

Publication and citation list

Gergely Zábrádi

16th April 2024

Preprints

To appear

Publications

22. The sup-norm problem for automorphic cusp forms of $\mathrm{PGL}(n, \mathbb{Z}[i])$ (jt. with Péter Maga), *Proc. of the Amer. Math. Soc.* **152** (2024), 559–572, DOI:10.1090/proc/16576
21. Matrix Kloosterman sums modulo prime powers (jt. with Márton Erdélyi and Árpád Tóth), *Math. Zeitschrift* **306**(68) (2024), pp. 21, DOI:10.1007/s00209-024-03467-y
20. Explicit isomorphisms of quaternion algebras over quadratic global fields (jt. with Tímea Csahók, Péter Kutas, and Mickaël Montessinos), in: Proc. of the Fifteenth Algorithmic Number Theory Symposium, ANTS-XV, *Res. Number Theory* **8**, Article number: 77 (2022), DOI:10.1007/s40993-022-00380-3
19. Finding nontrivial zeros of quadratic forms over rational function fields of characteristic 2 (jt. with Tímea Csahók, Péter Kutas, and Mickaël Montessinos), *Proceedings of the 47th International Symposium on Symbolic and Algebraic Computation* (2022), 235–244, DOI:10.1145/3476446.3535485
18. On Kuznetsov-Bykovskii’s formula of counting prime geodesics (jt. with Giacomo Cherubini and Han Wu), *Math. Zeitschrift* **300** (2022), 881–928.
17. Multivariable (φ, Γ) -modules and Representations of Products of Galois Groups: The Case of Imperfect Residue Field (jt. with Jishnu Ray and Feng Wei), *Bull. Soc. Math. France* **149**(3) (2021), 521–546.
16. Drinfeld’s lemma for perfectoid spaces and overconvergence of multivariate (φ, Γ) -modules (jt. with Annie Carter and Kiran S. Kedlaya), *Doc. Math.* **26** (2021), 1329–1393.
15. Cohomology and overconvergence for representations of powers of Galois groups (jt. with Aprameyo Pal), *J. Inst. Math. Jussieu* **20**(2) (2021), 361–421.
14. Estimating the greatest common divisor of the value of two polynomials (jt. with Péter E. Frenkel), *Int. Journal of Number Theory* **14**(9) (2018), 2543–2554.
13. The p -adic Hodge decomposition according to Beilinson (jt. with T. Szamuely), in *Algebraic Geometry: Salt Lake City 2015*, Proceedings of Symposia in Pure Mathematics **97** (2018), AMS, Providence, part 2, 495–572.

12. Multivariable (φ, Γ) -modules and products of Galois groups, *Math. Research Letters* **25**(2) (2018), 687–721.
11. Multivariable (φ, Γ) -modules and smooth \mathfrak{o} -torsion representations, *Selecta Mathematica* **24**(2) (2018), 935–995.
10. Links between generalized Montréal functors (jt. with M. Erdélyi), *Math. Zeitschrift* **286**(3–4) (2017), 1227–1275.
9. On twists of modules over noncommutative Iwasawa algebras (jt. with S. Jha and T. Ochiai), *Algebra & Number Theory* **10**(3) (2016), 685–694.
8. Algebraic functional equations and completely faithful Selmer groups (joint with T. Backhausz), *Int. Journal of Number Theory* **11**(4) (2015), 1233–1257.
7. From étale P_+ -representations to G -equivariant sheaves on G/P (joint with P. Schneider and M.-F. Vigneras), in: *Automorphic Forms and Galois Representations*, Volume 2, LMS Lecture Note Series **415** (2014), 248–366.
6. (φ, Γ) -modules over noncommutative overconvergent and Robba rings, *Algebra & Number Theory* **8**(1) (2014), 191–242.
5. Generalized Robba rings, (with an appendix by P. Schneider), *Israel J. Math.* **191**(2) (2012), 817–887.
4. Exactness of the reduction on étale modules, *Journal of Algebra* **331** (2011), 400–415.
3. Pairings and functional equations over the GL_2 -extension, *Proc. London Math. Soc.* (2010) **101** (3), 893–930.
2. Characteristic elements, pairings and functional equations over the false Tate curve extension, *Math. Proc. Camb. Phil. Soc.* **144** (2008), no. 3, 535–574.
1. On irregularities in the graph of generalized divisor functions, *Acta Arithmetica* **110** (2003), no. 2, 165–171.

Independent citations

- (1) R. Greenberg, Iwasawa theory, projective modules, and modular representations, *Mem. Amer. Math. Soc.* **211** (2011), no. 992, cites 3 and 2.
- (2) S. Zerbes, Akashi series of Selmer groups, *Math. Proc. Camb. Phil. Soc.* **151** (2011), 229–243, cites 3 and 2.
- (3) L. Berger, Multivariable Lubin-Tate (φ, Γ) -modules and filtered φ -modules, *Math. Res. Letters* **20** (2013), no. 3, 1–20. Cites 5.
- (4) E. Große-Klönne, Locally algebraic automorphisms of the $PGL_2(F)$ -tree and \mathfrak{o} -torsion representations, *Bull. Soc. Math. France* **143**(3) (2015), 433–466, cites 7.
- (5) T. Backhausz, Ranks of GL_2 Iwasawa modules of elliptic curves, *Functiones et Approximatio, Commentarii Mathematici* **52**(2) (2015), 283–298, cites 3.
- (6) A. Pal, Functional equation of characteristic elements of abelian varieties over function fields, PhD thesis, University of Heidelberg, 2013, pp. 52, cites 3 and 2.

- (7) A. Riedel, On Perrin-Riou’s exponential map and reciprocity laws for (φ, Γ) -modules, PhD thesis, University of Heidelberg, 2013, pp. 104, cites 6.
- (8) R. Ollivier, Resolutions for principal series representations of p -adic GL_n , *Münster J. of Math.* **7** (2013), 225–240. cites 4.
- (9) A. Pal, Functional equation of characteristic elements of abelian varieties over function fields, *Int. Journal of Number Theory* **10**(3) (2014), 705–735. cites 3.
- (10) Ch. Breuil, Induction parabolique et (φ, Γ) -modules, *Algebra & Number Theory* **9**(10) (2015), 2241–2291, cites 4 and 10.
- (11) U. Schmitt, Towards a twist conjecture in non-commutative Iwasawa theory, PhD thesis, University of Heidelberg, 2014, pp. 224, cites 3.
- (12) M. F. Lim, On completely faithful Selmer groups of elliptic curves and Hida deformations, *J. of Algebra* **432** (2015), 72–90. cites 8.
- (13) M. Erdélyi, On the Schneider–Vigneras functor for principal series, *J. of Number Theory* **162** (2016), 68–85, cites 4 and 7.
- (14) M. F. Lim, Comparing the π -primary submodules of the dual Selmer groups, *Asian J. Math.* **21**(6) (2017), 1153–1182, cites 2, 3, and 8.
- (15) M. F. Lim, On the completely faithfulness of the p -free quotient modules of dual Selmer groups, *Journal of Ramanujan Math. Soc.*, **32**(3) (2017), 99–326, cites 8.
- (16) L. Berger, Multivariable (φ, Γ) -modules and locally analytic vectors, *Duke Math. J.* **165**(18) (2016), 3567–3595, cites 5.
- (17) M. Erdélyi, Computations and comparison of generalized Montréal functors, PhD thesis, Central European University, 2015, pp. 89, cites 4, 6, and 7.
- (18) T. Csige, The Grothendieck group of completed distribution algebras, preprint, arxiv:1601.02393, cites 5.
- (19) T. Csige, K -theoretic methods in the representation theory of p -adic analytic groups, PhD thesis, Humboldt University, Berlin, 2016, pp. 114, cites 5.
- (20) D. Lombardo, A. Perucca, Reductions of points on algebraic groups, *J. Inst. Math. Jussieu* **20**(5) (2021), 1637–1669, cites 13.
- (21) K. Kedlaya, Sheaves, stacks, and shtukas, in: *Perfectoid spaces: Lectures from the 2017 Arizona Winter School* (ed.: Bhargav Bhatt, Bryden Cais, Ana Caraiani, Kiran Kedlaya, Peter Scholze, and Jared Weinstein), Mathematical Surveys and Monographs **242**, American Mathematical Society, 2019, pp. 58–205, cites 11, 12, and 15.
- (22) P. Schneider, *Galois representations and (φ, Γ) -modules*, Cambridge Studies in Advanced Mathematics **164**, Cambridge University Press (2017), cites (in section 4.7) 11 and 12.
- (23) M. Witte, *Non-Commutative Iwasawa Theory for Global Fields*, habilitation thesis, University of Heidelberg (2017), pp. 136, cites 3.
- (24) K. F. Lai, I. Longhi, K.-S. Tan, F. Trihan, Pontryagin duality for Iwasawa modules and abelian varieties, *Trans. Amer. Math. Soc.* **370** (2018), 1925–1958, cites 3.

- (25) C. Wald, A p -adic quantum group and the quantized p -adic upper half plane, PhD thesis, Humboldt University, Berlin, 2017, pp. 163, cites 5.
- (26) Y. H. J. Zähringer, Non-Commutative Iwasawa Theory With (φ, Γ) -Local Conditions Over Distribution Algebras, PhD thesis, King's College London, 2017, pp. 163, cites 5.
- (27) S. Jha, S. Shekhar, Non-commutative twisted Euler characteristic, *Münster J. of Math.* **11** (2018), 1–12, cites 2.
- (28) M. Witte, Noncommutative Iwasawa main conjecture, *Int. Journal of Number Theory* **16**(09) (2020), 2041–2094, cites 3.
- (29) K. Česnavičius, T. Koshikawa, The A_{inf} -cohomology in the semistable case, *Comp. Math.* **155**(11) (2019), 2039–2128, cites 13.
- (30) D. Le, Weight cycling and supersingular representations, preprint (2017), cites 12.
- (31) E. Große-Klönne, A note on multivariable (φ, Γ) -modules, *Res. in Number Theory* **5**(6) (2019), pp. 9, cites 11 and 12.
- (32) B. Schraen, Représentations des groupes de Lie p -adiques et applications globales, habilitation thesis, CNRS, Centre de Mathématiques Laurent Schwartz, École Polytechnique, Palaiseau Cédex, 2018, pp. 51, cites 7.
- (33) J. Kohlhaase, Coefficient systems on the Bruhat-Tits building and pro- p Iwahori-Hecke modules, *Mem. Amer. Math. Soc.* **279**(1374) (2022), v+69 pp., cites 7.
- (34) Ch. Breuil, Y. Ding, Sur un problème de compatibilité local-global localement analytique, *Mem. Amer. Math. Soc.* **290**(1442) (2023), cites 10 and 11.
- (35) I. Kaneko, The prime geodesic theorem for $PSL_2(\mathbb{Z}[i])$ and spectral exponential sums, *Algebra & Number Theory* **16**(8) (2022), 1845–1887, arXiv:1903.05111, cites 18.
- (36) Ch. Aribam, N. Kwatra, Galois Cohomology For Lubin-Tate (φ_q, Γ_{LT}) -modules Over Coefficient Rings, *Res. in Number Theory* **8** (2022), article no.: 104, cites 15.
- (37) Z. Jiang, Non-archimedean Analysis and GAGA, PhD thesis, University of California San Diego, 2019, pp. 50, cites 16.
- (38) S. Jha, T. Ochiai, Control theorem and functional equation of Selmer groups over p -adic Lie extensions, *Selecta Math.* **26**(5) (2020), article no. 80, pp. 58, cites 2, 3, and 8.
- (39) O. Thomas, On Analytic and Iwasawa Cohomology, PhD thesis, University of Heidelberg, 2019, pp. 95, cites 15.
- (40) K. Kedlaya, Frobenius modules over multivariate Robba rings, preprint, arXiv:1311.7468, cites 5, 6, 7, 12, and 15.
- (41) K. Česnavičius, P. Scholze, Purity for flat cohomology, *Annals of Math.(2)* **199**(1), 51–180, cites 13.
- (42) B. Antieau, A. Mathew, M. Morrow, Th. Nikolaus, On the Beilinson fiber square, *Duke Math. J.* **171**(18) (2022), 3707–3806, cites 13.
- (43) S. Ahmed, M. F. Lim, On the algebraic functional equation for the mixed signed Selmer group over multiple \mathbb{Z}_p -extensions, *Proc. AMS* **149** (2021), 4541–4553, cites 2 and 3.

- (44) O. Thomas, Duality for K -analytic cohomology, arXiv:2008.02621, cites 15.
- (45) D. Marangoni, On derived de Rham cohomology, PhD thesis, University of Milan and University of Bordeaux, 2020, pp. 78, cites 13.
- (46) X. Tong, Hodge–Iwasawa theory II, arXiv:2010.06093, cites 5.
- (47) O. Balkanova, Spectral decomposition formula and moments of symmetric square L -functions, *Izvestiya Math.* **87**(4), 641–682 (2023), cites 18.
- (48) X. Tong, Analytic Geometry and Hodge–Frobenius Structure, arXiv:2011.08358, cites 5, 15, and 16.
- (49) X. Tong, Analytic Geometry and Hodge–Frobenius Structure Continued, arXiv:2012.07336, cites 15 and 16.
- (50) X. Tong, Period Rings with Big Coefficients and Applications I, arXiv:2012.07338, cites 15 and 16.
- (51) X. Tong, Category and Cohomology of Hodge–Iwasawa Modules, arXiv:2012.07308, cites 5, 15, and 16.
- (52) A. Mathew, Some recent advances in topological Hochschild homology, *Bull. London Math. Soc.* **54**(1) (2022), 1–44, cites 13.
- (53) X. Tong, Period Rings with Big Coefficients and Applications II, arXiv:2101.03748, cites 15 and 16.
- (54) S. Ghosh, S. Jha, S. Shekhar, Twisting lemma for Λ -adic modules, *Asian J. of Math.* **25**(4) (2021), 551–564, cites 2.
- (55) Ch. Breuil, F. Herzig, Y. Hu, S. Morra, B. Schraen, Conjectures and results on modular representations of $\mathrm{GL}_n(K)$ for a p -adic field K , to appear in *Memoirs of the AMS*, arXiv:2102.06188, cites 11 and 12.
- (56) Gh. Pupazan, Multivariable (φ, Γ) -modules and representations of products of Galois groups, PhD thesis, cites 11, 12, and 16.
- (57) B. Zavyalov, Mod- p Poincaré Duality in p -adic Analytic Geometry, arXiv:2111.01830, cites 13.
- (58) H. A. Tran, Applications of resultant of two p -adic power series, arXiv:2111.04974, cites 14.
- (59) K. Szabó, Estimating the p -adic valuation of the resultant, arXiv:2111.06354, cites 14.
- (60) O. Brinon, B. Chiarellotto, N. Mazzari, Multivariable de Rham representations, Sen theory and p -adic differential equations, to appear in *Math. Res. Letters*, arXiv:2111.11563, cites 11, 12, 15, and 16.
- (61) N. Marquis, Théorie des (φ, Γ) -modules univariables, représentations de $\mathrm{GL}_2(\mathbb{Q}_p)$ et généralisation à la théorie de (φ, Γ) -modules multivariables, MSc thesis, Sorbonne Université, cites 10, 11, 12, 15, and 16.
- (62) X. Tong, Geometric and Representation Theoretic Aspects of p -adic Motives, PhD thesis, University of California San Diego, 2021, pp. 694+xv, arXiv:2201.04785, cites 5, 15, and 16.
- (63) X. Tong, ∞ -Categorical Functional Analysis and p -adic Motives, arXiv:2112.10616, cites 5, 15, and 16.

- (64) X. Tong, ∞ -Categorical Approaches to Hodge-Iwasawa Theory I: Introduction and Extensions, arXiv:2201.01979, cites 15 and 16.
- (65) X. Tong, ∞ -Categorical Perverse p -adic Differential Equations over Stacks, arXiv:2201.05003, cites 15 and 16.
- (66) E. Grosse-Klönne, On ψ -Lattices in Modular (φ, Γ) -Modules, In: *Banerjee, D., Kedlaya, K.S., de Shalit, E., Chaudhuri, C. (eds) Perfectoid Spaces*, Infosys Science Foundation Series, Springer, Singapore (2022), 1–13, cites 12.
- (67) R. L. Prieto, The Hodge-Tate Decomposition and p -adic Hodge theory, University of Cambridge, thesis for *Master of Advanced Study in Pure Mathematics* (2022), cites 13.
- (68) K. F. Lai, Differential equations and Lie group representations, *Frontiers of Mathematics in China* **17**, 171–225 (2022), cites 7.
- (69) J. Ray, R. Sujatha, Selmer groups of elliptic curves over the $PGL(2)$ -extension, *Nagoya Math. J.* **248** (2022), 922–938, cites 8.
- (70) D. Kongsgaard, On the mod p cohomology of pro- p Iwahori subgroups, PhD thesis, University of California San Diego, 2022, pp. 138+xv, cites 4.
- (71) S. P. Dutta, Local Cohomology of Module of Differentials of integral extensions II, *J. of Algebra* **614** (2023), 392–416, cites 13.
- (72) Zh. Wu, Trianguline variety and eigenvariety at points with non-regular Hodge-Tate weights, PhD thesis, Université Paris-Saclay, 2022, pp. 187, cites 7 and 11.
- (73) D. El-Baz, M. Lee, A. Strömbergsson, Effective equidistribution of primitive rational points on expanding horospheres, arXiv:2212.07408, cites 21.
- (74) A. Ma, L. Chen, Z. Qin, Jordan semi-triple derivations and Jordan centralizers on generalized quaternion algebras, *AIMS Mathematics* **8**(3) (2023), 6026–6035, cites 20.
- (75) P. Schneider, O. Venjakob, Reciprocity laws for (φ_L, Γ_L) -modules over Lubin-Tate extensions, arXiv:2301.11606, cites 15.
- (76) R. Hallepeau, Microlocalisation des modules coadmissibles sur une courbe formelle, arXiv:2302.03959, cites 5.
- (77) A. Dubickas, On the least common multiple of several consecutive values of a polynomial, *St. Petersburg Math. J.* **34** (2023), 305–311, cites 14.
- (78) K. Ito, Prismatic G -display and descent theory, arXiv:2303.15814, cites 13.
- (79) Y. Min, Y. Wang, Integral p -adic non-abelian Hodge theory for small representations, arXiv:2304.07078, cites 13.
- (80) A. Castano, A Berkovich Approach to Perfectoid Spaces, PhD thesis, University of Michigan, 2023, 168 pp., arXiv:2304.09266, cites 13.
- (81) Y. Hashimoto, Universality theorems of the Selberg zeta functions for arithmetic groups, *The Quarterly Journal of Mathematics*, haae006, DOI:10.1093/qmath/haae006, cites 18.

- (82) J. Fuselier, A. Iezzi, M. Kozek, T. Morrison, Ch. Namoiyam, Computing supersingular endomorphism rings using inseparable endomorphisms, arXiv:2306.03051, cites 20.
- (83) D. Chatzacos, G. Harcos, I. Kaneko, The Prime Geodesic Theorem in Arithmetic Progressions, arXiv:2309.04186, cites 18.
- (84) X. Tong, ∞ -Categorical Approaches to Hodge-Iwasawa Theory II: ∞ -Categorical and Derived Hodge-Iwasawa Modules, arXiv:2311.10022, cites 15 and 16.
- (85) K. Ardakov, S. Wadsley, Global sections of equivariant line bundles on the p -adic upper half plane, arXiv:2312.12395, cites 5.
- (86) E. Zelingher, On matrix Kloosterman sums and Hall–Littlewood polynomials, arXiv:2312.13121, cites 21.
- (87) X. Tong, Arithmetic Hodge-Iwasawa Moduli Stacks, arXiv:2401.09403, cites 15 and 16.
- (88) I. Kaneko, The Prime Geodesic Theorem and Bounds for Character Sums, arXiv:2402.12133, cites 18.
- (89) M. Malcic, R. Steingart, O. Venjakob, M. Witzelsperger, ε -isomorphisms for rank one (φ, Γ) -modules over Lubin-Tate Robba rings, arXiv:2404.09974, cites 15.