

# CURRICULUM VITAE

## *Stepan Douplii* (pen: *Steven Duplij*)

### PERSONAL INFORMATION

Passport name: **Stepan Douplii**

Pen name: **Steven Duplij**

Cyrillic name: **Степан Анатольевич Дуплий**

#### Office address:

Theory Group, Nuclear Physics Laboratory,  
V. N. Karazin Kharkov National University,  
Kharkov 61022,  
Ukraine

E-mails: **Steven.A.Duplij@univer.kharkov.ua** (office mail)  
**sduplij@gmail.com** (public – main mail, preferable)

#### Web pages:

<http://homepages.spa.umn.edu/~duplij> (in USA, regularly updated, main)  
<http://duplij.univer.kharkov.ua> (in Ukraine, local)

### 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. Rekaló**

All docs and transcripts in PDF are available here: <http://webusers.physics.umn.edu/~duplij/job>

### 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.

**1971.1974** Department of Theoretical Radiophysics, Kharkov State University.

## WORK EXPERIENCE

- 2000-now** Leading Staff Researcher at the Nuclear Physics Laboratory,  
(The Laboratory Main Project Coordinator)  
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

- 2007** April-June American Physical Society Travel Grant
- 1994-1997** Alexander von Humboldt Fellowship at the Physics Department,  
University of Kaiserslautern, Kaiserslautern, Germany (Host: W. Rühl)

## EDITOR EXPERIENCE

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

### 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** Reviewer of *Journal of Mathematical Physics*, AIP, USA

## LECTURE COURSES

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

**2008** AMERICAN PHYSICAL SOCIETY (College Park, MD)  
**2002** ALEXANDER VON HUMBOLDT CLUB Ukraine  
**1995** AMERICAN MATHEMATICAL SOCIETY (Providence, NJ)  
**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 THE WORLD  
LINKEDIN CORPORATION

## 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.

**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)  
**1997** July INTERNATIONAL CONFERENCE ON SUPERSYMMETRY AND QUANTUM SYMMETRIES dedicated to the memory of V. I. Ogievetsky (Dubna, Russia)  
**1997** August INTERNATIONAL CONFERENCE ON SYMMETRY METHODS IN PHYSICS (Dubna, Russia)  
**1997** August INTERNATIONAL ALGEBRAIC CONFERENCE dedicated to the memory of L. M. Gluskin (Slavyansk, 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 INTERNATIONAL SCHOOL ON THEORETICAL AND MATHEMATICAL PHYSICS (Saint-Francois, Guadeloupe)  
**1993** July INTERNATIONAL COLLOQUIUM ON GROUP THEORETICAL METHODS IN MATHEMATICAL PHYSICS (Lyon, France)

## VISITS & TALKS (outside FSU)

### 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 *Journal of Physics, Communications in Mathematical Physics, Journal of Mathematical Physics, Communications in Algebra, Semigroup Forum, Letters in Mathematical Physics, Theoretical and Mathematical Physics; Linear Algebra and Applications* (full list is on personal web page).

Monograph: S. Duplij "*SEMISUPERMANIFOLDS AND SEMIGROUPS*", Kharkov: Krok, 2000, 220pp.

## RESEARCH INTERESTS

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

**Quantum groups** and supergroups; Hopf algebras and Yang-Baxter equation; representations of quantized algebras, ternary algebras and groups, Cuntz algebras.

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

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

### Secondary:

Symmetries of genetic code and 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).

**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

## 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)

AvH Fellows meetings/workshops at the German Embassy in Ukraine, Kiev (regularly)

## ADDITIONAL PERSONAL INFORMATION

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

Citizenship: Ukraine.

Shengen States multi-Visa: expires March 29, **2013**.

Marital status: divorced.

Nonsmoking, driver’s license.

## 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 (1996) (bilingual English/Russian)

Published in USA:

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

REFLEXOES 1993 (in Portuguese)

Free access on the personal webpage. Recent poems: <http://blogs.mail.ru/mail/duplij>

Playing guitar and composing songs

CD albums of songs:

BLITZ (Heidelberg, 1995),

MOTIFS OF YEARS (Heidelberg, 1996)

SUPERMANIFOLD OF LIFE (Houston, 2007)

MC album of songs:

BLITZ (GEMA, Berlin, 1996)

CD album of poems (read professionally by T. Kudryashova, in English):

SUPERMANIFOLD OF LIFE (2004)

## Live performances

- 1994 July* INTERNATIONAL CONGRESS OF ARTS AND COMMUNICATIONS (Edinburgh,UK) — poetry reading in English
- 1994 December* SMALL PRESS BOOK FAIR (New York, NY) — poetry reading in English and Russian
- 1994 December* PenRose PUBLISHING Co. (Mystic Island, NJ) — poetry reading in English and Russian
- 1995 July* University of Valladolid Residence (Valladolid, Spain) — poetry reading with own songs to the guitar in English and Russian
- 1995 July* LA CLAVE MUSIC AND POETRY CLUB (Madrid, Spain) — poetry reading with own songs to the guitar in English and Russian with Spanish translation
- 1995 August* SYMPOSIUM OF INTERNATIONAL SOCIETY OF POETS (Washington, D.C.) — poetry reading and performance of literary works
- 1995 August* RAVEN POETRY CLUB (Baltimore, MD) — poetry reading in English
- 1995 August* SECOND CHURCH OF PONCE (Ponce, Puerto Rico) — poetry reading with own songs to the guitar in English and Russian with Spanish translation
- 1995 August* THE LIBRARY OF CONGRESS (Washington, D.C.) — poetry reading with own songs to the guitar (in English and Russian) at the special Russian Table
- 1995 August* ROCK CREEK GALLERY (Washington, D.C.) — poetry reading with own songs to the guitar in English and Russian
- 1996 June* WASHINGTON POETS WORKSHOP'S annual reading (Reston Community Center, Washington, DC) — poetry reading and songs to the guitar in English and Russian
- 1996 June* ALBANY POETRY CLUB (Albany, NY) — poetry reading and songs to the guitar in English and Russian
- 1996 June* MARY PICKFORD THEATER at THE LIBRARY OF CONGRESS (Washington, DC) — poetry reading and songs to the guitar in English and Russian
- 1996 June* RAVEN POETRY CLUB (Baltimore, MD) — songs to the guitar in English
- 1996 December* FEUDENHEIM HARMONIKA CLUB (Mannheim, Germany) — songs to the guitar in Russian
- 1999 May* Kharkov State University (Kharkov, Ukraine) — poetry reading and songs to the guitar in English and Russian
- 2003 May* LITERARY CLUB (Wroclaw University, Poland) — poetry reading in English and Russian
- 2007 May* MINDPUDDLES GALLERY (Houston,TX) — poetry reading and songs to the guitar in English and Russian
- 2007 May* BOWERY POETRY CLUB (New York, NY) — poetry in English and Russian

## HOBBIES

Collecting music: symphonic, sympho-rock, electro-tango and piano/guitar jazz.

Collecting books: deep poetry and short stories in Russian and English.

MIDI, bicycle, volleyball, tennis, rollers.