

CURRICULUM VITAE

VLADIMIR V. KISIL

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EXPERIENCE

Research: Experience in research work in complex and Clifford *analysis*, group convolutions and pseudodifferential operators on nilpotent Lie groups and C^* -algebras generated by them; harmonic and microlocal analysis; *quantum mechanics*, interaction between harmonic analysis, physics, and *combinatorics*; mathematical simulation of natural and social processes.

EMPLOYMENT:	2004 – now	Reader	University of Leeds (England)
	1999 – 2004	Research Fellow	University of Leeds (England)
	1998 – 2005	Docent	Odessa State University (Ukraine)
	1992 – 1998	Assistant	Odessa State University (Ukraine)
	1996 – 1997	PostDoc Position	Gent University (Belgium)
	1993 – 1995	Visiting Professor	CINVESTAV del IPN (Mexico)
	1983 – 1986	Military service	USSR Navy

EDUCATION:	1989 – 1992	certificate	Odessa State University , Postgraduate course
	1982 – 1989	diploma with honors	Odessa State University , Department of Mathematics
	1971 – 1982	certificate	Secondary (10-year) School

QUALIFICATION:	1992	Ph.D.	Physics and Mathematics
	1989	M.Sc.	Mathematician, Teacher of Mathematics

LANGUAGES:	Ukrainian	(mother tongue)
	Russian	(mother tongue)
	English	(fluent)
	Spanish	(mas ó menos)

PUBLICATIONS: One research monograph and more than 70 research publications in international editions. The **List of Publications** is enclosed.

CONFERENCES WITH TALKS OR POSTERS PRESENTED

1987–90 *Memorial Gakhov workshop*, Odessa (Ukraine)
1987 *Diff. and Intgr. Equation*, Odessa (Ukraine)
1989 *27-th annual Soviet Students Conf.*, Novosibirsk (Russia)
1990 *Functional Analysis and Application*, Odessa (Ukraine)
1991 *16-th School on Operators Theory*, Nizhnij Novgorod (Russia)

- 1992 *International Seminar Series on Mathematical Simulation of Social Catastrophes and Nonlinear Models of Sociodynamics*, Kiev (Ukraine)
- 1992 *International Conference dedicated to the Memory of Acad. M.P.Kravchuk*, Kiev (Ukraine)
- 1993 *III International Conference on Clifford Algebras and Their Applications in Mathematical Physics*, Deinze (België)
- 1993 *10-th Conference on Problems and Methods in Mathematical Physics*, Chemnitz (Germany)
- 1994 *Conference in Harmonic Analysis and Operator Theory*, Caracas (Venezuela)
- 1994 *Symposium on Computer Simulation and Artificial Intelligence*, México (México)
- 1994 *Great Plains Operator Theory Symposium*, Lincoln (USA)
- 1994 *Interaction between Harmonic Analysis, Functional Analysis and Probability*, Columbia (Missouri, USA)
- 1994 *AMS Symposium on Quantization*, MIT (USA)
- 1994 *V Coloquio Internacional de Filosofía e Historia de las Matemáticas*, UNAM (México)
- 1994 *The Norbert Wiener Centenary Congress*, Michigan State U. (USA)
- 1994 *International Conference on Operator Theory for Complex and Hypercomplex Analysis*, CINVESTAV del IPN (Mexico)
- 1995 *III International Conference on Computer Simulation*, Universidad Panamericano (Mexico)
- 1996 *Special Section Moments and Operators*, of AMS Meeting # 909 Iowa City (USA)
- 1996 *AMS–BeNeLux International Meeting*, Antwerpen (Belgium)
- 1996 *IV International Conference on Clifford Algebras and Their Applications in Mathematical Physics*, Aachen (Germany)
- 1996 *Symposium Analytical and Numerical Methods in Quaternionic and Clifford Analysis*, Seiffen (Germany)
- 1996 *Aegean Conference on Operator Algebras and Applications*, Pithagorio, Samos (Greece)
- 1996 *Modern Banach Spaces Conference*, Kent State University (USA)
- 1997 *7-th Int. Workshop on Analysis and Its Application*, University of Maine (USA), **invited one-hour talk**
- 1997 *ISAAC Congress*, University of Delaware (USA)
- 1997 *Geometrical Analysis on Singular and Noncompact Manifolds*, San Feliu de Guixols (Spain)
- 1997 *9-th Int. Conference on Formal Power Series and Algebraic Combinatorics*, Vienna (Austria)
- 1997 *International M.G. Krein Conference on Operator Theory and Applications*, Odessa (Ukraine)
- 1997 *Non-Commutative Geometry and Applications*, Lisboa (Portugal)
- 1997 *Combinatorics—Algebraic, Geometric and Probabilistic Aspects*, San Feliu de Guixols (Spain)
- 1998 *Workshop on Recent Trends in Complex Methods for Partial Differential Equations*, Ankara (Turkey), **invited one-hour talk**
- 1998 *International Congress of Mathematicians*, Berlin (Germany)
- 1998 *Seminar on Analysis*, Schögl (Austria)
- 1999 *Special Session on Operator Algebras* of AMS Joint Meeting, San Antonio (USA)
- 1999 *Conference on Operator Theory*, Newcastle (England)
- 2000 *3-rd Workshop on Applications and Generalizations of Complex Analysis*, Aveiro (Portugal)

- 2000 *International Workshop on Operator Theory and Applications*, Bordeaux (France)
- 2000 *International Functional Analysis Meeting*, Valencia (Spain).
- 2000 *The International Congress on Mathematical Physics*, London (England)
- 2000 *IWOTA–Portugal 2000*, Faro (Portugal)
- 2000** *Clifford Analysis and Its Applications*, Prague (Czech Republic)—**invited one-hour talk**
- 2001 *Classic Analysis, Operator Theory, Geometry of Banach Spaces*, St.Petersburg (Russia)
- 2001 *Quantum Theory: reconsideration of foundations*, Växjö (Sweden)
- 2001 *International Conference on Banach Algebras and Cohomology*, Newcastle (England)
- 2001 *18th British Combinatorial Conference*, Brighton (England)
- 2001** *LMS Workshop on Quantisation, Deformations, and New Homological and Categorical Methods in Mathematical Physics*, Manchester (England)—**invited talk**
- 2001 *Conference on Complex Analysis and Potential Theory*, Kiev (Ukraine)
- 2001 *Conference on Functional Analysis and Applications*, Kiev (Ukraine)
- 2002 *Analysis and Operators*, Biarritz (France)
- 2002 *International Conference on Functional analysis and Its Applications dedicated to the 110th anniversary of S. Banach*, Lviv (Ukraine)
- 2002 *GROUP24–XXIV International Colloquium on Group Theoretical Methods in Physics*, Paris (France)
- 2003 *British Mathematical Colloquium*, Birmingham (England)
- 2003 *Symmetry in Nonlinear Mathematical Physics*, Kiev (Ukraine)
- 2003 *International Congress on Industrial and Applied Mathematics*, Sydney (Australia)
- 2003 *12-th Summer St. Petersburg Meeting in Mathematical Analysis*, St. Petersburg (Russia)
- 2003** *International Workshop “Potential Theory and Free Boundary Flows”*, Kiev (Ukraine)—**invited talk**
- 2004 *Analysis and Operators: Fourth general meeting*, Dalfsen (The Netherlands)
- 2004 *Non-Commutative Geometry and Representation Theory*, Karlsberg (Sweden)
- 2004 *IWOTA–International Workshop on Operator Theory and Applications*, Newcastle (England)
- 2005 *Symmetry in Nonlinear Mathematical Physics*, Kiev (Ukraine)
- 2005 *Workshop Symbolic Calculations and Exact Methods in Mathematical Physics*, Kiev (Ukraine)
- 2005 *Banach Algebras and their Applications*, Bordeaux (France)
- 2005 *Conference on Operator Theory, Function Spaces and Applications*, Aveiro (Portugal)
- 2005** *LMS Symposium Operator Theory and Spectral Analysis*, Durham (England), **invited talk**
- 2006 *International Conference on Applied Mathematics and Interdisciplinary Research*, Tianjin (China)
- 2006** *Conference on Quantum Dynamics in a Real Molecular Environment*, Warsaw (Poland), **invited one hour talk**
- 2006 *Internationales Kolloquium über Anwendungen der Informatik und der Mathematik in Architektur und Bauwesen*, Weimar (Germany)
- 2006 *Cats, Kets and Cloisters*, Oxford (England)
- 2006 *Geometric and Asymptotic Group Theory*, Manresa (Spain)
- 2006 *Groups in Geometry and Topology*, Malaga (Spain)
- 2007 *Tenth International Conference on Squeezed States and Uncertainty Relations (ICSSUR-X)*, Bradford (England), **invited talk**

- 2007 *International Conference on Modern Analysis and Applications dedicated to 100th anniversary of Mark Krein*, Odessa (Ukraine)
- 2007 *Workshop on Clifford Algebras and Applications*, Ghent (Belgium), **invited talk**
- 2007 *Second qNet Meeting*, London (England)
- 2007 *Transformation Groups*, Moscow Independent University (Russia)
- 2007 *Mathematical Questions of Nanosystems Theory*, Steklov Mathematical Institute (Russia)
- 2008 *Boundary Value Problems and Functional Equations with Applications*, Krakow (Poland)
- 2008 *Classic and Modern Harmonic Analysis*, Edinburgh (Scotland)
- 2008 *17-th Summer St. Petersburg Meeting in Mathematical Analysis*, St. Petersburg (Russia)
- 2008 *6th Bolyai-Gauss-Lobachevsky Conference: International conference on the non-euclidean geometry and its applications in modern physics*, Debrecen (Hungary) **invited plenary talk**
- 2008 *3rd Q-net Workshop: Quantum Information Theory*, Edinburgh (Scotland)
- 2009 *Quantum Theory: reconsideration of foundations (QTRF5)*, Växjö (Sweden)
- 2009 *Workshop on Representation Theory and Lie Theory*, Cambridge (England)
- 2009 *7th ISAAC Congress*, (session organiser) London (England)
- 2009 *Second Ukrainian Mathematical Congress*, Kiev (Ukraine)
- 2009 *4th Q-net Workshop: Quantum Information Theory*, Oxford (England)
- 2010 *LMS-WIMCS Workshop “Wiener-Hopf Techniques and its Applications”*, Aberystwyth (Wales)
- 2010 *IWOTA—International Workshop on Operator Theory and Applications*, Berlin (Germany), (session organiser)
- 2010 *28th International Colloquium on Group-Theoretical Methods in Physics*, Newcastle (England)
- 2010 *Matrix and Operator Pencil Network, Third meeting*, **invited hour talk**, Edinburgh (Scotland)
- 2010 *Finsler Extensions of Relativity Theory—2010*, Moscow (Russia) **invited hour talk** and a session organiser
- 2011 *Analytic and algebraic methods in physics*, Prague (Czech Republic)
- 2011 *13th Workshop on Applications and Generalizations of Complex Analysis*, Aveiro (Portugal)
- 2011 *Discrete Harmonic Analysis*, Cambridge (England)
- 2011 *From Abstract to Computational Harmonic Analysis*, Strobl (Austria)
- 2011 *8th International Algebraic Conference in Ukraine*, Lugansk (Ukraine)
- 2012 *14th Workshop on Applications and Generalizations of Complex Analysis*, **invited hour talk**, Aveiro (Portugal)
- 2012 *Second LMS-WIMCS Workshop “Wiener-Hopf Techniques and its Applications”*, Aberystwyth (Wales)
- 2012 *Analytic Methods of Analysis and Partial Differential Equations (AMADE-2012)*, **invited plenary talk**, Minsk (Belarus)
- 2013 *New Approaches in Theoretical and Applied Methods in Algebra and Analysis*, **invited plenary talk**, Constanta (Romania)
- 2013 *9th ISAAC Congress*, Krakow (Poland)
- 2013 *Complex Analysis, Potential Theory and Applications*, Kiev (Ukraine)
- 2013 *Classifying Structures for Operator Algebras and Dynamical Systems*, Aberystwyth (Wales)
- 2014 *WIMCS—CIDMA Wiener–Hopf Workshop*, Aveiro (Portugal)
- 2016 *Past and Future Directions in Hypercomplex and Harmonic Analysis*, Aveiro (Portugal)

- 2016 *Noncommutative Analysis and Partial Differential Equations*, London (England)
- 2016 *Uncertainty Quantification in Inverse Problems*, Novosibirsk (Russia)

COLLOQUIUM TALKS:

- 1987–1993 Odessa State University (Ukraine)
- 1991 Steklov Mathematical Institute, Moscow (Russia)
- 1991 Rostov-on-Don State University (Russia)
- 1991 Mathematical Institute, Tbilisi (Rep. of Georgia)
- 1993 University of Ghent (Belgium)
- 1994 Math. Dep., CINVESTAV del IPN (Mexico)
- 1995 Phys. Dep., CINVESTAV del IPN (Mexico)
- 1995 Computer Sci Dep., UNAM (Mexico)
- 1995 Arov's seminar, Odessa Pedagogical University (Ukraine)
- 1995 Gent University (Belgium)
- 1995 University Paris VII (France)
- 1995 Institute of Mathematics, Bergakademia of Freiberg (Germany)
- 1995 University of Weimar (Germany)
- 1995 Free University of Berlin (Germany)
- 1996 Katholieke Universiteit Lueven (Belgium)
- 1996 Massachusetts Institute of Technology (USA)
- 1997 Universiteit Gent (Belgium)
- 1998 Arov's seminar, Odessa Pedagogical University (Ukraine)
- 1998 Eastern Mediterranean University (Cyprus)
- 1999 Bogazici University (Turkey)
- 1999–2000 University of Leeds (England)
- 1999 Cambridge University (England)
- 1999–2002 University of York (England)
- 2001 University Paris-6 (France)
- 2001 University of Aberdeen (Scotland)
- 2002 Oxford University (England)
- 2003 University of Sussex (England)
- 2006 Tianjin University of Technology and Education (China)
- 2006 Wuhan University (China)
- 2007 Belarus State University (Belarus)
- 2008 Warwick University (England)
- 2008 Birmingham University (England)
- 2008 Cardiff University (England)
- 2008 Arov's seminar, Odessa Pedagogical University (Ukraine)
- 2009 Aveiro University (Portugal)
- 2009 Universidad de Oriente (Cuba)
- 2009 Havana University (Cuba)
- 2010 Zhejiang University (China)
- 2010 Wuhan University (China)
- 2010 Nottingham University (England)
- 2012 London Analysis Seminar (England)
- 2012 Odessa National University (Ukraine)
- 2013 King's College, London (UK)
- 2014 Theoretical physics, Birmingham (UK)
- 2015 Centre international de rencontres mathématiques (Marseille, France)
- 2016 Indian Institute of Technology (Kharagpur, India)

ADVANCED COURSES:

- 2000 *Spaces of Analytical Functions and Wavelets*, Univ. of Coimbra, (Portugal)
- 2000 *Special Functions and Their Symmetries*, Univ. of Leeds, (England)
- 2008 *Erlangen Programme at Large*, Univ. of Leeds, (England)
- 2010 *Group Representations and Analytic Functions*, Minsk, (Belarus)
- 2010–16 *Erlangen program in geometry and analysis: $SL(2, \mathbb{R})$ case study*, EPSRC-funded distant learning PG course—MAGIC (England)
- 2011–17 *The Heisenberg group in mathematics and physics*, EPSRC-funded distant learning PG course—MAGIC (England)
- 2016 *Geometry, Integrability and Quantization*, Varna (Bulgaria)
- 2016 Global Initiative for Academic Networks—GIAN, Kharagpur (India)

POSTGRADUATE STUDENTS:

- 2004 Alastair Brodlie, *Relationships Between Quantum and Classical Mechanics using the Representation Theory of the Heisenberg Group*.
- 2006 Debapriya Biswas, thesis *Geometry of elliptic, parabolic and hyperbolic homogeneous spaces using Clifford algebras and group representations*
- 2012 Abdelhamid Salem A El Mabrok, thesis *Operators in complex analysis and the affine group*
- 2014 Souad Ahmed Ali Abumaryam, thesis *Numerical and Symbolic Aspects of Harmonic Analysis*
- 2016 Amer Hassan A. Albargi, thesis *Covariant Transforms on Locally Convex Spaces*
- 2016 Steven Trotter, thesis *Involutive Algebras and Locally Compact Quantum Groups*

Current PG students: Khawlah Ali Mustafa, Richard Whyman, Amerah Alameer, Fadhel Al-malki, Dale Hodgson, Amjad Alghamdi, Taghreed Alqurashi.

POSTDOCTORAL FELLOW:

- 2004 Dr. Gong Yafang

REFEREE: for Founding Bodies and Professional Journals

EPSRC (grants assessment)

Research Foundation Flanders (FWO) (grants assessment)

Journal of Physics A: Mathematical and General

Computational Methods and Function Theory

Journal of Optics B: Quantum and Semiclassical Optics

Journal of Mathematical Analysis and Applications

Journal of Fourier Analysis and its Applications

The Houston Journal of Mathematics

The Bulletin of the Belgian Mathematical Society—Simon Stevin

Experimental Mathematics

Foundations of Physics

Communications in Mathematical Analysis

Complex Variables and Elliptic Equations

Advances in Applied Clifford Algebras

Proceedings A of The Royal Society of Edinburgh

Trends in Mathematics

Journal of Applied Analysis

REVIEWER: *Mathematical Reviews* of AMS (USA)
Zentralblatt für Mathematik (Germany)

MEMBERSHIP: The London Mathematical Society
 The International Society for Analysis, its Applications and Computation (ISAAC) life-time member

AWARDS and DISTINCTIONS:

- 2000 My **paper** won Essay Competition at ICMP2000, London, England.
- 1998 Prize of the *Renaissance* foundation (Ukraine)
- 1995 Investigador Nacional Nivel I (Mexico)
- 1993 One year research Scholarship from *Foundation PRO MATHEMATICA* (French Mathematical Society)
- 1993 Honor Scholarship for Young Researcher Named after *I.I. Mechnikov* of **Odessa State University**
- 1986–1989 Lenin’s scholarship “To the highest ranking student of the class”

GRANTS:

- 2009–2012 member of the EPSRC research network *Matrix and Operator Pencils and Applications*
- 2006–2009 member of the EPSRC research network *Semantics of Quantum Computation*
- 2000-2004 member of EEC Research Training Network *Classical Analysis, Operator Theory, Geometry of Banach spaces, Their Interplay and Their Applications*, contract No. HPRN-CT-2000-00116
- 1999–now Numerous small research and travel grants from LMS and Roayl Society
- 1997 INTAS Project 93–0322–Ext (EU)
- 1996 NWFO Project 3GP03196 (Belgium)
- 1995 INTAS Project 93–0322 (EU)
- 1994 CONACyT Project 1821–E9211 (Mexico)

PERSONAL: Born in 1965
 Marital status: **married, two children**