Personal information

Surname(s) / First name(s)
Douplii, Stepan (publishing name: **Steven Duplij**)

Cyrillic name
Степан Анатольевич Дуплий

Address(es)
48159 Münster, Germany

E-mail(s)
sduplij@gmail.com duplij@gmx.de



Work authorization
German PR (Unbefristete Niederlassungserlaubnis)
spouse of an Italian citizen

Homepage: https://www.uni-muenster.de/IT.StepanDouplii

Desired employment / Occupational field

Senior Scientist / Researcher in Cryptography, Quantum Computing, Algebraic Structures, Mathematical Physics

Work experience

2025 – 2026
Visiting Research Fellow (Scientific Grant)
Yantai Research Institute, Harbin Engineering University, Harbin, China
- Research in cryptography, quantum computing, algebraic structures and signal processing

2025 – present
Affiliated Researcher (Hosting Agreement)
Center for Information Technology (CIT), University of Münster, Germany
- Collaboration in cryptography, quantum computing and mathematical physics

2019 – 2025
Scientific Researcher
Center of Information Technology (CIT), Universität Münster, Münster, Germany
- Research in quantum information, cryptography, algebraic structures and mathematical modelling
- Participation in ERC-funded projects

2016
Lecturer in Mathematics
Bochum University of Applied Sciences, Germany

2014 – 2016
Scientific Researcher
Mathematisches Institut, Universität Münster, Germany

2011 – 2012
Visiting Fulbright Scholar and Lecturer in Mathematics
Rutgers University, Piscataway, USA

2000 – 2014
Lead Senior Staff Researcher
Nuclear Physics Laboratory, Kharkov National University, Kharkov, Ukraine

2000 – present
Member of CMS Collaboration
CERN, Geneva, Switzerland

1997 – 2000
Senior Staff Researcher
Nuclear Physics Laboratory, Kharkov National University, Ukraine

1983 – 1997
Staff Researcher
Nuclear Physics Laboratory, Kharkov State University, Ukraine

1978 – 1983
Half-time Researcher
Radiophysics Laboratory, Kharkov State University, Ukraine

Education and training

2002
Senior Research Fellow (academic status)
Higher Certifying Commission, Kiev, Ukraine

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

1983
Ph.D. – Candidate of Science in Physics and Mathematics
Kharkov State University, Ukraine
- Thesis: “Theoretical Investigation of Hard Processes in QCD”; Adviser: Prof. M.P. Rekalo

1978 – 1982
Postgraduate Course in Theoretical Physics
Kharkov State University

1974 – 1978
M.Sc. in Theoretical Nuclear Physics (Distinguished Diploma)
Department of Theoretical Physics, Kharkov State University

1994 – 1995
Special German Language Course (Distinguished Diploma)
Goethe-Institut, Mannheim, Germany

1973 – 1976
Special English Language Course (Distinguished Diploma)
Kharkov State University

Personal skills

Mother tongue(s)
Russian, Ukrainian

Other language(s)

Language	Understanding	Speaking	Writing	Level
English	C2	C2	C2	Proficient
German	B2	B2	B1	Independent
Italian	A2	A2	A1	Basic

Levels: A1/A2 Basic – B1/B2 Independent – C1/C2 Proficient (Common European Framework of Reference)

Communication skills
- Excellent written and oral communication skills developed through 40+ years of international scientific collaboration, conference presentations and teaching
- Experience in multicultural environments (Germany, USA, China, CERN)

Organisational / managerial skills
- Organisation of international workshops (NATO ARW 2000 as Partner Country Co-Director)
- Editorial management of scientific journals
- Supervision of PhD and M.Sc. Students

Job-related skills

- Advanced research in cryptography, quantum computing, polyadic algebraic structures
- Mathematical modelling and signal processing
- Scientific writing and peer reviewing for leading international journals

Digital competences

- Programming: Perl, Mathematica, Maple, LaTeX, BibTeX, HTML
- Operating systems: Windows, Unix, Linux
- Software: Microsoft Office, Adobe products, Scientific WorkPlace, Photoshop, Dreamweaver

Additional information

Publications

Author of 214 scientific publications, including 9 monographs published by IOP Publishing, Springer, Kluwer and Nova. Articles appear in Physical Review, Journal of Physics, Communications in Mathematical Physics, Journal of Mathematical Physics, Communications in Algebra, Semigroup Forum, Letters in Mathematical Physics and others.

Selected books:

- S. Duplij, R. Vogl – Innovative Quantum Computing, IOP Publishing, 2023
- S. Duplij – Polyadic Algebraic Structures, IOP Publishing, 2022 (461 pp.)
- S. Duplij, W. Siegel, J. Bagger (eds.) – Concise Encyclopedia of Supersymmetry, Kluwer/Springer, 2004/2005
- S. Duplij & J. Wess (eds.) – Noncommutative Structures in Mathematics and Physics, Kluwer, 2001

Fellowships and grants

- Alexander von Humboldt Fellowships (1994–1997, 2001, 2005–2006, 2008, 2010)
- Fulbright Scholar Program, Rutgers University (2011–2012)
- European Research Council Grant, University of Münster (2015–2016)
- Scientific Grant, Harbin Engineering University, China (2025–2026)
- National Natural Science Foundation of China Grant (2001)

Memberships

- American Physical Society, American Mathematical Society, European Physical Society
- International Association of Mathematical Physics, International Mathematical Union
- Alexander von Humboldt Club (Ukraine)
- Russian Union of Writers

Editorial activity

- Editor of East European Journal of Physics (2013–present)
- Former Editor of Kharkov National University Journal (1999–2013)
- Reviewer for Zentralblatt Mathematik, Modern Physics Letters A, Advances in Mathematical Physics, Symmetry and others

Literary and musical activity

- Writing poetry and prose — more than 200 publications in professional literary magazines in English, German, French, Spanish and other languages
- Author of 14 literary books (available on Amazon, Barnes & Noble, etc.)
- Literary presentations and readings
- Playing guitar and composing songs
- Audio music albums: “Blitz” (1995), “Motifs of years” (1996), “Supermanifold of life” (2007), “Life-casino” (2026)
- MC audio album: “Blitz” (GEMA, Berlin, 1996)

Mass media and public activity

- TV programmes and interviews at Kharkov TV studios
- Scientific programme “Logos” — interviews at the Central Kharkov radio station
- Articles about S. Duplij published in USA (SCOOP USA, Gazette, LoC), Germany and Ukrainian press
- Participation in Alexander von Humboldt Fellows meetings and workshops

Annexes

- Scientific publications: https://www.uni-muenster.de/IT.StepanDouplii/Duplij_publications-(1980-2026)-full.pdf
- Research summary: https://www.uni-muenster.de/IT.StepanDouplii/Duplij_SciRes2026.pdf
- Literary publications: https://www.uni-muenster.de/IT.StepanDouplii/old/pub-lit.htm
- Music site: https://www.uni-muenster.de/IT.StepanDouplii/old/music

Münster, 2026

Universität Münster
CIT – Center for Information Technology

Universität Münster
CIT – Center for Information Technology
Röntgenstraße 7–13
48149 Münster
Germany

Interim Reference Letter

(Zwischenzeugnis)

Mr. Stepan Douplii has been employed at the Center for Information Technology (CIT) of the University of Münster since **1 June 2019** as a research associate in the research project on *Innovative and Atypical Quantum Computing*.

The CIT, with approximately 160 employees, is the central service and competence centre of the University of Münster for all IT-related matters. The focus of his work is the investigation of possible fields of application as well as the development of deployment concepts for quantum computers in scientific research. A particular emphasis is placed on surveying the state of the art in the application of innovative mathematical concepts for quantum computers.

Within the scope of this activity, Mr. Douplii is responsible for the following tasks:

- Analysis and exploration of the literature on the state of research in the field of quantum computing
- Development of independent new research approaches for quantum computers based on innovative non-standard methods of mathematics
- Publication of the results of the research work in specialist articles and books
- Application of his solid lifelong experience in mathematical physics as well as close, appreciative networking with internationally recognised experts

Mr. Douplii possesses excellent and, even in peripheral areas, very profound specialist knowledge, which he always skilfully applies for the benefit of our institution. As a recognised expert, he is in ongoing exchange with other experts and also independently organises further training and professional development measures within the framework of his research activities.

Due to his very good comprehension, he is at all times able to correctly assess even difficult situations immediately and to find very good solutions quickly. Mr. Douplii always shows a high degree of personal initiative and fully identifies with his tasks and our institution, impressing also through his very great enthusiasm for the work.

He can always be relied upon for his highly reliable, very prudent and extremely conscientious working style, even in difficult situations. He carries out all tasks at all times completely independently, extremely carefully and in a well-planned, thoughtful manner. He always acts calmly, considerately and in a goal-oriented way, and with the highest degree of precision. In this, he consistently impresses in a particularly positive manner both in qualitative and quantitative terms.

Trustworthiness and absolute reliability characterise Mr. Douplii's working style at all times. Even for the most difficult problems he finds highly effective solutions, which he successfully implements in practice at all times and thereby always achieves excellent work results.

Mr. Douplii distinguishes himself through the publication of numerous specialist articles as well as two scientific books entitled *Polyadic Algebraic Structures* and *Innovative Quantum Computing*. These achievements testify to his extraordinary commitment and the highest degree of identification with his own work. His willingness to perform and his professional excellence deserve particular emphasis.

He is highly valued by all for his consistently friendly and even-tempered nature. He is always helpful and courteous and, if necessary, subordinates personal interests. His conduct towards superiors, colleagues and clients is exemplary at all times.

This interim reference is issued at the request of Mr. Douplii. We thank him for the consistently very good performance rendered in the past and look forward to a continued positive continuation of the employment relationship.

Münster, 4 December 2024

Prof. Dr. Raimund Vogl

Head of CIT
University of Münster
Center for Information Technology

CURRICULUM VITAE
Stepan Douplii



Name: **Stepan Douplii**
Publishing name: **Steven Duplij**
Cyrillic name: **Степан Анатольевич Дуплий**

Address:
- 48159 Münster, Germany

E-mails:
duplij@gmx.de
sduplij@gmail.com

Homepage:
https://www.uni-muenster.de/IT.StepanDouplii

SUMMARY

Senior Scientist with more than forty years of research experience in cryptography, quantum computing, algebraic structures, coding-related mathematics, and mathematical physics.

Author of 214 scientific publications, including nine monographs with IOP Publishing, Springer, Kluwer, and Nova.

Extensive background in polyadic algebraic systems, quantum information, mathematical modeling, and signal processing.

Long-term research experience in Germany (WWU Münster, CIT; ERC projects; Alexander von Humboldt Fellowships).

Strong international profile: USA (Fulbright), China (Visiting Research Fellow), CERN (CMS Collaboration).

Fluent in English, strong German, native Russian/Ukrainian, spoken Italian.

WORK AUTHORIZATION

German PR (Unbefristete Niederlassungserlaubnis) | spouse of an Italian citizen.

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. Rekalo

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

2025-2026 Visiting Research Fellow (Scientific Grant), Yantai Research Institute, Harbin Engineering University, Harbin, China
Research in cryptography, quantum computing, algebraic structures, and signal processing.
2025–present Affiliated Researcher (Hosting Agreement), Center for Information Technology (CIT), University of Münster, Germany
Continued collaboration in cryptography, quantum computing, and mathematical physics.
2019-2025 Scientific Researcher at the Center of Information Technology (CIT), Universität Münster, Münster, Germany
Research in quantum information, cryptography, algebraic structures, and mathematical modeling; participation in ERC-funded projects.
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
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

2025-2026 Scientific Grant, Yantai Research Institute, Harbin Engineering University, Harbin, China (Host: Qiang Guo)

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)

SCIENTIFIC PUBLICATIONS

In total: **214** publications, among them 9 books and 205 articles in *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, etc.* Full lists are on my homepage https://www.uni-muenster.de/IT.StepanDouplii/Duplij_publications-(1980-2026)-full.pdf

Scientific Books (available on Amazon, Barnes&Noble, etc.):

1. S. Duplij, R. Vogl, "*Innovative Quantum Computing*", IOP Publ., Bristol-London, 2023, 178 pp.
2. S. Duplij,"*Polyadic Algebraic Structures*", IOP Publ., Bristol-London, 2022, 461 pp.
3. S. Duplij and M.L. Walker, eds, "*Selected Topics in Gravity, Field Theory and Quantum Mechanics*",, MDPI Books, Basel, 2022, 348 pp.
4. S. Duplij, "*Exotic Algebraic and Geometric Structures in Theoretical Physics*", Nova Publishers, New York, 2018, 410 pp.
5. S. Duplij, "*Supersymmetry, Quantum Groups, Multigravity and Singulaer Theories"*, Central West Publ., Australia, 2018, 254 pp.
6. S. Duplij, W. Siegel, and J. Bagger, eds., "*Concise Encyclopedia of Supersymmetry And Noncommutative Structures In Mathematics And Physics*", Kluwer Academic Publishers, Dordrecht-Boston-London, 2004, 584 pp. (Second printing, Springer Science and Business Media, Berlin- New York-Heidelberg, 2005).
7. S. Duplij and J. Wess, eds., "*Noncommutative Structures in Mathematics and Physics*", Kluwer, Dordrecht, 2001, 493 pp.
8. S. Duplij and V. G. Zima, eds., "*Supersymmetric Structures in Mathematics and Physics*",

UkrINTI, Kiev, 2000, 262 pp.

9. S. Duplij "*Semisupermanifolds and Semigroups*", Kharkov: Krok, 2000, 220 pp. (Second Print by CreateSpace Publ.: Charleston, 2013).

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*
2018 Invited Editor at *World Scientific Publishing Co*

Reviewing:

1998-now *Zentralblatt Mathematik*, Karlsruhe-Berlin, Germany
2005-now *Journal of Zhejiang University. Science*, Hangzhou, China
2007-now AIP, Melville, USA
2010-now *Reports of Mathematical Physics*, Warsaw, Poland
2012-now *Advances in Mathematical Physics*, New York, USA
2016-now *Modern Physics Letters A*, World Scientific, Singapore
2017-now *International Journal of Modern Physics B*, World Scientific, Singapore
2014-now *Advances in Applied Clifford Algebras*, Springer, Heidelberg, Germany
2015-now *Hindawi Publishing Co.*, London, UK
2018-now *Symmetry*, Basel, Switzerland

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

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, RJ)
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, Wikipedia (UA), Google Scholar, Microsoft Academics, Scopus, Semantic Scholar, Zmath, ORCID, SciProfiles.

CONFERENCE ORGANIZING

2017 December Workshop *Supergeometry And Applications* (Luxembourg), as a member of Advisory Board
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 **30** international conferences, workshops, schools and seminars in USA, Germany, France, UK, Poland, Spain, Czech Republic, Russia, China, Ukraine.

VISITS & TALKS (names)

S. Adler, H. Arodz, M.A. Aukhadiev, J. Bagger, M. Bianchi, L. Bonora, B. Broda, C. Burdik, R. Casalbuoni, S. Catto, Jiejing Cheng, M. Ciric, A. Comtet, J. Cuntz, M. Dabrowski, C. Delizia, A. Douglas, B. Dragovich, W. Dudek, G. Esposito, P. Etingof, A.M. Gal'mak, D.V. Gal'tsov, G.A. Goldin, S.A. Grigoryan, H. Grosse, D. Grumiller, Qiang Guo, U. Günther, L. Kauffman, R. Kotiuga, M.I. Krivoruchenko, J. Kupsch, M. Lapidus, M.I. Levchuk, Fang Li, Kang Li, E. Lomon, J. Lukierski, L. Lusanna, W. Marcinek, A. Martsinkovsky, M. Mulase, F. Müller-Hoissen, Chi-Keung Ng, W. Von Oertzen, J. Okninski, N. Poncin, A.Ya. Radyno, M. Schlichenmaier, A. Schwarz, M. Shifman, W. Siegel, G.L. Stavraki, C. Ringel, V. Rittenberg, W. Rühl, J. Stasheff, X. Tata, M. Tonin, P. Urbanski, A. Vilenkin, K. Wali, J. Wess, G. Wolschin, S. Woronowicz, R. Wulkenhaar, Yun-Long Xu, Zheng Yu, C. Zachos, M. Zirnbauer, M. Znojil.

RESEARCH INTERESTS

Cryptography and signal processing.
Quantum computing and quantum information.
Coding theory and algebraic structures.
Polyadic algebraic structures and their applications in cryptography.

Mathematical methods in secure communication systems.
Supersymmetry and semigroups; supermatrix models; superconformal symmetry; super Riemann surfaces; exotic supermanifolds; supersymmetric quantum mechanics.
Quantum groups and supergroups; weak Hopf algebras and Yang-Baxter equation; representations of quantized algebras, new actions of quantum algebras on quantum spaces.
Nonlinear methods in (super)electrodynamics, Yang-Mills, gravity and multigravity.
Constrained systems and gauge theories, quantum chromodynamics and gravity.

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.

SCIENTIFIC RESULTS AND INNOVATIVE IDEAS

with direct clickable links to articles
https://www.researchgate.net/publication/385046446_Abstract_of_my_life
https://www.uni-muenster.de/IT.StepanDouplii/Duplij_SciRes2026.pdf

SKILLS

Languages: English (perfect), German (speaking), Russian (native), Ukrainian (native), Italian (basic)**.**
Programming: Perl, Mathematica, Maple, LaTeX, BibTeX, HTML.
PC platforms: MS-DOS, Windows, 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
https://www.uni-muenster.de/IT.StepanDouplii/old/TV-RADIO
Scientific program "Logos" (interviews at the Central Kharkov radio station).
Articles about S. Duplij: in USA (SCOOP USA, Gazette, Library of Congress); in Germany, in Ukrainian press.
Alexander von Humboldt Fellows meetings/workshops.

LITERARY & MUSICAL ACTIVITY

Writing poetry and prose

More than 200 publications in USA/UK professional literary magazines in English, German, French, Spanish, etc. (the full list is on homepage), and **14** literary books (available on Amazon, Barnes&Noble, etc.). Literary presentations:
https://www.uni-muenster.de/IT.StepanDouplii/old/duplij-presentations.htm

Playing guitar and composing songs

Professional CD audio albums of songs (for mp3's see Music Site):
"*Blitz*" (Heidelberg, 1995), "Motifs of years" (Heidelberg, 1996),
"Supermanifold of life" (Houston, 2007),
MC audio album of songs: "Blitz" (GEMA, Berlin, 1996).

Universität Münster

Center for Information Technology

Universität Münster
CIT – Center for
Information Technology

Röntgenstraße 7–13
48149 Münster

Zwischenzeugnis

Herr Stepan Douplii ist seit dem 1. Juni 2019 im Center for Information Technology (CIT) als wissenschaftlicher Mitarbeiter im Forschungsprojekt zu *Innovative and Atypical Quantum Computing* tätig.

Das CIT ist mit rund 160 Beschäftigten das zentrale Dienstleistungs- und Kompetenzzentrum der Universität Münster für alle Belange der IT. Im Mittelpunkt seiner Tätigkeit steht die Erhebung zu möglichen Anwendungsfeldern sowie die Erarbeitung von Einsatzkonzepten für Quantencomputern in der wissenschaftlichen Forschung. Ein besonderer Schwerpunkt soll dabei die Erhebung zum Stand der Wissenschaft bei der Anwendung innovativer Mathematischer Konzepte für Quantencomputern sein.

Im Rahmen dieser Tätigkeit ist Herr Douplii für folgende Aufgaben verantwortlich:

- Analyse und Erschließung der Literatur zum Stand der Forschung im Themenfeld des Quantencomputing
- Entwicklung eigenständiger neuer Forschungsansätze für Quantencomputer auf Basis innovativer non-standard Methoden der Mathematik
- Publikation der Ergebnisse der Forschungsarbeit in Fachartikeln und Büchern
- Anwendung seiner fundierten lebenslangen Erfahrung in der Mathematischen Physik sowie die enge, wertschätzende Vernetzung mit weltweit anerkannten Experten

Herr Douplii verfügt ein hervorragendes und auch in Randbereichen sehr tiefgehendes Fachwissen, welches er stets gekonnt zum Wohle unserer Einrichtung einsetzt. Er ist als ausgewiesener Experte im laufenden Austausch mit anderen Expert*innen und organisiert zudem Fort- und Weiterbildungen im Rahmen seiner Forschungstätigkeit eigenständig.

Aufgrund seiner sehr guten Auffassungsgabe ist er jederzeit in der Lage, auch schwierige Situationen sofort zutreffend zu erfassen und schnell sehr gute Lösungen zu finden. Herr Douplii zeigt jederzeit hohe Eigeninitiative und identifiziert sich immer voll mit seinen Aufgaben und unserer Einrichtung, wobei er auch durch seine sehr große Einsatzfreude überzeugt.

Auf seine sehr absolut zuverlässige, sehr umsichtige und äußerst gewissenhafte Arbeitsweise ist auch in schwierigen Situationen jederzeit Verlass. Alle Aufgaben führt er

jederzeit vollkommen selbstständig, äußerst sorgfältig und planvoll durchdacht aus. Er agiert immer ruhig, überlegt und zielorientiert und in höchstem Maße präzise. Dabei überzeugt er stets in besonderer Weise sowohl in qualitativer als auch in quantitativer Hinsicht.

Vertrauenswürdigkeit und absolute Zuverlässigkeit zeichnen den Arbeitsstil von Herrn Douplii jederzeit aus. Auch für schwierigste Problemstellungen findet er sehr effektive Lösungen, die er jederzeit erfolgreich in die Praxis umsetzt und damit immer ausgezeichnete Arbeitsergebnisse erzielt.

Herr Douplii zeichnet sich durch die Veröffentlichung zahlreicher Fachartikel sowie zweier wissenschaftlicher Bücher mit den Titeln *Polyadic Algebraic Structures* und *Innovative Quantum Computing* aus. Diese Leistungen zeugen von seinem außergewöhnlichen Engagement und höchstem Maß an Identifikation mit der eigenen Arbeit. Seine Leistungsbereitschaft und fachliche Exzellenz sind dabei in besonderem Maße hervorzuheben.

Er wird wegen seines stets freundlichen und ausgeglichenen Wesens allseits sehr geschätzt. Er ist immer hilfsbereit, zuvorkommend und stellt, falls erforderlich, auch persönliche Interessen zurück. Sein Verhalten zu Vorgesetzten, Kolleg*innen sowie Kund*innen ist jederzeit vorbildlich.

Dieses Zwischenzeugnis wird auf Wunsch von Herrn Douplii ausgestellt. Wir bedanken uns bei ihm für die in der Vergangenheit erbrachten stets sehr guten Leistungen und freuen uns auf eine weiterhin positive Fortsetzung des Arbeitsverhältnisses.

Münster, 04.12.2024



Prof. Dr. Raimund Vogl

Leiter CIT

In total: **183** publications, among them **9** books and **174** articles on
mathematical physics, quantum computing, nonlinear electrodynamics, gravity, cryptography, signal processing and DNA structure

Publications by Steven Duplij/Stepan Douplii (1985-2026)

[1] S. Duplij, *Multiary gradings*, Axioms **15** (2026), 197 (Special issue "Computational Algebra, Coding Theory and Cryptography: Theory and Applications", 3nd Edition).

[2] S. Duplij, Q. Guo, and N. Fu, *Ternary public-key cryptosystem*, Coll. Inf. Commun. Eng., HEU, arXiv: 2606.07832 [cs.CR], Harbin, 2026, 28 p.

[3] S. Duplij, *Positional numeral systems over polyadic rings*, Mathematics **14** (2026), 530.

[4] S. Duplij and Q. Guo, *Polyadic encryption*, Axioms **14** (2025), 835 (Special issue *Computational Algebra, Coding Theory and Cryptography: Theory and Applications, 2nd Edition*).

[5] S. Duplij, *Higher power polyadic group rings*, Axioms **15** (2026), 371.

[6] B. Na, Q. Guo, and S. Douplii, *Joint delay-doppler estimation for HF channels under impulsive noise based on SW-APC-FOTD and RSSFT-Hough*, IEEE Comm. Lett. **30** (2026), 3372–3376.

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