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CURRICULUM VITAE Volodymyr V. Lyubashenko

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Name	Volodymyr V. Lyubashenko
Date of Birth	July 4, 1959
Place of Birth	Kyiv, Ukraine
Nationality	Ukrainian
Marital Status	married, one daughter
Languages	Ukrainian – mother tongue; English, French – fluent; Italian

RESEARCH FIELD

Multicategories, A_∞-categories, Category Theory, Hopf Algebras, Quantum Groups.

EDUCATION

1976 - 1981	student of Department of Mechanics and Mathematics, Kyiv State University, Ukraine
1981	M. Sc. (university diploma)
1983 - 1986	post-graduate studies at Kyiv Polytechnic Institute
3 Feb 1987	(first degree) Ph. D. (candidate in Phys.-Math. Sciences) at the Institute for Mathematics, Academy of Sciences of Ukraine
1991 - 1996	Post Doctoral Research at Kyiv Polytechnic Institute
27 Dec 2000	(second degree) D. Sc. (doctor in Phys.-Math. Sciences) at the Kyiv National Taras Shevchenko University, Ukraine

Ph. D. Advisor, D. Sc. consultant: Professor Yu. L. Daletskyi, acad.

OBJECTIVES

To share my knowledge of mathematics with students, including elementary level. To collaborate with colleagues mathematicians in the research work.

EMPLOYMENT

Sep 81 - Nov 83	engineer at the Institute for Cybernetics, Kyiv
Jan 87 - Oct 90	Junior Research Fellow at Kyiv Polytechnic Institute
Sep 87 - Jun 88	Associate Professor at Kyiv Polytechnic Institute
Oct 90 - Aug 91	Senior Research Fellow at Kyiv Polytechnic Institute
Sep 91 - Dec 93	Post Doctoral Research at Kyiv Polytechnic Institute
Jun 92 - May 95	Postdoctoral Research Fellow at the University of York, England
Jul 95 - Mar 96	Post Doctoral Research at Kyiv Polytechnic Institute
Mar 96 - Jun 96	Chercheur associé à l'Institut de Recherche Mathématique Avancée, Strasbourg, France
Aug 96 - May 98	Research Scholar at Kansas State University, Manhattan, U.S.A.
Sep 98 - Jun 00	Associate Professor at National University "Kyiv-Mohyla Academy", Kyiv
Oct 98 - Jan 02	Senior Research Fellow at Institute for Mathematics, Kyiv
from Jan 2002	Leading Research Fellow at Institute for Mathematics, Kyiv

SEMINARS GIVEN

at Kyiv (Kyiv State University, Institute for Mathematics, Institute for Theoretical Physics, Kyiv Polytechnic Institute), Voronezh (Voronezh Winter Mathematical School), Montreal (Université de Quebec à Montréal), Quebec (Université Laval), Paris (Université Paris-Nord, Ecole Normale Supérieure, Université Jussieu), Pisa (Universitá di Pisa), Sheffield, Swansea, Milton Keynes (the Open University), Nottingham, York, London (City University), Lyon (Ecole Normale Supérieure, Université Claude Bernard), Strasbourg (Institut de Recherche Mathématique Avancée), Chapel Hill (University of North Carolina), State College (Pennsylvania State University), Lille (Université des Sciences et Techniques Lille–Flandres Artois), Montpellier (Université des Sciences et Techniques du Languedoc), Manhattan (Kansas State University), Cincinnati, Philadelphia (University of Pennsylvania), Columbus (Ohio State University), Göttingen, Bonn (Max-Planck-Institut für Mathematik), München (Ludwig-Maximilians-Universität), Kaiserslautern, Université d'Angers, Zurich (University of Zurich, Eidgenössische Technische Hochshule).

TALKS

Jun 1989 "Differential geometry and computer-algebraic methods in nonlinear problems of physics and mechanics", Vŏru, Estonia

Oct 1990 The first semester "Quantum groups",

Dec 1990 Euler International Mathematical Institute, Leningrad, Russia

Apr 1991 International semester "Infinite dimensional algebras and algebraic geometry", Scuola Normale Superiore, Pisa, Italy

Jun 1991 "Category Theory 1991", McGill University, Montreal, Canada

Sep 1992 "Low Dimensional Topology and Quantum Field Theory", Isaac Newton Institute for Mathematical Sciences, Cambridge, England

Aug 1993 2^{nd} Gauss Symposium, Ludwig-Maximilians-Universität, München, Germany

Aug 1993 Workshop on Conformal Field Theory, Operator Algebras and Low-Dimensional Topology, University of Warwick, Coventry, England

Jun 1994 Journée Groupes Quantiques, Institut Henri Poincaré, Paris, France

May 1995 Colloque "Groupes Quantiques", CIRM, Marseille, France

Nov 1995 Minisemester "Quantum Groups and Quantum Spaces", Stefan Banach International Mathematical Center, Warsaw, Poland

May 1996 Journée d'Algèbre à Reims, Université de Reims, France

Nov 1996 AMS Meeting #916, University of Missouri, Columbia, U.S.A.

May 1997 International Workshop "Mathematical Physics – today, Priority Technologies – for tomorrow", Kyiv, Ukraine

Jun 1998 7^{th} International Colloquium "Quantum Groups and Integrable Systems", Prague, Czech Republic

Sep 2000 Austrian-Ukrainian International Workshop, Kyiv, Ukraine

Sep 2000 NATO Advanced Research Workshop "Supersymmetry", Kyiv, Ukraine

Sep 2000 International Workshop, Bogolyubov Institute for Theoretical Physics, Kyiv, Ukraine

Jul 2001 Third International Algebraic Conference in Ukraine, Sumy, Ukraine

Jun 2002 XIV International Summer School-Seminar on Theoretical and Mathematical Physics, "Volga 14 '2002", Kazan, Russia

Aug 2003 Forth International Algebraic Conference in Ukraine, Lviv, Ukraine

Jun 2004 "Tensor categories in mathematics and physics", Erwin Schrödinger Institute, Vienna, Austria

Jul 2005 Fifth International Algebraic Conference in Ukraine, Odessa, Ukraine

Jul 2006 IV Summer School "Algebra, Topology, Functional and Stochastic Analysis", Kozyova, Lviv Region, Ukraine

Jul 2007 Sixth International Algebraic Conference in Ukraine, Kamyanets-Podilsky, Ukraine

Sep 2007 "Categories in geometry and in mathematical physics", Mediterranean Institute for Life Sciences, Split, Croatia

Jun 2009 "The Interplay of Algebra and Geometry", a conference in honour of Corrado De Concini, Cortona, Italy

Aug 2009 7th International Algebraic Conference in Ukraine, Kharkov, Ukraine

Aug 2009 Ukrainian Mathematical Congress – 2009 (Dedicated to the Centennial of Nikolai N. Bogoliubov), Kyiv, Ukraine

Dec 2009 International conference dedicated to 50th anniversary of Department of Algebra and Mathematical Logic, Kyiv Taras Shevchenko University, Kyiv, Ukraine

Jul 2010 VII Summer School "Algebra, Topology, Analysis and applications", Verhovyna, Ivano-Frankivsk region, Ukraine

Sep 2012 International Conference dedicated to 120-th anniversary of Stefan Banach, Lviv, Ukraine

Jul 2013 9th International Algebraic Conference in Ukraine, Lviv, Ukraine

Jul 2014 IX Summer School "Algebra, Topology and Analysis", Polyanytsya, Ivano-Frankivsk region, Ukraine

Aug 2015 X Summer School "Algebra, Topology and Analysis", Odessa, Ukraine

Aug 2015 10th International Algebraic Conference in Ukraine, Odessa, Ukraine

Aug 2016 XI Summer School "Algebra, Topology and Analysis", Odessa, Ukraine

Jun 2017 International scientific conference "Algebraic and geometric methods of analysis", Odessa, Ukraine

Jul 2017 XII Summer School "Algebra, Topology and Analysis", Kolochava, Ukraine

Jul 2019 XII International Algebraic Conference in Ukraine, Vinnytsia, Ukraine

Aug 2019 XIV Summer School "Analysis, Topology, Algebra and Applications", Pidzakharychi, Ukraine

Jul 2020 The conference dedicated to the 60th anniversary of the algebra department of Kyiv University, zoom

Jul 2021 XIII International Algebraic Conference in Ukraine, Kyiv, Ukraine

Jul 2023 XIV International Algebraic Conference in Ukraine, Sumy, Ukraine, zoom

Jul 2025 XV International Algebraic Conference in Ukraine, Lviv, Ukraine.

BRIEF VISITS

Apr 1991	Scuola Normale Superiore, Pisa, international semester "Infinite dimensional algebras and algebraic geometry" (on invitation of V.G. Kac)
Jun 1991	McGill University, Montreal (on invitation of T. Fox)
Nov 1991	Université Paris-Nord, Paris (on invitation of L. Breen)
Dec 91 - Jun 92	Visiting Professor ("Professore Visitatore") at Scuola Normale Superiore, Pisa (on invitation of C. De Concini)
Mar 1993	Université Pierre et Marie Curie, Paris (on invitation of R. Rentschler)
Jun 1994	Ecole Normale Supérieure de Lyon (on invitation of P. Sorba)
Jun 94 - Jul 94	Université Claude Bernard, Lyon (on invitation of C. Roger)
Nov 1994	University of North Carolina at Chapel Hill (on invitation of J. Stasheff)
Dec 1994	Pennsylvania State University (on invitation of B. Tsygan)
Nov 1996	McGill University, Montreal (on invitation of T. Fox)
Jan-Jun 2001	Max-Planck-Institut für Mathematik, Bonn
Oct 03 - Jun 04	Max-Planck-Institut für Mathematik, Bonn
Jul 2007	Technische Universität Kaiserslautern (on invitation of G.-M. Greuel)
Sep-Oct 2007	Max-Planck-Institut für Mathematik, Bonn
Oct-Dec 2020	Institut de Hautes Études Scientifiques, Bures-sur-Yvette
Apr 22 - Apr 23	University of Zurich
Aug 23 - Jun 24	Eidgenössische Technische Hochshule Zürich
Jul 24 - Jun 25	Hamburg University
Oct 25 - Dec 25	The University of Edinburgh
Dec 25 - Jan 26	Sapienza Università di Roma
Jan 2026	Università degli studi di Milano

RESEARCH GRANTS

obtained EPSRC research grant GR/G 42976 from 1 June 1992 to 31 May 1995.

ORGANISED CONFERENCES

Organized (jointly with Ya. S. Soibelman) a section *Quantum Groups and Applications* at AMS meeting # 932 in Manhattan, Kansas, 27-28 March 1998.

AWARDS

State award of Ukraine in science and technics in 2007, President of Ukraine decree N° 1191/2007 of December 10, 2007.

TRANSLATIONS

Translated the book of J. A. Goldstein *Semigroups of linear operators and applications* from English to Russian: *Polugruppy lineĭnykh operatorov i ikh prilozheniya* "Vyshcha Shkola", Kyiv, 1989, 348 p.

REFEREEING

for Journal of Physics A (1993,1998), Mathematical Proceedings of Cambridge Philosophical Society (1994), Transactions of the American Mathematical Society (1997), Journal of Pure and Applied Algebra (1997), Proceedings of a conference on algebra and topology (1998). SIGMA, Ukrainian Mathematical Journal, Documenta Mathematica, Applied Categorical Structures, Communications in Mathematical Physics, Algebras and Representation Theory, European Journal of Mathematics, Advances in Mathematics (2016-2020), Springer Verlag.

LECTURING

taught students at Kyiv Polytechnic Institute, following various lecture courses given by other professors in 1984–1988. Gave a course "Functional Analysis" for 3rd year students in September–December 1987 at Kyiv Polytechnic Institute. Gave a course "Monoidal categories and topological quantum field theories" for graduate students in January–May 1997 at Kansas State University. Gave a course "Equivariant derived categories" for graduate students in January–May 1998 at Kansas State University. Taught linear algebra, calculus, analytical geometry, differential equations, probability and statistics in the University "Kyiv-Mohyla Academy", Kyiv, during September 1998 – June 2000. Gave special courses at Department of Mechanics and Mathematics at Kyiv National Taras Shevchenko University:

- Sheaf theory (spring 2008).
- Homological algebra (spring 2009).
- Homotopical categories (spring 2009).
- Deformation theory (autumn 2010).
- Homological algebra (spring 2011).
- Monads (autumn 2012).
- Categorical homotopy theory (autumn 2016).

Gave special courses at Department of Mathematics at Kyiv Academic University:

- Introduction to number theory: modular forms (autumn 2016).
- Modular curves (spring 2017).
- Theory of infinity-categories (autumn 2017).
- Differential graded algebras (spring 2020).

OTHER ATTENDED CONFERENCES

1979, 1980, 1983	Voronezh Winter Mathematical School,
1984, 1986, 1988	Voronezh, Russia
Sep 1981, 1989	International Conference on Nonlinear Oscillations, Kyiv, Ukraine
1982, 1985, 1987	"Complex analysis and differential equations", Chernogolovka, Russia
May 1986	XI Conference of Mathematicians of Universities of Georgia, Kutaisi, Georgia
Nov 1986, 1988	Workshop on Quantum Groups, Leningrad, Russia
Oct 1986	"Hypergroups and related topics", Kyiv, Ukraine
Sep 1987	All-Union School on Functional Spaces Operators Theory, Tambov, Russia
May 1988, Jun 1989	"Differential geometry and computer-algebraic methods in nonlinear problems of physics and mechanics",
Sep 1991	Rakhov, Ukraine, Võru, Estonia, Odessa, Ukraine
Oct, Dec 1990	The Euler International Mathematical Institute first semester "Quantum groups", Leningrad, Russia
Apr 1992	"String Theory", Trieste, Italy
May 1992	"Algebraic Geometry", Pisa, Italy
Sep, Oct 1992	"Low Dimensional Topology and Quantum Field Theory", Isaac Newton Institute for Mathematical Sciences, Cambridge, England
Jul 1994	XI$^{\text{th}}$ International Congress of Mathematical Physics, Paris, France
Aug 1994	International Congress of Mathematicians, Zürich, Switzerland
Mar 1995	Erasmus Intensive Program on Algebra and related topics, Edinburgh, Scotland
Jun 2001	Arbeitstagung, Max-Planck-Institut für Mathematik, Bonn, Germany
Aug 2001	First Ukrainian Mathematical Congress, Kyiv, Ukraine

Aug 2011	Summer School "Singularities: algebra, geometry and applications", Kiev, Ukraine
Jul 2014	The International Algebraic Conference dedicated to the 100th anniversary of L.A.Kaluzhnin, Kyiv, Ukraine
Jan 2017	Winter School in Mathematical Physics, Bogolyubov Institute for Theoretical Physics, Kyiv, Ukraine
Sep 2017	International Conference in Functional Analysis dedicated to the 125th anniversary of Stefan Banach, Lviv, Ukraine
Aug 2018	International workshop 'Algebraic Curves, Integrable Systems, and Cryptography', Kyiv, Ukraine
Sep 2019	International Conference 'Morse theory and its applications', Kyiv, Ukraine
Sep 2022	International Conference 'Noncommutative Shapes', Antwerp, zoom
Apr 2025	"Higher structures, moduli spaces and integrability", Hamburg, Germany

List of publications by Volodymyr V. Lyubashenko

Monographs

[I] *Squared Hopf algebras*, Mem. Amer. Math. Soc. **142** (1999), no. 677, 184 p.

[II] *Non-semisimple topological quantum field theories for 3-manifolds with corners*, Lect. Notes in Math., vol. 1765, Springer-Verlag, Heidelberg, 2001, vi+379 p. (with T. Kerler).

[III] *Pretriangulated A_∞-categories*, Proceedings of the Institute of Mathematics of NAS of Ukraine, vol. 76, Institute of Mathematics of NAS of Ukraine, Kyiv, 2008, 599 p. (with Yu. Bespalov and O. Manzyuk).

[IV] *Curved cooperads and homotopy unital A_∞-algebras*, Math. Studies Monograph Series, vol. 17, VNTL Publishers, L′viv, 2015, viii+196 p.

Articles

[1] *Boundary values of solutions of differential–operator equations*, Dopovīdī Akad. Nauk Ukraïn. RSR Ser. **A** (1984), no. 4, 71–73 (with A. G. Reznikov).

[2] *The Berezinian in some monoidal categories*, Ukrainian Math. J. **38** (1986), no. 5, 501–505.

[3] *Hopf algebras and vector symmetries*, Sov. Math. Surveys, **41** (1986), no. 5, 153–154, Uspekhi Mat. Nauk **41** (1986), no. 5, 185–186.

[4] *Superanalysis and solutions to the triangles equation*, Ph.D. thesis, Institute for Mathematics, Kyiv, 1986.

[5] *Real and imaginary forms of quantum groups*, Quantum Groups, Lect. Notes Math., vol. 1510, Springer, 1992, 67–78.

[6] *Categorical aspects of conformal field theory*, CMS Conference Proceedings (R. A. G. Seely, ed.), vol. 13, 1992, 309–320.

[7] *Fourier transform identities in quantum mechanics and the quantum line*, Phys. Lett. B **284** (1992), 66–70 (with S. Majid).

[8] *Braided groups and quantum Fourier transform*, J. Algebra **166** (1994), no. 3, 506–528 (with S. Majid).

[9] *Existence of R-matrix for quantized Kac–Moody algebra*, Math. Proc. Camb. Phil. Soc. **116** (1994), no. 2, 193–207.

[10] *Quantum function algebra at roots of 1*, Adv. Math. **108** (1995), no. 2, 205–262 (with C. De Concini).

[11] *Tangles and Hopf algebras in braided categories*, J. Pure and Applied Algebra **98** (1995), no. 3, 245–278.

[12] *Modular transformations for tensor categories*, J. Pure and Applied Algebra **98** (1995), no. 3, 279–327.

[13] *Modular properties of ribbon abelian categories*, Symposia Gaussiana, Proc. of the 2^{nd} Gauss Symposium, Munich, 1993, Conf. A (Berlin, New York), Walter de Gruyter, 1995, 529–579.

[14] *Invariants of 3-manifolds and projective representations of mapping class groups via quantum groups at roots of unity*, Commun. Math. Phys. **172** (1995), no. 3, 467–516.

[15] *Ribbon abelian categories as modular categories*, J. Knot Theory Ramifications **5** (1996), no. 3, 311–403.

[16] *Extensions and contractions of the Lie algebra of q-pseudodifferential symbols on the circle*, J. Funct. Anal. **143** (1997), no. 1, 55–97 (with B. Khesin and C. Roger).

[17] *Squared Hopf algebras and reconstruction theorems*, Proc. of the Workshop "Quantum Groups and Quantum Spaces" (Warszawa), Banach Center Publ., no. 40, Inst. Math. Polish Acad. Sci., 1997, 111–137.

[18] *Quantum supergroups of $GL(n|m)$ type: Differential forms, Koszul complexes and Berezinians*, Duke Math. J. **90** (1997), no. 1, 1–62 (with A. Sudbery).

[19] *Generalised Lie algebras of type A_n*, J. Mathematical Phys. **39** (1998), no. 6, 3487–3504 (with A. Sudbery).

[20] *Example of a triangulated Hopf category*, Vīsnik Kiïv. Unīv. Ser. Fīz.-Mat. Nauki (1999), no. 2, 50–58, in Ukrainian.

[21] *Operations and isomorphisms in a triangulated Hopf category*, Methods of Func. Analysis and Topology **5** (1999), no. 4, 37–53.

[22] *Integrals for braided Hopf algebras*, J. Pure and Appl. Algebra **148** (2000), no. 2, 113–164 (with Yu. Bespalov, T. Kerler and V. G. Turaev).

[23] *Tensor product of equivariant perverse sheaves*, Vīsnik Kiïv. Unīv. Ser. Fīz.-Mat. Nauki (2000), no. 2, 22–34, in Ukrainian.

[24] *Coherence isomorphisms for triangulated Hopf category $SL(2)$*, Naukovi zapysky of Kyiv-Mohyla academy (Physical-mathematical sciences) **18** (2000), 4–7.

[25] *On a functorial isomorphism in the derived category of ℓ-adic sheaves*, Matematychni Studii **14** (2000), no. 2, 115–120.

[26] *Squared Hopf algebras and the modular functor*, Kyiv National Taras Shevchenko University, Doctor of sciences in physics and mathematics thesis, Kyiv, December 2000.

[27] *External tensor product of perverse sheaves*, Ukr. Math. J. **53** (2001), no. 3, 311–322.

[28] *Coherence isomorphisms for a Hopf category*, Noncommutative Structures in Mathematics and Physics (Dordrecht) (S. Duplij and J. Wess, eds.), NATO Advanced Research Workshop Proceedings, Kluwer Academic Publishers, 2001, September 24-27, 2000, Kyiv, Ukraine, 283–294.

[29] *Coassociativity–coherence relation for Hopf category n_+SL2*, Proc. 3rd Internat. Alg. Conf. in Ukraine, July 2-8 (Sumy) 2001, 67–70.

[30] *Tensor products of categories of equivariant perverse sheaves*, Cahiers Topologie Géom. Différentielle Catég. **XLIII-1** (2002), 49–79.

[31] *The triangulated Hopf category $n_+SL(2)$*, Applied Categorical Structures **10** (2002), no. 4, 331–381.

[32] *A model of the 2-category of equivariant derived categories*, Algebraic structures and their applications (Kyiv), Inst. of mathematics NASU, 2002, Proc. of Ukrainian Math. Congress – 2001, 307–322.

[33] *Category of A_∞-categories*, Homology, Homotopy and Applications **5** (2003), no. 1, 1–48, `http://intlpress.com/HHA/v5/n1/a1/`.

[34] *Category of A_∞-categories and derived categories*, Naukovi zapysky of Kyiv-Mohyla academy (Physical-mathematical sciences) **21** (2003), 5–20 (with S. A. Ovsienko).

[35] *Special PROPs and homotopy bialgebras*, Math. bulletin of the Shevchenko Sci. Soc. **1** (2004), 59–76, in Ukrainian.

[36] *Free A_∞-categories*, Theory and Applications of Categories **16** (2006), no. 9, 174–205 (with O. Manzyuk).

[37] *Braided and modular tensor categories*, Encyclopedia of Mathematical Physics (J.-P. Françoise, G. L. Naber, and S. T. Tsou, eds.), vol. 1, Elsevier Science Publ., Oxford, 2006, 351–359.

[38] *A construction of quotient A_∞-categories*, Homology, Homotopy and Applications **8** (2006), no. 2, 157–203 (with S. A. Ovsienko).

[39] *Unital A_∞-categories*, Problems of topology and related questions (V. V. Sharko, ed.), Proc. of Inst. of Mathematics NASU, vol. 3, no. 3, Inst. of Mathematics, Nat. Acad. Sci. Ukraine, Kyiv, 2006, 235–268 (with O. Manzyuk).

[40] *Erratum to: "Category of A_∞-categories" [Homology, Homotopy Appl. 5 (2003), no. 1, 1–48]*, Homology, Homotopy Appl. **9** (2007), no. 2, 163–164.

[41] *A_∞-bimodules and Serre A_∞-functors*, Geometry and Dynamics of Groups and Spaces (M. M. Kapranov, S. Kolyada, Yu. I. Manin, P. Moree, and L. Potyagailo, eds.), Progress in Mathematics, vol. 265, Birkhäuser Verlag, Basel, 2008, 565–645 (with O. Manzyuk).

[42] *Quotients of unital A_∞-categories*, Theory Appl. Categ. **20** (2008), no. 13, 405–496 (with O. Manzyuk).

[43] *A_∞-algebras, A_∞-categories and A_∞-functors*, Handbook of Algebra, vol. 5, Elsevier Science Publ., North Holland, 2008, pp. 143–188 (with O. Manzyuk).

[44] *Homotopy unital A_∞-algebras*, J. Algebra **329** (2011), no. 1, 190–212, Special Issue Celebrating the 60th Birthday of Corrado De Concini, http://dx.doi.org/10.1016/j.jalgebra.2010.02.009

[45] *Bar and cobar constructions for curved algebras and coalgebras*, Matematychni Studii **40** (2013), no. 2, 115–131, http://matstud.org.ua/texts/2013/40_2/115-131.pdf

[46] *A_∞-morphisms with several entries*, Theory Appl. Categ. **30** (2015), no. 45, 1501–1551, http://www.tac.mta.ca/tac/volumes/30/45/30-45abs.html.

[47] *Homotopy unital A_∞-morphisms with several entries*, Theory Appl. Categ. **30** (2015), no. 46, 1552–1623, http://www.tac.mta.ca/tac/volumes/30/46/30-46abs.html.

[48] *Homotopy cooperads*, Matematychni Studii **44** (2015), no. 2, 119–160, http://matstud.org.ua/texts/2015/44_2/119-160.html.

[49] *Curved homotopy coalgebras*, Appl. Categ. Structures **25** (2017), no. 6, 991–1036, arXiv:1402.0408 https://doi.org/10.1007/s10485-016-9440-4.

[50] *Moyal and Rankin–Cohen deformations of algebras*, Proc. Int. Geom. Cent. **11** (2018), no. 2, 48–52, https://doi.org/10.15673/tmgc.v11i2.1027.

[51] *A model structure on categories related to categories of complexes*, Ukr. Math. J. **72** (2020), no. 2, 232–244, arXiv:1205.6066 http://umj.imath.kiev.ua/index.php/umj/article/view/682, https://doi.org/10.1007/s11253-020-01780-3.

[52] *Filtered cocategories*, Theory Appl. Categ. **35** (2020), no. 47, 1726–1770, arXiv:2010.05242 http://www.tac.mta.ca/tac/volumes/35/47/35-47.pdf.

[53] *Homotopy equivalence of normalized and unnormalized complexes, revisited*, Algebra and Discrete Math., **32** (2021), no. 2, 253–266, (with A. Matsui), `http://admjournal.luguniv.edu.ua/index.php/adm/article/download/1879/pdf`.

[54] *Dold–Kan correspondence, revisited*, Appl. Categ. Structures **30** (2022), no. 3, 543–567, `https://doi.org/10.1007/s10485-021-09665-7`.