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Publication list

Metrics

- Research publications ▶▶ **Overview** 59 papers in total, 45 published papers, 13 submitted preprints, 1 eprints, 2657 published pages, 29 open access publications
- Research reach ▶▶ **Citations** 1063 with h-index 21 on Google Scholar, 448 on MathSciNet, 411 on zbMath, 1084 on Research Gate; Stats from March 2, 2026
- Research fields ▶▶ **ArXiv identifier** 50 papers listed on arXiv in math.RT, 39 in math.QA, 22 in math.GT, 17 in math.CT, 11 in math.RA, 8 in math.GR, 7 in math.CO, 2 in cs.CR, 5 in cs.LG, 1 in cs.CV, 1 in stat.ML
- Research range ▶▶ **Mathematics Subject Classification 2020 (MSC2020)** My papers cover the fields 05 (Combinatorics), 11 (Number theory), 14 (Algebraic geometry), 15 (Linear and multilinear algebra; matrix theory), 16 (Associative rings and algebras), 17 (Nonassociative rings and algebras), 18 (Category theory; homological algebra), 20 (Group theory and generalizations), 22 (Topological groups, Lie groups), 26 (Real functions), 30 (Functions of a complex variable), 33 (Special functions), 57 (Manifolds and cell complexes), 62 (Statistics), 68 (Computer Science), 81 (Quantum theory), 94 (Information and communication, circuits)
- Coauthors ▶▶ **39 coauthors** from Australia, Belgium, China, Denmark, Finland, France, Germany, India, Japan, Portugal, Sweden, Switzerland, Ukraine, United Kingdom, United States
- Comment ▶▶ **Open access** All my papers (latest versions) are freely available on arXiv; 29 are published via the Creative Commons Attribution licence (CC BY) or similar
- Journals ▶▶ **My papers are published in** Algebr. Comb., Algebr. Geom. Topol., Algebr. Represent. Theory, Ark. Mat., Bull. Lond. Math. Soc., Canad. J. Math., Contemp. Math., Comb. Theory, Comm. Algebra, Commun. Am. Math. Soc., Doc. Math., Forum Math., Fund. Math., Glasg. Math. J., High. Struct., Indiana Univ. Math. J., Int. Math. Res. Not. (IMRN), J. Algebraic Combin., J. Aust. Math. Soc., J. Comb. Algebra, Journal of Experimental Mathematics (twice), J. Knot Theory Ramifications (twice), J. Lond. Math. Soc., Math. Ann., Math. Z. (twice), New York J. Math., North-West. Eur. J. Math., Pacific J. Math., Port. Math., Proc. Amer. Math. Soc. Ser. B, Proc. Lond. Math. Soc. (twice), Quantum Topol., Represent. Theory, Rev. Mat. Iberoam, Rocky Mountain J. Math., Selecta Math. (N.S.), Trans. Amer. Math. Soc. Ser. (twice), Transform. Groups (twice)
- Before 2011 ▶▶ **Eprints etc.** see <http://www.dtubbenhauer.com/preprint.html>

Publication list

- Paper #59 Feb.2026 ▶▶ **Möbius strip diagram algebras**
Daniel W. Collison, Daniel Tubbenhauer
<https://arxiv.org/abs/2602.11591>
- Paper #58 Dec.2025,2 ▶▶ **Generalized diagram categories and monoids, and their representations**
Matthias Fresacher, Willow Stewart, Daniel Tubbenhauer
<https://arxiv.org/abs/2512.17177>
- Paper #57 Dec.2025 ▶▶ **Affine diagram categories, algebras and monoids**
David He, Daniel Tubbenhauer
<https://arxiv.org/abs/2512.05510>
- Paper #56 Nov.2025 ▶▶ **Growth problems of quantum groups**
Jensen O'Sullivan and Daniel Tubbenhauer
Preprint
<https://arxiv.org/abs/2511.06737>
- Paper #55 Oct.2025 ▶▶ **On knot detection via picture recognition**
Anne Dranowski, Yura Kabkov, Daniel Tubbenhauer
Preprint
<https://arxiv.org/abs/2510.06284>
- Paper #54 Sep.2025 ▶▶ **On detection probabilities of link invariants**
Tuomas Kelomäki, Abel Lacabanne, Daniel Tubbenhauer, Pedro Vaz, Victor L. Zhang
Preprint
<https://arxiv.org/abs/2509.05574>
- Paper #53 Aug.2025 ▶▶ **Tensor powers of representations of (diagram) monoids**
David He, Daniel Tubbenhauer
Preprint
<https://arxiv.org/abs/2508.04054>
- Paper #52 Jul.2025 ▶▶ **Idempotents, traces, and dimensions in Hecke categories**
Ben Elias, Liam Rogel, Daniel Tubbenhauer
Preprint
<https://arxiv.org/abs/2507.10061>
- Paper #51 Jun.2025 ▶▶ **Quantum topology without topology**
Daniel Tubbenhauer
eprint
<https://arxiv.org/abs/2506.18918>
- Paper #50 May.2025 ▶▶ **Representation gaps of rigid planar diagram monoids**
Willow Stewart, Daniel Tubbenhauer
Preprint
<https://arxiv.org/abs/2505.05846>

Publication list (continued)

- Paper #49 Mar.2025,2 ▶▶ **Big data comparison of quantum invariants**
Daniel Tubbenhauer, Victor L. Zhang
To appear in Journal of Experimental Mathematics.
<https://arxiv.org/abs/2503.15810>
- Paper #48 Mar.2025 ▶▶ **Growth problems in diagram categories**
Jonathan Gruber, Daniel Tubbenhauer
Bull. Lond. Math. Soc. 57 (2025), no. 11, 3454–3469
<https://arxiv.org/abs/2503.00685>
- Paper #47 Feb.2025 ▶▶ **Growth problems for representations of finite monoids**
David He, Daniel Tubbenhauer
North-West. Eur. J. Math. 11 (2025), 103–117, i.
<https://arxiv.org/abs/2502.02849>
- Paper #46 Dec.2024,2 ▶▶ **Diagrammatics for dicyclic groups**
Peter DeBello, Daniel Tubbenhauer
Preprint
<https://arxiv.org/abs/2412.01283>
- Paper #45 Dec.2024 ▶▶ **Big data approach to Kazhdan–Lusztig polynomials**
Abel Lacabanne, Daniel Tubbenhauer, Pedro Vaz
Journal of Experimental Mathematics, 2(1), 21–62
<https://arxiv.org/abs/2412.01283>
- Paper #44 Sep.2024 ▶▶ **On Hecke and asymptotic categories for complex reflection groups**
Abel Lacabanne, Daniel Tubbenhauer, Pedro Vaz
To appear in Port. Math.
<https://arxiv.org/abs/2409.01005>
- Paper #43 Aug.2024 ▶▶ **Equivariant neural networks and piecewise linear representation theory**
Joel Gibson, Daniel Tubbenhauer, Geordie Williamson
To appear in Contemp. Math.
<https://arxiv.org/abs/2408.00949>
- Paper #42 May.2024 ▶▶ **Fractal behavior of tensor powers of the two dimensional space in prime characteristic**
Kevin Coulembier, Pavel Etingof, Victor Ostrik, Daniel Tubbenhauer
To appear in Contemp. Math.
<https://arxiv.org/abs/2405.16786>
- Paper #41 Apr.2024 ▶▶ **Asymptotics in infinite monoidal categories**
Abel Lacabanne, Daniel Tubbenhauer, Pedro Vaz
Higher Structures 9(2): 168–197, 2025.
<https://arxiv.org/abs/2404.09513>

Publication list (continued)

- Paper #40 Jan.2024 ▶▶ **Orthogonal webs and semisimplification**
Elijah Bodish, Daniel Tubbenhauer
Comb. Theory 5 (2025), no. 3, Paper No. 12, 76 pp
<https://arxiv.org/abs/2401.00704>
- Paper #39 Sep.2023 ▶▶ **Cellularity of KLR and weighted KLRW algebras via crystals**
Andrew Mathas, Daniel Tubbenhauer
To appear in Commun. Am. Math. Soc.
<https://arxiv.org/abs/2309.13867>
- Paper #38 Jul.2023, 2 ▶▶ **Asymptotics in finite monoidal categories**
Abel Lacabanne, Daniel Tubbenhauer, Pedro Vaz
Proc. Amer. Math. Soc. Ser. B 10 (2023), 398–412
<https://arxiv.org/abs/2307.03044>
- Paper #37 Jul.2023 ▶▶ **On rank one 2-representations of web categories**
Daniel Tubbenhauer
Algebr. Comb. Volume 7 (2024) no. 6, pp. 1813–1843
<http://arxiv.org/abs/2307.00785>
- Paper #36 Mar.2023 ▶▶ **On a symplectic Howe duality**
Elijah Bodish, Daniel Tubbenhauer
Math. Z. 309 (2025), no. 4, Paper No. 68.
<https://arxiv.org/abs/2303.04264>
- Paper #35 Jan.2023 ▶▶ **Growth rates of the number of indecomposable summands in tensor powers**
Kevin Coulembier, Victor Ostrik, Daniel Tubbenhauer
Algebr. Represent. Theory 27 (2024), no. 2, 1033–1062
<https://arxiv.org/abs/2301.00885>
- Paper #34 Sep.2022 ▶▶ **A formula to evaluate type A webs and link polynomials**
Abel Lacabanne, Daniel Tubbenhauer, Pedro Vaz
Ark. Mat. 62 (2024), no. 1, 83–101
<https://arxiv.org/abs/2209.12169>
- Paper #33 Jul.2022 ▶▶ **Verma Howe duality and LKB representations**
Abel Lacabanne, Daniel Tubbenhauer, Pedro Vaz
To appear in New York J. Math.
<https://arxiv.org/abs/2207.09124>
- Paper #32 Jun.2022 ▶▶ **Sandwich cellularity and a version of cell theory**
Daniel Tubbenhauer
Rocky Mountain J. Math. 54 (2024), no. 6, 1733–1773
<https://arxiv.org/abs/2206.06678>

Publication list (continued)

- Paper #31 Apr.2022 ▶▶ **Annular webs and Levi subalgebras**
Abel Lacabanne, Daniel Tubbenhauer, Pedro Vaz
J. Comb. Algebra 7 (2023), no. 3/4, pp. 283–326
<https://arxiv.org/abs/2204.00947>
- Paper #30 Jan.2022, 2 ▶▶ **Cellularity for weighted KLRW algebras of types $B, A^{(2)}, D^{(2)}$**
Andrew Mathas, Daniel Tubbenhauer
J. Lond. Math. Soc. (2) 107 (2023), no. 3, 1002–1044
<https://arxiv.org/abs/2201.01998>
- Paper #29 Jan.2022 ▶▶ **Monoidal categories, representation gap and cryptography**
Mikhail Khovanov, Maithreya Sitaraman, Daniel Tubbenhauer
Trans. Amer. Math. Soc. Ser. B 11 (2024), 329–395
<https://arxiv.org/abs/2201.01805>
- Paper #28 Dec.2021 ▶▶ **Minimal presentations of gl_n -web categories**
Genta Latifi, Daniel Tubbenhauer
This is part of my student Genta's Ph.D. thesis – Genta should get all the credit.
I am only on the paper because Genta insisted that I am. So here we are...
Preprint
<https://arxiv.org/abs/2112.12688>
- Paper #27 Nov.2021 ▶▶ **Cellularity and subdivision of KLR and weighted KLRW algebras**
Andrew Mathas, Daniel Tubbenhauer
Math. Ann. 389 (2024), no. 3, 3043–3122
<https://arxiv.org/abs/2111.12949>
- Paper #26 May.2021, 2 ▶▶ **SL₂ tilting modules in the mixed case**
Louise Sutton, Daniel Tubbenhauer, Paul Wedrich, Jieru Zhu
Selecta Math. (N.S.) 29 (2023), no. 3, 39
<https://arxiv.org/abs/2105.07724>
- Paper #25 May.2021 ▶▶ **Handlebody diagram algebras**
Daniel Tubbenhauer, Pedro Vaz
Rev. Mat. Iberoam. 39 (2023), no. 3, pp. 845–896
<https://arxiv.org/abs/2105.07049>
- Paper #24 Aug.2020 ▶▶ **Finitary birepresentations of finitary bicategories**
Marco Mackaay, Volodymyr Mazorchuk, Vanessa Miemietz, Daniel Tubbenhauer, Xiaoting Zhang
Forum Math. 33 (2021), no. 5, 1261–1320
<https://arxiv.org/abs/2008.01658>
- Paper #23 Apr.2020 ▶▶ **The center of SL₂ tilting modules**
Daniel Tubbenhauer, Paul Wedrich
Glasg. Math. J. 64 (2022), no. 1, 165–184
<https://arxiv.org/abs/2004.10146>

Publication list (continued)

- Paper #22 Aug.2019 ▶▶ **HOMFLYPT homology for links in handlebodies via type A Soergel bimodules**
David E.V. Rose, Daniel Tubbenhauer
Quantum Topol. 12 (2021), no. 2, 373–410
<https://arxiv.org/abs/1908.06878>
- Paper #21 Jul.2019 ▶▶ **Quivers for SL_2 tilting modules**
Daniel Tubbenhauer, Paul Wedrich
Represent. Theory 25 (2021), 440–480
<https://arxiv.org/abs/1907.11560>
- Paper #20 Jun.2019 ▶▶ **2-representations of Soergel bimodules for finite Coxeter types**
Marco Mackaay, Volodymyr Mazorchuk, Vanessa Miemietz, Daniel Tubbenhauer, Xiaoting Zhang
Proc. Lond. Math. Soc. (3) 126 (2023), no. 5, 1585–1655
<https://arxiv.org/abs/1906.11468>
- Paper #19 Jul.2018 ▶▶ **Algebraic properties of zigzag algebras**
Michael Ehrig, Daniel Tubbenhauer
Comm. Algebra 48 (2020), no.1, 11–36
<https://arxiv.org/abs/1807.11173>
- Paper #18 Apr.2018 ▶▶ **Trihedral Soergel bimodules**
Marco Mackaay, Volodymyr Mazorchuk, Vanessa Miemietz, Daniel Tubbenhauer
Fund. Math. 248 (2020), no. 3, 219–300
<https://arxiv.org/abs/1804.08920>
- Paper #17 Oct.2017 ▶▶ **Relative cellular algebras**
Michael Ehrig, Daniel Tubbenhauer
Transform. Groups 26 (2021), no. 1, 229–277
<https://arxiv.org/abs/1710.02851>
- Paper #16 Mar.2017 ▶▶ **Functoriality of colored link homologies**
Michael Ehrig, Daniel Tubbenhauer, Paul Wedrich
Proc. Lond. Math. Soc. (3) 117 (2018), no. 5, 996–1040
<https://arxiv.org/abs/1703.06691>
- Paper #15 Jan.2017 ▶▶ **Webs and q-Howe dualities in types BCD**
Antonio Sartori, Daniel Tubbenhauer
Trans. Amer. Math. Soc. 371 (2019), no. 10, 7387–7431
<https://arxiv.org/abs/1701.02932>
- Paper #14 Dec.2016 ▶▶ **Simple transitive 2-representations via (co)algebra 1-morphisms**
Marco Mackaay, Volodymyr Mazorchuk, Vanessa Miemietz, Daniel Tubbenhauer
Indiana Univ. Math. J. 68 (2019), no. 1, 1–33
<https://arxiv.org/abs/1612.06325>

Publication list (continued)

- Paper #13 Nov.2016 ▶▶ **Singular TQFTs, foams and type D arc algebras**
Michael Ehrig, Daniel Tubbenhauer, Arik Wilbert
Doc. Math. 24, 1585–1655 (2019)
<https://arxiv.org/abs/1611.07444>
- Paper #12 Sep.2016 ▶▶ **Two-color Soergel calculus and simple transitive 2-representations**
Marco Mackaay, Daniel Tubbenhauer
Canad. J. Math. 71 (2019), no. 6, 1523–1566
<https://arxiv.org/abs/1609.00962>
- Paper #11 Jan.2016 ▶▶ **Generic gl_2 -foams, web and arc algebras**
Michael Ehrig, Catharina Stroppel, Daniel Tubbenhauer
Preprint
<https://arxiv.org/abs/1601.08010>
- Paper #10 Oct.2015 ▶▶ **The Blanchet–Khovanov algebras**
Michael Ehrig, Catharina Stroppel, Daniel Tubbenhauer
Categorification and Higher Representation Theory, 183–226, Contemp. Math.,
683, Amer. Math. Soc., Providence, RI, 2017
<https://arxiv.org/abs/1510.04884>
- Paper #9 Jul.2015 ▶▶ **Semisimplicity of Hecke and (walled) Brauer algebras**
Henning H. Andersen, Catharina Stroppel, Daniel Tubbenhauer
J. Aust. Math. Soc. 103 (2017), no. 1, 1–44
<https://arxiv.org/abs/1507.07676>
- Paper #8 Apr.2015 ▶▶ **Super q -Howe duality and web categories**
Daniel Tubbenhauer, Pedro Vaz, Paul Wedrich
Algebr. Geom. Topol. 17-6 (2017), 3703–3749
<https://arxiv.org/abs/1504.05069>
- Paper #7 Mar.2015 ▶▶ **Cellular structures using U_q -tilting modules**
Henning H. Andersen, Catharina Stroppel, Daniel Tubbenhauer
Pacific J. Math. 292-1 (2018), 21–59
<https://arxiv.org/abs/1503.00224>
- Paper #6 Jan.2015 ▶▶ **Symmetric webs, Jones–Wenzl recursions and q -Howe duality**
David E.V. Rose, Daniel Tubbenhauer
Int. Math. Res. Not. (IMRN), 2016-17 (2016), 5249–5290
<https://arxiv.org/abs/1501.00915>
- Paper #5 Sep.2014 ▶▶ **Diagram categories for U_q -tilting modules at roots of unity**
Henning H. Andersen, Daniel Tubbenhauer
Transform. Groups 22 (2017), no. 1, 29–89
<https://arxiv.org/abs/1409.2799>

Publication list (continued)

- Paper #4 Apr.2014 ▶▶ **gl_n -webs, categorification and Khovanov–Rozansky homologies**
Daniel Tubbenhauer
J. Knot Theory Ramifications 29-11 (2020), 96 pages
<https://arxiv.org/abs/1404.5752>
- Paper #3 Oct.2013 ▶▶ **sl_3 -web bases, intermediate crystal bases and categorification**
Daniel Tubbenhauer
J. Algebraic Combin. 40-4 (2014), 1001–1076
<https://arxiv.org/abs/1310.2779>
- Paper #2 Jun.2012 ▶▶ **The sl_3 web algebra**
Marco Mackaay, Weiwei Pan, Daniel Tubbenhauer
Math. Z. 277-1-2 (2014), 401–479
<https://arxiv.org/abs/1206.2118>
- Paper #1 Nov.2011 ▶▶ **Virtual Khovanov homology using cobordisms**
Daniel Tubbenhauer
J. Knot Theory Ramifications 23-9 (2014), 91 pages
<https://arxiv.org/abs/1111.0609>



Daniel Tubbenhauer (digital signature); March 2, 2026