtelen, S. Duplij, "Conformal symmetry transformations and nonlinear Maxwell equations", 2017, 12p. preprint arXiv:1704.00146.
8. S. Duplij, W. Werner, "Structure of unital 3-fields".- 2015.- arXiv: math.RA, 1505.04393 (Submitted to **Communications in Algebra**).
9. S. Duplij, E. Di Grezia, G. Esposito, A. Kotvytskiy, "Non-linear constitutive equations for gravitoelectromagnetism", **International Journal of Geometric Methods in Modern Physics**. - 2014.- V.11. – № 1.- 1450004 (10 pages).

10. S. A. Duplij and A. T. Kotvytskiy, "Generalized Interaction In Multigravity", **Theoretical and Mathematical Physics** - 2013. - V.177.- P. 1400-1411.
11. S. Duplij, Generalized duality, Hamiltonian formalism and new brackets, preprint Los Alamos, **Journal of Mathematical Physics, Analysis, Geometry**, 2014.-V. **10**.- №2.- P. 189-220.
12. S. A. Duplij and A. T. Kotvytskiy, "Multigravity And Pauli-Fierz Model", **Journal of Kharkov National University**, ser. Nuclei, Particles and Fields. - 2013. - V. 1041.- №2(58).- P. 81–92.
13. S. A. Duplij, "Partial Hamiltonian Formalism, Multi-Time Dynamics And Singular Theories", **Journal of Kharkov National University**, ser. Nuclei, Particles and Fields. - 2013. - V. 1059.- №3(59).- P. 10–21, arXiv:1307.5771.
14. S. Duplij and G.Ch. Kurinnoj, Representations, quivers, and their and supersymmetric generalizations, **Journal of Kharkov National University**, ser. Nuclei, Particles and Fields. - 2011. - V.969.- № 3(51).- P. 81–93.
15. S. Duplij, Polyadic Systems, Representations And Quantum Groups, **Journal of Kharkov National University**, ser. Nuclei, Particles and Fields. - 2012. - V. 1017.- № 3(55).- P. 28–59, arXiv:1308.4060.
16. S. Duplij, S. Sinel'shchikov, *Classification of  $U_q(sl_2)$ -module algebra structures on the quantum plane*, **Journal of Mathematical Physics, Analysis, Geometry**, 2010.-V. **6**.- №4.- P. 21-46.
17. S. Duplij, S. Sinel'shchikov, *On  $U_q(sl_2)$ -actions on the quantum plane*, **Acta Polytechnica**, 2010, V. 4.- P. 21-38.
18. S. Duplij, A new Hamiltonian formalism for singular Lagrangian theories, **Journal of Kharkov National University**, ser. Nuclei, Particles and Fields. - 2011. - V.969.- № 3(51).- P. 34–39.
19. S. Duplij, S. Sinel'shchikov, *Quantum enveloping algebras with von Neumann regular Cartan-like generators and the Pierce decomposition*, **Communications in Mathematical Physics**, - 2009. - V. **287**. - № 4. - P. 769-785.
20. S. Duplij, S. Sinel'shchikov, *Quantum universal enveloping algebras with idempotents and the Pierce decomposition*, **Journal of Kharkov National University**, ser. Nuclei, Particles and Fields. - 2009. - V. **845**.- № 1(41).- P. 3–15.
21. S.A. Duplij, G.A. Goldin, V.M. Shtelen, *Generalizations of nonlinear and supersymmetric classical electrodynamics*, **J. Physics A: Math. and Gen.** – 2008. – V.41.- P. 304007.
22. S.A. Duplij, G.A. Goldin, V.M. Shtelen, Nonlinear supersymmetric classical electrodynamics, **Journal of Kharkov National University**, ser. Nuclei, Particles and Fields. - 2007. - V. **781**.- № 3(35).- P. 37–47.
23. A. Yu. Berezhnoy and S. Duplij, *Dependence of nucleotide physical properties in water on their placement in codons and determinative degree*, **Biophysical Bull. Kharkov Univ.** 2007. – **18**(1), 29-47.
24. S. A. Duplij and A. T. Kotvytskiy, *Coincidence limit and generalized interaction term structure in multigravity*, **Journal of Kharkov National University**, ser. Nuclei, Particles and Fields. - 2007. - V. **784**, №4(36), p. 67–72.
25. S.A.Duplij, I.I.Shapoval, **Quantum computations: fundamentals and algorithms**, Problems Of Atomic Science And Technology (PAST).-2007.-No.3(1).-p.230-235.

26. S. A. Duplij, I. I. Shapoval, *Topological Methods In Quantum Computations*, **Journal of Kharkov National University**, ser. "Nuclei, particles and fields". - 2007. - V. 781. - N 3(35). - S. 3–31.
27. S.A. Duplij, D.V. Soroka, V.A. Soroka, *A special fermionic generalization of lineal gravity*, **J. Zhejiang Univ. Science**. - 2006. - V. 7A (4) 629-632.
28. A. Borowiec, W. Dudek, S. Duplij, *Bi-element representations of ternary groups*, **Communications in Algebra** - 2006 - V. 34 (5), 1651-1670.
29. S. Duplij, S. Sinel'shchikov, *Quantum enveloping algebras, von Neumann regularity and the Pierce decomposition*. - In Proceedings of **5th Mathematical Physics Meeting: Summer School in Modern Mathematical Physics**, 6 - 17 July 2008, Belgrade, Ed. B. Dragovich, Z. Rakic, Institute of Physics, Belgrade, 2009, p. 241-265.
30. S.A. Duplij, G.A. Goldin, V.M. Shtelen, *Conformal Inversion and Maxwell Field Invariants in Four- and Six-Dimensional Spacetimes*. - In Proceedings of the XXXIInd Workshop on **Geometric Methods in Physics**, (Bialowieza, Poland, July 2013), 2014.
31. D. Duplij, S. Duplij, Determinative degree, trianders and physical properties of nucleotides, In: Humboldt-Kolleg "**Actual Science in Ukraine: Humboldt-Club Ukraine General Assembly**", January 11-12, 2008, Kiev, p.8-10.
32. S. Duplij, *Analysis of constrained systems using the Clairaut equation*. - In Proceedings of **5th Mathematical Physics Meeting: Summer School in Modern Mathematical Physics**, 6 - 17 July 2008, Belgrade, Ed. B. Dragovich, Z. Rakic, Institute of Physics, Belgrade, 2009, p. 217-225.
33. S. Duplij, S. Sinel'shchikov, *All  $U_q(sl_2)$ -actions on the quantum plane and their classical limits*, **The Fourth International Conference on p-Adic Mathematical Physics** Hrodna, Belarus, Sept, 2009, p.15-16.
34. D. Duplij, S. Duplij, Determinative degree, trianders and physical properties of nucleotides, In: Humboldt-Kolleg "**Actual Science in Ukraine: Humboldt-Club Ukraine General Assembly**", January 11-12, 2008, Kiev, p.8-10.
35. S. Duplij, G.A. Goldin, V. Shtelen, Nonlinear classical electrodynamics and supersymmetry, In: Humboldt-Kolleg "**Actual Science in Ukraine: Humboldt-Club Ukraine General Assembly**", January 11-12, 2008, Kiev, p.11-12.
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8. • Borcherds Superalgebra
9. • BPS Preon
10. • Braided Supersymmetry
11. • Coderivation
12. • Colored Hopf Superalgebra
13. • Conformal Supergravity
14. • Conifold
15. • Coquasitriangular Structure
16. • Dehn Twist
17. • Del Pezzo Surface
18. • Dijkgraaf-Vafa Theory
19. • Doubly Supersymmetric Approach
20. • Drinfeld Twist
21. • E-String
22. • Even Rule
23. • F-Manifold
24. • Face Algebra
25. • Fano Manifold
26. • Fluxbrane
27. • Frenkel-Kac-Segal Construction

28. • Frobenius Supermanifold
29. • Gamma Matrices
30. • Generalized Superbrane Action Principle
31. • Geometric Engineering
32. • Graded Parafermion
33. • Grassmann Parity
34. • Gromov-Hausdorff Distance
35. • Gromov-Hausdorff Limit
36. • Gromov-Witten Class
37. • Hanany-Witten Construction
38. • Hecke Algebra
39. • Hodge Operator
40. • Hopf Superline
41. • Infinite-Dimensional Lie Algebra
42. • Interacting String Bit Formalism
43. • Intriligator-Leigh-Seiberg Principle
44. • Ishibashi-Kawai-Kitazawa-Tsuchiya Model
45. • Kappa Symmetry
46. • Kontsevich Cycle
47. • L-Brane
48. • Landau-Ginzburg Models
49. • Lens Space
50. • Little String Theories
51. • Manifold, of exceptional holonomy
52. • Manifold, of special holonomy
53. • Manin Triple
54. • Melvin Space
55. • Murray-Von Neumann Equivalence
56. • Nambu-Goto Action
57. • Neumann Coefficient
58. • Neveu-Schwarz-Ramond String
59. • Nicolai Mapping
60. • Nilpotent Mapping
61. • Noncommutative Determinants
62. • Noninvertible Regularization-
63. • Nonlinear Holomorphic Supersymmetry
64. • Obstructor
65. • Operad
66. • Oxidation
67. • P-Manifold
68. • Parent Action Approach
69. • Penrose Limit
70. • Phantom Field
71. • Polyakov Action
72. • Q-Manifold
73. • QP-Manifold
74. • Quantum Cartan Domain
75. • Quantum Cohomology
76. • Quantum General Linear Supergroup
77. • Quantum Groupoid
78. • Quantum Superspace
79. • Quasi-Hopf Superalgebra
80. • Quasideterminants
81. • Queer Superalgebra
82. • Regular Category

83. • Regular Coalgebra
84. • Regular Functor
85. • Regular Yang-Baxter Equation
86. • Resolution Via Transgression
87. • Reverse Geometric Engineering
88. • Satake Diagram
89. • Schouten Superalgebra
90. • Semisupermanifold
91. • Set-Theoretical Solution
92. • Shadow Multiplet
93. • Simple Supergravity
94. • Skew-Whiffing
95. • Spacelike Brane
96. • Spinors
97. • Stack
98. • Stainless Superbrane
99. • Stenzel Metric
100. • Super Elliptic Function
101. • Super Gardner Equation
102. • Super Grassmannian
103. • Super Kadomtsev-Petviashvili Hierarchy
104. • Super Loday Algebra
105. • Super Reshetikhin-Semenov-Tian-Shansky Algebra
106. • Super Schlesinger Equations
107. • Supercomplexification
108. • Superderivation
109. • Superfield, definition
110. • Superfield,  $N = 1$
111. • Supergravity
112. • Supergravity,  $D = 11$
113. • Supergroup
114. • Supermanifold
115. • Supernumerary Killing Spinor
116. • Superscheme
117. • Supersliver
118. • Superspace
119. • Supersymmetric PP-Wave
120. • Supersymmetry
121. • Supertube
122. • Supertwistor
123. • Ternary Algebra
124. • Ternary Group
125. • Ternary Hopf Algebra
126. • Toron
127. • Universal Enveloping Superalgebra
128. • Volkov, Dmitriy Vasilievich
129. • Volkov-Akulov Theory
130. • Weak Hopf Algebra

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