

Vasily A. Dolgushev's Publications

• In Preparation:

1. V. A. Dolgushev, The gentle version of the Grothendieck-Teichmueller group revisited
2. V. A. Dolgushev and Y.S. Wang, The groupoid of GT-shadows for the gentle version of the Grothendieck-Teichmueller group revisited
3. V. A. Dolgushev, H. Miller and Y.S. Wang, Documentation for the package 'GT-gentle'; the SageMath package allows one to work with GT-shadows for the gentle version of the Grothendieck-Teichmueller group and their action on child's drawings

• Submitted:

1. I. Bortnovskiy, V. A. Dolgushev, B. Holikov and V. Pashkovskiy, Accessing non-abelian quotients of the Grothendieck-Teichmueller group via elementary tools, *submitted to Algebra and Number Theory in December 2024*, <https://arxiv.org/abs/2405.11725>

• Notes, preprints, documentation of software packages (no intention to submit for publication):

1. S.V. Breslavets and V.A. Dolgushev, Solutions to Selected Exercises on Groups, Rings and Elementary Number Theory, January 2025, <https://sites.temple.edu/vald/files/2025/01/ExercisesGroupsRingsENT.pdf>
2. V.A. Dolgushev, Documentation for the package GT, https://sites.temple.edu/vald/files/2024/05/PackageGT_README.pdf
3. V. A. Dolgushev and G.E. Schneider, The package for computing a quasi-isomorphism $\mathrm{Ger}_\infty \rightarrow \mathrm{Br}$, https://sites.temple.edu/vald/files/2024/08/PackageGerBr_README.pdf
4. V.A. Dolgushev, Erratum to: "A Proof of Tsygan's Formality Conjecture for an Arbitrary Smooth Manifold", Preprint, <https://arxiv.org/abs/math/0703113>

• Accepted or Published:

1. V.A. Dolgushev and J.J. Guynne, GT-shadows for the gentle version of the Grothendieck-Teichmueller group, *J. Pure Appl. Algebra* **229**, 1 (2025) Paper No. 107819, 40 pp.; <https://arxiv.org/abs/2401.06870>
2. V.A. Dolgushev, The Action of GT-Shadows on Child's Drawings, *J. Algebra* **662** (2025) 242–287; <https://arxiv.org/abs/2106.06645>
3. V.A. Dolgushev, K.Q. Le and A. Lorenz, What are GT-shadows? *Algebr. Geom. Topol.* **24**, 5 (2024) 2721–2777; <https://arxiv.org/abs/2008.00066>
4. V.A. Dolgushev, Stable formality quasi-isomorphisms for Hochschild cochains, *Mém. Soc. Math. Fr. (N.S.)* **168** (2021), vi + 108 pp; <https://arxiv.org/abs/1109.6031>

5. V.A. Dolgushev and C.L. Rogers, The cohomology of the full directed graph complex, *Algebr. Represent. Theory* **23**, 3 (2020) 917–961; <https://arxiv.org/abs/1711.04701>
6. E. Altinay-Ozaslan and V.A. Dolgushev, Towards deformation quantization over a $\mathbb{Z}$ -graded base, *J. Noncommut. Geom.* **13**, 1 (2019) 227–256.; <https://arxiv.org/abs/1702.06930>
7. V.A. Dolgushev and G.E. Schneider, When can a formality quasi-isomorphism over $\mathbb{Q}$ be constructed recursively? *J. Pure Appl. Algebra* **223**, 5 (2019) 2145–2172; <https://arxiv.org/abs/1610.04879>
8. V.A. Dolgushev, A Formality quasi-isomorphism for Hochschild cochains over rationals can be constructed recursively, *Int. Math. Res. Not.* **18** (2018) 5729–5785; <https://arxiv.org/abs/1306.6733>
9. V.A. Dolgushev and T.H. Willwacher, A direct computation of the cohomology of the braces operad, *Forum Mathematicum* **29**, 2 (2017) 465–488; <https://arxiv.org/abs/1411.1685>
10. V.A. Dolgushev and C.L. Rogers, On an enhancement of the category of shifted L_∞ algebras, *Appl. Categ. Structures* **25**, 4 (2017) 489–503; <https://arxiv.org/abs/1406.1744>
11. V.A. Dolgushev and B. Paljug, Tamarkin’s construction is equivariant with respect to the action of the Grothendieck-Teichmueller group, *J. Homotopy Relat. Struct.* **11**, 3 (2016) 503–552; <https://arxiv.org/abs/1402.7356>
12. V.A. Dolgushev, C.L. Rogers, and T.H. Willwacher, Kontsevich’s graph complex, GRT, and the deformation complex of the sheaf of polyvector fields, *Ann. of Math.* (2) **182**, 3 (2015) 855–943; <https://arxiv.org/abs/1211.4230>
13. V.A. Dolgushev, A.E. Hoffnung, and C.L. Rogers, What do homotopy algebras form? *Adv. Math.* **274** (2015) 562–605; <https://arxiv.org/abs/1406.1751>
14. V.A. Dolgushev and C.L. Rogers, A Version of the Goldman-Millson theorem for filtered L_∞ algebras, *J. Algebra* **430** (2015) 260–302; <https://arxiv.org/abs/1407.6735>
15. V.A. Dolgushev and T. H. Willwacher, Operadic twisting – with an application to Deligne’s conjecture, *J. Pure Appl. Algebra* **219**, 5 (2015) 1349–1428; <https://arxiv.org/abs/1207.2180>
16. V.A. Dolgushev and T.H. Willwacher, The Deformation complex is a homotopy invariant of a homotopy algebra, in *Developments and Retrospectives in Lie Theory*, 137–158, *Developments in Math.* **38**, Springer 2014; arXiv:1305.4165.
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18. V.A. Dolgushev and C.L. Rogers, Notes on algebraic operads, graph complexes, and Willwacher’s construction. *Mathematical aspects of quantization*, 25–145, *Contemp. Math.*, **583**, Amer. Math. Soc., Providence, RI, 2012; arXiv:1202.2937.
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25. V.A. Dolgushev and V.N. Rubtsov, An Algebraic Index Theorem for Poisson Manifolds, *J. Reine Angew. Math.*, **633** (2009) 77–113; arXiv:0711.0184.
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27. V.A. Dolgushev, D.E. Tamarkin, and B.L. Tsygan, The Homotopy Gerstenhaber Algebra of Hochschild Cochains of a Regular Algebra is Formal, *J. Noncomm. Geom.*, **1**, 1 (2007) 1-25; math.KT/0605141.
28. V.A. Dolgushev, A Proof of Tsygan's Formality Conjecture for an Arbitrary Smooth Manifold, PhD thesis M.I.T.; math.QA/0504420.
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