

Todor D. Todorov: LIST OF PUBLICATIONS

References

- [1] Chr. Ya. Christov, T. D. Todorov, *Asymptotic Numbers: Algebraic Operations with Them*, In: *Serdica, Bulgaricae Mathematicae Publicationes*, Vol.2, 1974, p. 87–102.
- [2] Todor D. Todorov, *Asymptotic Numbers: I. Algebraic Properties*, In: *Bulgarian Journal of Physics*, 7 (1981), 5, p. 450–468.
- [3] Todor D. Todorov, *Asymptotic Numbers: II. Order Relation and Interval Topology*, In: *Bulgarian Journal of Physics*, 7 (1981), 6, p. 547–562.
- [4] T.D. Todorov, *Asymptotic Functions and the Problem of Multiplication of Schwartz Distributions*, In: *Bulgarian Journal of Physics*, Vol. 8 (1982), 2, p. 109–120.
- [5] T. D. Todorov, *Extended Asymptotic Functions - Some Examples*, In: *Bulgarian Journal of Physics*, 8 (1981), 3, p. 216–225.
- [6] T. D. Todorov, *Quasi-Extended Asymptotic Functions*, In: *Bulgarian Journal of Physics*, 8 (1981), 4, p. 313–328.
- [7] T. D. Todorov, *Asymptotic Functions as Kernels of Schwartz Distributions*, In: *Bulgarian Journal of Physics*, Vol. 12 (1981), 5, p. 451–464.
- [8] T. D. Todorov, *The Products $\delta^2(x)$, $\delta(x)x^{-n}$, $H(x)x^{-n}$ in the Class of the Asymptotic Functions*, In: *Bulgarian Journal of Physics*, Vol.12 (1981), 5, p. 465–480.
- [9] T. D. Todorov, *Application of Non-Standard Hilbert Space to Quantum Mechanics*, In: *Proceedings of the International Conference on Complex Analysis and Applications*, Varna, May 5-11, 1985, Bulgarian Academy of Sciences Publ., 1986, p. 689–704.
- [10] T. D. Todorov, *Sequential Approach to Colombeau's Theory of Generalized Functions*, In: *Internal Publication of International Centre for Theoretical Physics, International Atomic Energy Agency, UNESCO*, IC/87/126 (1987), Trieste, Italia.

- [11] B. Fisher and T. D. Todorov, *Operations with Distribution Vectors*, In: *Demonstratio Mathematica*, Vol. XX, No 3-4, 1987, p. 401–412.
- [12] T.D. Todorov, *Colombeau's Generalized Functions and Non-Standard Analysis*, In: B. Stankovic, E. Pap, S. Pilipovic, V.S. Vladimirov (editors), *Generalized Functions, Convergence Structures and their Applications*, Plenum Press, New York (1988), p. 327–339.
- [13] S. Salbany, T. Todorov, *Alexander's Subbase Lemma*, In: *Proceedings of the American Mathematical Society*, Vol. 105, Number 1, Jan. 1989.
- [14] Todor Todorov, *A Nonstandard Delta Function*, In: *Proceedings of the American Mathematical Society*, Vol. 110, Number 4, 1990, p. 1143–1144.
- [15] B. Fisher and T. Todorov, *A Commutative Product with Distribution Vectors*, In: *Journal of Mathematical and Physical Sciences*, Vol. 25, No 2, April 1991, p. 138–151.
- [16] Todor Todorov, *Pointwise Kernels of Schwartz Distributions*, In: *Proceedings of the American Mathematical Society*, Vol. 114, No 3, March 1992, p. 817–819.
- [17] S. Salbany and T. Todorov, *Nonstandard and Standard Compactifications of Ordered Topological Spaces*, In: *Topology and its Applications*, Vol. 47 (1992), p. 35–52.
- [18] S. Salbany and T. Todorov, *Monads and Realcompactness*, In: *Topology and its Applications*, Vol. 56 (1994), p. 99–104.
- [19] S. Salbany and T.D. Todorov, *Lecture Notes: Nonstandard Analysis in Topology*, 2008 (arXivMathematics: <http://arxiv.org/abs/1107.3323>).
- [20] Todor Todorov, *An Existence Result for a Class of Partial Differential Equations with Smooth Coefficients*, In S. Albeverio, W.A.J. Luxemburg, M.P.H. Wolff (Eds.), *Advances in Analysis, Probability and Mathematical Physics; Contributions to Nonstandard Analysis*, Kluwer Academic Publishers, Dordrecht/Boston/London, Volume 314, 1995, p.107-121 (https://link.springer.com/chapter/10.1007/978-94-015-8451-7_9).

- [21] Todor Todorov, *An Existence Result for Linear PDE with C^∞ -Coefficients in an Algebra of Generalized Functions*, In: *Transactions of the American Mathematical Society*, Vol. 348, 2, Feb. 1996, p. 673–689 <http://www.ams.org/journals/tran/1996-348-02>.
- [22] T. Todorov, *Pointwise Values and Fundamental Theorem in the Algebra of Asymptotic Functions*, In: *Non-Linear Theory of Generalized Functions* (Eds: M. Grosser, Günther Hörmann, M. Kunzinger and M. Oberguggenberger), *Chapman & Hall/CRC Research Notes in Mathematics*, 401, 1999, p. 369-383 (available at arXivMathematics: <http://arxiv.org/abs/math/0601723>).
- [23] M. Oberguggenberger and T. Todorov, *An Embedding of Schwartz Distributions in the Algebra of Asymptotic Functions*, In: *International Journal of Mathematics & Mathematical Sciences*, Vol. 21, No. 3 (1998), p. 417–428 (in ArXiv: <http://arxiv.org/abs/2403.15661>).
- [24] S. Salbany and T. Todorov, *Nonstandard Analysis in Topology: Non-standard and Standard Compactifications*, In: *Journal of Symbolic Logic*, 65, 4 (2000), p.1836-1840 (available at arXivMathematics: <http://arxiv.org/abs/math/0601724>).
- [25] S. Salbany and T.D. Todorov, *Lecture Notes: Nonstandard Analysis in Topology*, 2008 (arXivMathematics: <http://arxiv.org/abs/1107.3323>).
- [26] T. Todorov and R. Wolf, *Hahn field representation of A. Robinson's asymptotic numbers*, In: *Nonlinear Algebraic Analysis and Applications*, Proceedings of the International Conference on Generalized Functions (ICGF) 2000, Edited by A. Delcroix, M. Hasler, J.-A. Marti, and V.Valmorin, *Cambridge Scientific Publishers*, Cottenham, Cambridge, 2004, pp. 357-374 (available at arXivMathematics: <http://arxiv.org/abs/math/0601722>).
- [27] Todor D. Todorov, *Back to Classics: Teaching Limits through Infinitesimals*, In: *International Journal of Mathematical Education in Science and Technology*, 2001, vol. 32, no. 1, p. 1-20 (available at arXivMathematics: <http://arxiv.org/abs/1108.4657>).
- [28] Todor D. Todorov, *Radius of Convergence of Power Series*, In: *International Journal of Mathematical Education in Science and Technology*, Vol. 34, Number 2, March-April, 2003 (p. 277-280).

- [29] Todor D. Todorov, *Existence and uniqueness of v -asymptotic expansions and Colombeau's generalized numbers*, In: *Journal of Mathematical Analysis and Applications*, 312 (2005), p. 261-279 (available at arXiv-Mathematics: <http://arxiv.org/abs/math/0601720>).
- [30] Angel P. Popov and Todor D. Todorov, *Exponentiation of 2×2 and 3×3 Matrices without Canonization*, In: *Mathematics and Education in Mathematics, 2006, Proceedings of the Thirty Fifth Spring Conference of the Union of Bulgarian Mathematicians, Borovets*, April 5-8, 2006, pp. 344-353 (available at arXivMathematics: <http://arxiv.org/abs/0712.2632>).
- [31] Todor D. Todorov, *Lecture Notes: Non-Standard Approach to J.F. Colombeau's Theory of Generalized Functions*, In arXiv: <https://arxiv.org/abs/1010.3482>.
- [32] Ray Cavalcante and Todor D. Todorov, *A Lost Theorem: Definite Integrals In Asymptotic Setting*, In: *The American Mathematical Monthly*, Volume 115, Number 1, January, 2008, pp. 45-56 (available at arXiv-Mathematics: <http://arxiv.org/abs/0804.3156v1>).
- [33] Todor Todorov and Hans Vernaev, *Full Algebra of Generalized Functions and Non-Standard Asymptotic Analysis*, In: *Logic and Analysis*, Springer, Vol. 1, Issue 3, 2008, pp. 205-234 (available at: (<http://www.logicandanalysis.com/index.php/jla/article/view/193/79>) and/or at: <http://arxiv.org/abs/0712.2603>).
- [34] Todor D. Todorov, *An axiomatic approach to the non-linear theory of generalized functions and consistency of Laplace transforms*, In: *Integral Transforms and Special Functions*, Volume 22, Issue 9, September 2011, p. 695-708 (available at arXivMathematics: <http://arxiv.org/abs/1101.5740>).
- [35] Todor D. Todorov, *Algebraic Approach to Colombeau Theory*, In: *San Paulo Journal of Mathematical Sciences*, **7** (2013), no. 2, 127-142 <http://arxiv.org/abs/1405.7341>.
- [36] James F. Hall and Todor D. Todorov, *Ordered Fields, the Purge of Infinitesimals from Mathematics and the Rigorousness of Infinitesimal Calculus*, *Bulgarian Journal of Physics*, Vol. 42 (2015) 99-127 - An issue

dedicated to the centenary of the birth of Prof. Christo Yankov Christov (available at <http://arxiv.org/abs/1509.03798>).

- [37] Todor D. Todorov, *Steady-State Solutions in an Algebra of Generalized Functions: Lightning, Lightning Rods and Superconductivity*, Novi Sad Journal of Mathematics, Volume 45, Number 1, 2015 (available at <http://www.dmi.pmf.uns.ac.rs/nsjom/framepaper.htm> or <http://arxiv.org/abs/1509.03796>).
- [38] Todor D. Todorov, *Infinite-Dimensional Linear Algebra and Solvability of Partial Differential Equations*, Journal of Logic & Analysis (ISSN: 1759-9008), 13:5 (2021), 1-34, (<http://arxiv.org/abs/2106.04039>), DOI: <https://doi.org/10.4115/jla.2021.13.5>.
- [39] Todor D. Todorov, *Non-Standard Version of Egorov Algebra of Generalized Functions*. In: Cardona, D., Restrepo, J., Ruzhansky, M. (eds) Extended Abstracts 2021/2022. GMC 2021. Trends in Mathematics, vol. 3. Birkhäuser, Cham., p. 209-217. (DOI: https://doi.org/10.1007/978-3-031-48579-4_21; ArXiv: <http://arxiv.org/abs/2403.07206>).
- [40] Todor D. Todorov, *Infinitesimals inside the Familiar Field of Complex Numbers*, arXiv: <http://arxiv.org/abs/2603.22308>.

Master Theses under Todor Todorov:

1. Guy Berger, *Non-Standard Analysis, Multiplication of Schwartz Distributions and Delta-Like Solution of Hopf's Equation*, Master Thesis, Cal Poly Library, San Luis Obispo, LD729.6.S52 M3 B47, 2005, <http://arxiv.org/abs/0809.4322v1>.
2. Ray Cavalcante, *Reduction of the Number of Quantifiers in Real Analysis through Infinitesimals*, Master Thesis, Mathematics Department, California Polytechnic State University, San Luis Obispo, 2007, <http://arxiv.org/abs/0809.4814v1>.