

Dinesh S. Thakur
List of publications and preprints

Mathematics publication list ordered by the year of publication, followed by preprints, followed by publications by category and **non-math publications**

1. Number fields and function fields (zeta and gamma functions at all primes), Proceedings of conference on p-adic analysis, Hengelhoef 1986, 149-157. Publ. Universiteit Brussel, Belgium. Ed. N. De Grande-De Kimpe, L. Van Hamme.
2. **Thesis** Gamma functions and gauss sums for function fields and periods of Drinfeld modules—PhD thesis, Harvard University 1987. (Advisor—John Tate)
3. Gauss sums for $\mathbf{F}_q[T]$, Inventiones Math. 94, 105-112 (1988).
4. Gross-Koblitz formula for function fields – Proceedings of the congress on p-adic analysis, Trento , May 89; pa. 396, Springer lecture notes in Mathematics no. 1454 (1990) Ed. F. Baldassarri, S. Bosch, B. Dwork.
5. (Jointly with Greg Anderson) Tensor powers of the Carlitz module and zeta values, Annals of Math. 132 (1990), 159-191.
6. Analogies between integers and polynomials, Huzurbazar Memorial lectures, Bombay Mathematical Colloquium, Bulletin, vol. 7, no. 3 (1990), 77-89.
7. (Jointly with V. Chari) On the work of V. G. Drinfeld, Current Science, Vol. 59, No. 24, (1990), 1297-1300.
8. Zeta measure associated to $\mathbf{F}_q[T]$, J. Number theory, 35 (1990), 1-17.
9. Gamma functions for function fields and Drinfeld modules, Annals of maths, 134 (1991), 25-64.
10. Gauss sums for function fields, J. Number theory, 37 (1991), 242-252.

11. Continued fraction for the exponential for $\mathbf{F}_q[T]$, J. Number theory, 41 (1992), 150-155.
12. Drinfeld modules and Arithmetic in the function fields, International Mathematics Research Notices, No. 9 (1992), 185-197, Duke Math. J. vol. 68 (1992).
13. On gamma functions for function fields, 'The Arithmetic of function fields', pa. 75-86, Ed. D. Goss, D. Hayes, M. Rosen. Publ: Walter de Gruyter, NY, Berlin (1992).'
14. Shtukas and Jacobi sums, Inventiones Math. 111, 557-570 (1993).
15. (With an appendix by J. F. Voloch) Behavior of function field Gauss sums at ∞ , Bull. London Math. Soc. 25 (1993), 417-426.
16. Iwasawa theory and cyclotomic function fields, Proceedings of the conference on Arithmetic geometry, Contemporary Math. vol. 174 (1994), American Math. Soc., pa. 157-165. Edited by J. Jones and N. Childress.
17. Hypergeometric functions for function fields, Finite fields and their applications, Vol. 1, (Carlitz special issue), 219-231, (1995).
18. On characteristic p zeta functions, Compositio Math. Vol. 99 (1995), 231-247.
19. Exponential and Continued fractions, J. Number theory, 59 (1996), 248-261.
20. Automata-style proof of Voloch's transcendence result, J. Number theory, 58 (1996), 60-63.
21. Transcendence of Gamma values for $\mathbf{F}_q[T]$, Annals of Math. 144 (1996), 181-188.
22. Patterns of continued fractions for the analogues of e and related numbers in the function field case, J. Number Theory, 66 (1997), 129-147.

23. Automata and Transcendence, Number Theory, Edited by V. Kumar Murty and M. Waldschmidt, Contemporary Math. vol. 210, (1997), American Math. Soc., pa. 387-399. Proceedings of the International conference on Discrete mathematics and Number theory.
24. (Jointly with Robert M. Beals) Computational classification of numbers and algebraic properties, International Mathematics Research Notices, 15 (1998), 799-818.
25. Diophantine approximation exponents and continued fractions for algebraic power series, J. Number Theory, 79 (1999), 284-291.
26. An alternate approach to solitons for $\mathbf{F}_q[T]$, J. Number Theory, 76 (1999), 301-319.
27. (Jointly with Jean-Paul Allouche) Automata and transcendence of the Tate period in finite characteristic, Proceedings of American Mathematical Society, 127 (1999), 1309-1312.
28. Hypergeometric functions for function fields II, J. Ramanujan Math. Soc. 15 (2000), 43-52.
29. **Four** expository articles (i) Introduction, (ii) Quadratic and cyclotomic fields, (iii) Fermat's last theorem for regular primes, (iv) Overview and interconnections in 'Cyclotomic fields and related topics', Proceedings of the summer school (June 7-30, 1999), Edited by S. D. Adhikari, S. A. Katre and D. S. Thakur, Published by Bhaskaracharya Pratishthan, October 2000.
30. (**Editor**) 'Cyclotomic fields and related topics', Proceedings of the summer school (June 7-30, 1999), Edited by S. D. Adhikari, S. A. Katre and D. S. Thakur, Published by Bhaskaracharya Pratishthan, October 2000.
31. (Joint with M. Kim and J. Voloch) Diophantine approximation and deformation, Bull. Soc. Math. France, 128 (2000), 585-598.
32. L -functions and modular forms in finite characteristic, Proceedings of the International conference on Cohomology of arithmetic groups, L -functions and Automorphic forms, Mumbai 1998, Edited by T. N.

Venkataramana (2001), 214-228. Published for Tata Institute of Fundamental Research by Narosa Publ., distributed by AMS.

33. Integrable systems and number theory in finite characteristic, Advances in nonlinear mathematics and science, special issue, Proceedings of conference 'Integrating integrability into mathematics and science (Nonlinear world of Vladimir Zakharov)', October 99 in Physica D, vol. 152-153, (2001), 1-8.
34. Elliptic curves in function field arithmetic, In 'Current Trends in Number Theory', Ed. S. D. Adhikar, S. A. Katre and B. Ramakrishnan: the proceedings of 'International conference on number theory', Harish-Chandra Research Institute, November 2000. Published by Hindustan Book Agency, New Delhi, March 2002. pp. 215-238.
35. Diophantine approximation in finite characteristic, 'Algebra, Arithmetic and Geometry with Applications' (Papers from Shreeram S. Abhyankar's 70th Birthday conference) —Edited by Chris Christensen, Ganesh Sundaram, Avinash Sathaye, Chandrajit Bajaj, Springer 2003, pp. 757-765. (Proceedings of the 'Conference on algebra and algebraic geometry with applications', Purdue University, July 2000)
36. **Book** 'Function Field Arithmetic' , World Scientific, New Jersey, May 2004.
37. Recent developments in Function Field Arithmetic, 'The Mathematics Student' proceedings of Centenary meeting of Indian Mathematical Society, Vol.76, Nos. 1-4 (2007), 163-170.
38. Diophantine approximation and transcendence in finite characteristic, 'Diophantine equations' –Editor N. Saradha, (2008), 265-278, Narosa Pub. House. Proceedings of International conference on Diophantine equations (DION 2005), TIFR December 2005,
39. (**Book, Edited** with David Savitt) 'p-adic geometry: Lectures from the 2007 Arizona Winter School' containing articles based on lectures at the school by Conrad, Teitelbaum (Dasgupta), Baker, Kedlaya and contributions by John Tate and Vladimir Berkovich. Published by

American Mathematical Society. University Lecture Series, vol. 45, Sep. 2008.

40. Approximation exponents in function fields, In “Analytic Number Theory — Essays in honour of Klaus Roth” edited by W. Chen, T. Gowers, H. Halberstam, W. Schmidt, R. C. Vaughn; pp. 421-435, Cambridge U. Press, 2009.
41. (Joint with Z. Wen, J. Yao, L. Zhao) Hypergeometric functions for function fields and transcendence, *Comptes Rendus Acad. Sci. Paris, Ser I* 347 (2009) 467-472.
42. Power sums of reciprocals of polynomials and applications to multizeta values and zeta zero distribution for $F_q[t]$, *Finite Fields and Their Applications*, Vol 15, Issue 4 (2009), 534-552.
43. (Joint with Greg Anderson) Multizeta values for $F_q[t]$, their period interpretation and relations between them, *International Mathematics Research Notices IMRN* (2009) no. 11, 2038-2055.
44. Relations between multizeta values for $F_q[t]$. *International Mathematics Research Notices IMRN* (2009) no. 12, 2318-2346.
45. Recent progress and open problems in function field arithmetic – The influence of John Tate’s work—, *Pure and Applied Mathematics Quarterly*, Vol. 6, No. 1, (Special issue: In honor of John Tate, part 2 of 2) 1-20 (2010).
Reprinted in ‘Wolf prize in Mathematics’, Vol. 4, ed. by Y. Sinai, E. Stein, 464-483 (2012).
46. (Joint with C.-Y. Chang, M. Papanikolas, J.Yu) Algebraic independence of arithmetic gamma values and Carlitz zeta values, *Advances in Mathematics*, 223 (2010), 1137-1154.
47. Shuffle relations for function field multizeta values, *International Mathematics Research Notices IMRN* (2010) No. 11, 1973-1980.
48. Higher diophantine approximation exponents and continued fraction symmetries for function fields, *Proc. Amer. Math. Soc.* 139 (2011), 11-19.

49. (Joint with Z. Wen, J. Yao, L. Zhao) Transcendence in positive characteristics and special values of hypergeometric functions, (Crelle's Journal) J. Reine Angew Math 657 (2011), 135-171.
50. A note on Numerators of Bernoulli numbers, Proc. Amer. Math. Soc. 140 (2012) no. 11, 3673-3676.
51. (Joint with Aaron Ekstrom and Carl Pomerance) Infinitude of elliptic Carmichael numbers, J. Australian Math. Soc. 92 (2012), no. 1, 45-60, special issue in memory of van der Poorten.
52. Binomial and Factorial congruences for $F_q[t]$, Finite Fields and Their Applications 18 (2012) 271-282.
53. From rationality to transcendence in finite characteristic, in (**co-authored book**) Transcendence et Irrationalité, Journée Annuelles , Pub. by Société Mathématique de France (2012) p. 21-48.
54. (Joint with Jim Sauerberg, Lingsueh Shu, George Todd) On infinitude of Wilson primes for $F_q[t]$, Acta Arith. 157 no. 1, 91-100 (2013).
55. Valuations of v -adic power sums and zero distribution for Goss' v -adic zeta for $F_q[t]$, Journal of Integer Sequences, Special Issue in Honor of the 60th Birthday of Jean-Paul Allouche, vol. 16 (2013), Art. 13.2.13, 1-18.
56. Higher diophantine approximation exponents and continued fraction symmetries for function fields II, Proceedings of American Mathematical Society, 141 (2013), no. 8, 2603-2608.
57. Differential characterization of Wilson primes for $F_q[t]$, Algebra and Number Theory, Vol. 7 no. 8 (2013), 1841-1848.
58. (Joint with J. A. Lara Rodriguez) Zeta-like multizeta values for $F_q[t]$, Indian J. Pure Appl. Math. 45(5):785-798 (2014), Indian Nat. Science Acad. Pub. by Springer, Ramanujan Special Issue.
59. Arithmetic of Gamma, Zeta and Multizeta values for function fields, pa. 195-280 in (**co-authored book**) Arithmetic Geometry over Global Function Fields (Series: Advanced Courses in mathematics, CRM, Barcelona), Springer-Basel, 2014.

60. Fermat versus Wilson congruences, Arithmetic derivatives and Zeta values, Special issue ‘Second decade of FFA’ of Finite Fields and their applications 32 (2015) 192-206.
61. Power sums of polynomials over finite fields and applications: a survey, Special issue ‘Second decade of FFA’ of Finite Fields and their applications 32 (2015) 171-191.
62. (Joint with J. A. Lara Rodriguez) Multiplicative relations between coefficients of logarithmic derivatives of F_q -linear functions and applications, J. of Algebra and its applications (Special issue in Honor of Shreeram S. Abhyankar), Vol. 14, No. 9, (2015), 154006 (13 pages).
63. Encounters with Ramanujan’s mathematics, Proceedings of Ramanujan Mathematical Society Annual Meeting, RMS Lecture Notes series No. 21 (2015) 181-186.
64. (Joint with J. A. Lara Rodriguez) Multizeta shuffle relations for function fields with non-rational infinite place. Finite Fields and their applications 37 (2016) 344-356.
65. Multizeta values for function fields: A survey. Journal de Théorie des Nombres de Bordeaux (Special volume in honor of David Goss), vol. 29 (2017), 997-1023.
66. (Joint with Gebhard Boeckle) Leading coefficient of the Goss zeta value and p-ranks of Jacobians of Carlitz cyclotomic covers. Journal de Théorie des Nombres de Bordeaux (Special volume in honor of David Goss), vol. 29 (2017), 963-995.
67. Kaprekar phenomena, in ‘Number theory: Arithmetic, Diophantine and Transcendence’, Proceedings of Ropar conference, Ramanujan Math. Soc. Lecture Note Series, No. 26, (2019), 1-10.
68. Automata methods in transcendence, (based on lectures given in a minicourse at ETH and Banff workshop), In t-motives, transcendence and other motivic aspects, Ed. by Bockle, Goss, Hartl, Papanikolas, European Math. Soc. pub. May 2020, pp. 351-372.

69. Multizeta in function field arithmetic, (based on lecture at Banff workshop) In t-motives, transcendence and other motivic aspects, Ed. by Bockle, Goss, Hartl, Papanikolas, European Math. Soc. pub. May 2020, pp. 441-452.
70. (Joint with Alejandro Lara Rodriguez) Zetalike multizeta values for higher genus curves, Journal de Theorie des Nombres de Bordeaux 33 (2021), 553-581. [Preprint on Arxivs]
71. Elementary prime counting. The Mathematics Student, Indian Math. Soc. Vol. 93, nos. 1-2, Jan-June (2024), 213-215.
72. Expected Mordell-Weil rank heuristics through Sato-Tate, Birch and Swinnerton-Dyer conjectures. Bulletin of the Institute of Mathematics, Academia Sinica, (New Series) Vol. 19 No. 2, pp 101-108, July (2024). [Preprint on Arxivs].
73. Fermat-Wilson Supercongruences, arithmetic derivatives and strange factorizations. Journal de Theorie des Nombres de Bordeaux, Vol. 36 No. 2 (2024) 481-491 [Preprint on Arxivs]
74. (Joint with Greg Anderson) Ihara power series for $F_q[t]$, (Preprint)
75. Surprising symmetries in distribution of prime polynomials. (Preprint on Arxivs).

Publications by category

Thesis and Articles in Research Journals:

- (1) Gamma functions and gauss sums for function fields and periods of Drinfeld modules—Thesis, Harvard University 1987. (Advisor-John Tate)
- (2) Gauss sums for $\mathbf{F}_q[T]$ – *Inventiones Math.* 94, 105-112 (1988).
- (3) (Jointly with Greg Anderson) Tensor powers of the Carlitz module and zeta values– *Annals of Math.* 132 (1990), 159-191.
- (4) Zeta measure associated to $\mathbf{F}_q[T]$ – *J. Number theory*, 35 (1990), 1-17.
- (5) Gamma functions for function fields and Drinfeld modules– *Annals of maths*, 134 (1991), 25-64.
- (5) Gauss sums for function fields – *J. Number theory*, 37 (1991), 242-252.
- (7) Continued fraction for the exponential for $\mathbf{F}_q[T]$ – *J. Number theory*, 41 (1992), 150-155.
- (8) Drinfeld modules and Arithmetic in the function fields — *International Mathematics Research Notices*, No. 9 (1992), 185-197, *Duke Math. J.* vol. 68 (1992).
- (9) Shtukas and Jacobi sums — *Inventiones Math.* 111, 557-570 (1993).
- (10) (With an appendix by J. F. Voloch) Behavior of function field Gauss sums at ∞ — *Bull. London Math. Soc.* 25 (1993), 417-426.
- (11) Hypergeometric functions for function fields – *Finite fields and their applications*, Vol. 1, (Carlitz special issue), 219-231, (1995).
- (12) On characteristic p zeta functions – *Compositio Math.* Vol. 99 (1995), 231-247.
- (13) Exponential and Continued fractions – *J. Number theory*, 59 (1996), 248-261.
- (14) Automata-style proof of Voloch’s transcendence result – *J. Number theory*, 58 (1996), 60-63.
- (15) Transcendence of Gamma values for $\mathbf{F}_q[T]$ – *Annals of Math.* 144 (1996), 181-188.
- (16) An alternate approach to solitons for $\mathbf{F}_q[T]$ – *J. Number Theory*, 76 (1999), 301-319.
- (17) Patterns of continued fractions for the analogues of e and related numbers in the function field case – *J. Number Theory*, 66 (1997), 129-147.
- (18) (Jointly with Jean-Paul Allouche) Automata and transcendence of

the Tate period in finite characteristic– Proceedings of American Mathematical Society, 127 (1999), 1309-1312.

(19) Hypergeometric functions for function fields II – J. Ramanujan Math. Soc. 15 (2000), 43-52.

(20) (Jointly with Robert M. Beals) Computational classification of numbers and algebraic properties– International Mathematics Research Notices, 15 (1998), 799-818.

(21) Diophantine approximation exponents and continued fractions for algebraic power series – J. Number Theory, 79 (1999), 284-291.

(22) Log-algebraicity for $F_q[T]$ – Preprint. (Incorporated in the book ‘Function Field Arithmetic’)

(23) (Joint with M. Kim and J. Voloch) Diophantine approximation and deformation – Bull. Soc. Math. France, 128 (2000), 585-598.

(24) Multizeta values for function fields – Preprint (Incorporated parts in the book ‘Function Field Arithmetic’).

(25) Recent developments in function field arithmetic – The Mathematics student, Indian Mathematical Society, in the special issue for invited talks at Indian Mathematical Society Centenary meeting, Vol 76, Nos. 1-4 (2007), 163-170.

(26) (Joint with C.-Y. Chang, M. Papanikolas, J. Yu) Algebraic independence of arithmetic gamma values and Carlitz zeta values. Advances in Mathematics, 223 (2010), 1137-1154.

(27) (Joint with Greg Anderson) Multizeta values for $F_q[t]$, their period interpretation and relations between them. International Mathematics Research Notices IMRN (2009), no. 11, 2038-2055.

(28) Relations between multizeta values for $F_q[t]$. International Mathematics Research Notices IMRN (2009), no. 12, 2038-2055.

(29) Power sums of reciprocals of polynomials and applications to multizeta values and zeta zero distribution for $F_q[t]$. Finite Fields and Their Applications, Vol. 15, Issue 4 (Aug. 2009), 534-552.

(30) (Joint with Z. Wen, J. Yao, L. Zhao) Transcendence in positive characteristics and special values of hypergeometric functions. Crelle’s Journal (J. Reine Angew Math) 657 (2011), 135-171.

(31) (Joint with Z. Wen, J. Yao, L. Zhao) Hypergeometric functions for function fields and transcendence, Comptes Rendus Acad. Sci. Paris. Ser I 347 (2009) 467-472.

- (32) Shuffle relations for function field multizeta values. International Mathematics Research Notices IMRN. (2010), No. 11, 1973-1980.
- (33) Higher diophantine approximation exponents and continued fraction symmetries for function fields. Proc. Amer. Math. Soc. 139 (2011), 11-19.
- (34) A note on Numerators of Bernoulli numbers. Proc. Amer. Math. Soc. 140 (2012) no. 11, 3673-3676.
- (35) (Joint with Aaron Ekstrom and Carl Pomerance) Infinitude of elliptic Carmichael numbers, J. Australian Math. Soc. 92 (2012), no. 1, 45-60, special issue in memory of van der Poorten.
- (36) Binomial and Factorial congruences for $F_q[t]$, Finite Fields and Their Applications 18 (2012) 271-282.
- (37) Higher diophantine approximation exponents and continued fraction symmetries for function fields II, Proc. Amer. Math. Soc. 141 (2013), no. 8, 2603-2608.
- (38) (Joint with Jim Sauerberg, Lingsueh Shu, George Todd) On infinitude of Wilson primes for $F_q[t]$, Acta Arith. 157 no. 1, 91-100 (2013).
- (39) Differential characterization of Wilson primes for $F_q[t]$, Algebra and Number Theory, Vol. 7 no. 8 (2013), 1841-1848.
- (40) Valuations of v -adic power sums and zero distribution for Goss' v -adic zeta for $F_q[t]$, Journal of Integer Sequences, Special Issue in Honor of the 60th birthday of Jean-Paul Allouche, vol. 16 (2013), Art. 13.2.13, 1-18.
- (41) Fermat versus Wilson congruences, Arithmetic derivatives and Zeta values. Special issue 'Second decade of FFA' of Finite Fields and their applications 32 (2015) 192-206.
- (42) (Joint with J. A. Lara Rodriguez) Zeta-like multizeta values for $F_q[t]$. Indian J. Pure Appl. Math. 45(5):785-798 (2014), Indian Nat. Science Acad. Pub. by Springer, Ramanujan Special Issue.
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- (44) (Joint with J. A. Lara Rodriguez) Multiplicative relations between coefficients of logarithmic derivatives of F_q -linear functions and applications, J. of Algebra and its applications (Special issue in Honor of Shreeram S. Abhyankar), Vol. 14, No. 9, (2015), 154006 (13 pages).
- (45) (Joint with J. A. Lara Rodriguez) Multizeta shuffle relations for function fields with non-rational infinite place. Finite Fields and their applications 37 (2016) 344-356.

(46) (Joint with Gebhard Boeckle) Leading coefficient of the Goss zeta value and p-ranks of Jacobians of Carlitz cyclotomic covers. *Journal de Theorie des Nombres de Bordeaux* (Special volume in honor of David Goss), vol. 29 (2017), 963-995

(47) Kaprekar phenomena, in ‘Number theory: Arithmetic, Diophantine and Transcendence’, Proceedings of Ropar conference, Ramanujan Math. Soc. Lecture Note Series, No. 26, (2019), 1-10.

(48) (Joint with Alejandro Lara-Rodriguez) Zetalike multizeta values for higher genus curves. *JTNB* 33 (2021) 553-581.

(49) Elementary prime counting. *The Mathematics Student*, Indian Math. Soc. vol. 93, nos. 1-2, Jan-June (2024), 213-215.

(50) Expected Mordell-Weil rank heuristics through Sato-Tate, Birch and Swinnerton-Dyer conjectures. *Bulletin of the Institute of Mathematics, Academia Sinica*, (New Series) Vol. 19 No. 2, pp 101-108, July (2024). [Preprint on Arxiv].

(51) Fermat-Wilson Supercongruences, arithmetic derivatives and strange factorizations. *Journal de Theorie des Nombres de Bordeaux* Vol. 36 No. 2 (2024) 481-491 (Preprint on Arxiv)

Not published yet

(i) (Joint with Greg Anderson) Ihara power series for $F_q[t]$.

(ii) Surprising symmetries in distribution of prime polynomials. (Work in progress, preprint on Arxiv).

Books:

(1) (Author) ‘Function Field Arithmetic’ —World Scientific, May 2004.

(2) (Co-editor and contributor) ‘Cyclotomic fields and related topics’, Proceedings of the summer school (June 7-30, 1999), coedited with Adhikari, Katre, Published by Bhaskaracharya Pratishthan, October 2000.

(3) (Co-editor) ‘p-adic geometry: lectures based on Arizona Winter School 2007’ containing articles based on lectures and contributions by John Tate and Vladimir Berkovich. Published by American Mathematical Society. Sep. 2008, co-edited with David Savitt.

(4) (Co-author) Transcendence et irrationalite—Journées Annuelles, Société Mathématique de France 2012, co-authors: Lucia Di Vizio and Micel Waldschmidt.

(5) (Co-author) Arithmetic Geometry over Global Function Fields, Advanced Courses in Mathematics, CRM Barcelona, Birkhauser 2014 (co-authors: Bockle, Burns, Goss, Trihan, Ulmer).

Special Journal of Number Theory volumes edited

(1) (Co-editor) In honor of David Hayes, Special issue JNT 133 (2013) no. 3, co-edited with Rosen and Papanikolas.

(2) (Co-editor) David Goss memorial issue: Special issue of JNT 232, March 2022, co-edited with Bockle, El-Guindy, Gekeler, Pal, Papikian, Pellarin.

(3) (Co-editor) New developments in the Theory of Modular Forms over Function Fields: Conference in Pisa, 2018/p-adic Cohomology and Arithmetic Applications: Conference in Banff, 2017, Special issue JNT 237, August 22, co-edited with Gekeler, Kaneko, Breuer, El-Guindy, Pellarin, Papikian, Goldfeld, Pal.

Conference proceedings papers in books or Journals based on lectures:

(1) Number fields and function fields (zeta and gamma functions at all primes)– Proceedings of conference on p-adic analysis, Hengelhoef 1986, 149-157. Publ. Universiteit Brussel, Belgium. Ed. N. De Grande-De Kimpe, L. Van Hamme.

(2) Gross-Koblitz formula for function fields – Proceedings of the congress on p-adic analysis, Trento , May 89; pa. 396, Springer lecture notes in Mathematics no. 1454 Ed. F. Baldassarri, S. Bosch, B. Dwork.

(3) Analogies between integers and polynomials – Huzurbazar Memorial lectures, Bombay Mathematical Colloquium, Bulletin, vol. 7, no. 3 (1990), 77-89.

(4) On gamma functions for function fields — ‘The Arithmetic of function fields’, pa. 75-86, Ed. D. Goss, D. Hayes, M. Rosen. Publ: Walter de Gruyter, NY, Berlin (1992).’

(5) Iwasawa theory and cyclotomic function fields. – Proceedings of the conference on Arithmetic geometry, Contemporary Math. vol. 174 (1994), American Math. Soc., pa. 157-165. Edited by J. Jones and N. Childress.

(6) Automata and Transcendence - Number Theory, Edited by V. Kumar Murty and M. Waldschmidt, Contemporary Math. vol. 210, (1997), Amer-

ican Math. Soc., pa. 387-399. Proceedings of the International conference on Discrete mathematics and Number theory.

(7) L -functions and modular forms in finite characteristic – Proceedings of the International conference on Cohomology of arithmetic groups, L -functions and Automorphic forms, Mumbai 1998, Edited by T. N. Venkataramana (2001), 214-228. Published for Tata Institute of Fundamental Research by Narosa Publ., distributed by AMS.

(8) Integrable systems and number theory in finite characteristic – Advances in nonlinear mathematics and science, special issue, Proceedings of conference ‘Integrating integrability into mathematics and science (Non-linear world of Vladimir Zakharov)’, October 99 in Physica D, vol. 152-153, (2001), 1-8.

(9) Diophantine approximation in finite characteristic– ‘Algebra, Arithmetic and Geometry with Applications’ (Papers from Shreeram S. Abhyankar’s 70th Birthday conference) — Edited by Chris Christensen, Ganesh Sundaram, Avinash Sathaye, Chandrajit Bajaj, Springer 2003, pp. 757-765. (Proceedings of the ‘Conference on algebra and algebraic geometry with applications’, Purdue University, July 2000)

(10) Elliptic curves in function field arithmetic – In ‘Current Trends in Number Theory’, Ed. S. D. Adhikar, S. A. Katre and B. Ramakrishnan: the proceedings of ‘International conference on number theory’, Harish-Chandra Research Institute, November 2000. Published by Hindustan Book Agency, New Delhi, March 2002. pp. 215-238.

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(12) Recent developments in Function Field Arithmetic — Invited article in ‘The Mathematics Student’ proceedings of Centenary meeting of Indian Mathematical Society, Vol.76, Nos. 1-4 (2007), 163-170.

(13) Automata methods in transcendence, based on lectures given in a minicourse at ETH and Banff workshop. (For proceedings of Banff workshop to be pub. by EMS)

(14) Multizeta in function field arithmetic, based on lecture at Banff workshop. (For proceedings of Banff workshop to be pub. by EMS)

(15) Arithmetic of Gamma, Zeta and Multizeta values for function fields. Pa. 195-280, in co-authored book, Arithmetic Geometry over Global func-

tion fields, in Advanced Courses in mathematics series, CRM, Barcelona, Springer-Basel 2014.

(16) From rationality to transcendence in finite characteristic, *Journée Annuelles de la Société Mathématique de France* (2012), p. 21-48.

(17) Encounters with Ramanujan's mathematics, *Proceedings of Ramanujan Mathematical Society Annual Meeting*, RMS Lecture Notes series No. 21, 2015, 181-186.

(18) Multizeta values for function fields: A survey. *Journal de Théorie des Nombres de Bordeaux* (Special volume in honor of David Goss), vol. 29 (2017), 997-1023.

(19) Automata methods in transcendence, (based on lectures given in a minicourse at ETH and Banff workshop), In *t-motives, transcendence and other motivic aspects*, Ed. by Bockle, Goss, Hartl, Papanikolas, *European Math. Soc. pub.* May 2020, pp. 351-372.

(20) Multizeta in function field arithmetic, (based on lecture at Banff workshop) In *t-motives, transcendence and other motivic aspects*, Ed. by Bockle, Goss, Hartl, Papanikolas, *European Math. Soc. pub.* May 2020, pp. 441-452.

Other contributions to books and Journals

(1) Recent progress and open problems in function field arithmetic – The influence of John Tate's work— In special issue Vol. 6, No. 1 (2010), 1-20 (edited by L. Ji, S. T. Yau and J. K. Yu) of *Pure and Applied Mathematics Quarterly* honoring John Tate.

Reprinted in 'Wolf prize in Mathematics' Vol. 4, edited by Y. Sinai, E. Stein, 464-483 (2012).

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Expository articles not based on my research:

(i) (Jointly with V. Chari) On the work of V. G. Drinfeld - *Current Science*, Vol. 59, No. 24, (1990), 1297-1300.

(ii) Four expository articles: (i) Introduction, (ii) Quadratic and cyclotomic fields, (iii) Fermat's last theorem for regular primes, (iv) Overview and interconnections in 'Cyclotomic fields and related topics', Proceedings of the summer school (June 7-30, 1999), Edited by S. D. Adhikari, S. A. Katre and D. S. Thakur, Published by Bhaskaracharya Pratishthan, October 2000.

Non-math articles (not in the lists above)

(1) ‘Bhaikaka’ (in Marathi), pub. 8 June 08, in Sunday literary supplement of Daily Loksatta.

Reprinted with different photos in JeevanJyot Diwali 2009, annual literary magazine.

Reprinted with no photos in the book ‘Tujhiyaa Jaatechaa Milo Amhaa Koni’, collection of articles published by Parachure Publishers, Mumbai (2011).

Reprinted with different photos in Kamaldoot Diwali 2018, annual literary magazine. (They changed title to ‘Bhaikaka’s gangot’). (Some below are original and some original with corrections)

web.math.rochester.edu/people/faculty/dthakur2/BhaikakaLoksatta.pdf

web.math.rochester.edu/people/faculty/dthakur2/BhaikakaLoksatta1.pdf

web.math.rochester.edu/people/faculty/dthakur2/BhaikakaKamaldoot.pdf

web.math.rochester.edu/people/faculty/dthakur2/BhaikakaKamaldoot1.pdf

Reprinted with no photos in Diwali 2019, Buffalo Marathi Mandal.

Electronic version: <https://buffalomarathi.org/diwaliank>

Pu La Prem Site electronic version:

http://cooldeepak.blogspot.com/2008/10/blog-post_07.html

(2) ‘Ganitaachaarya Shreeram Abhyankar’ (in Marathi), pub. 21 July 2013, in Sunday literary supplement of Daily Loksatta.

web.math.rochester.edu/people/faculty/dthakur2/AbhyankarLoksatta.pdf

(3) Shreeram Abhyankar (July 22, 1930-November 2, 2012), Notices of American Mathematical Society, November 2014, pa. 1216.

web.math.rochester.edu/people/faculty/dthakur2/AbhyankarNotices.pdf

web.math.rochester.edu/people/faculty/dthakur2/AbhyankarNotices.jpg

(4) The notion of twenty-two shrutis of Hindustani classical music, Vol. 20, No. 6, June (2015) issue of Resonance, Journal of Science Education, Indian Academy of Sciences, 515-531.

web.math.rochester.edu/people/faculty/dthakur2/ShrutiResonance.pdf

(5) (Joint declaration with relatives) ‘Charitrapat ki Vidambanpat’ (in Marathi) 10 March 2019, Sunday Loksatta

<https://www.loksatta.com/lokrang-news/article-about-autobiography-or-parody-movie-1854473/>

web.math.rochester.edu/people/faculty/dthakur2/autLoksatta.pdf

Text can also be found in

<https://www.facebook.com/ashutosh.thakur.94/posts/2508467539226294>

(6) ‘Pu La ani Suneetabai: Ek Sampanna Sahajeevan’, (in Marathi) in the book ‘Aaanakhi Pu La’, published by Loksatta pub., Mumbai, Nov. 2019
web.math.rochester.edu/people/faculty/dthakur2/BhaikakaMaiatte.pdf
web.math.rochester.edu/people/faculty/dthakur2/BhaikakaMaiatteLoksatta.pdf

(7) ‘Remembering John Tate’, pa. 177-190, Vol. 25, no. 2 Feb. 2020, Resonance, Indian Academy of Sciences journal of science education, Springer.
DOI 10.1007/s12045-020-0935-9

web.math.rochester.edu/people/faculty/dthakur2/TateResonanceFeb20.pdf

www.ias.ac.in/article/fulltext/reso/025/02/0177-0190

Springer Shredit link <https://rdcu.be/b2Whx>

(8) ‘Aathavanitil Babasaheb’ (in Marathi), pages 51-54, in ‘Shivashaahir Babasaheb Purandare Smrutigranth: Sonchaaphaa’, book published by ‘Itihaasaachya Paulkhuna, Jalgaon, India, 2 August 2022, edited by Dr. Chitrallekha Purandare

Text version: web.math.rochester.edu/people/faculty/dthakur2/Babasaheb.pdf

Printed version (with photo):

web.math.rochester.edu/people/faculty/dthakur2/BabasahebPrinted.pdf

(9) ‘Kumarkaka’ (in Marathi), pages 32-39 (minus 35, 37), in ‘Sunata hai gurugyani’ Kumar Gandharva centennary special issue booklet published by Loksatta pub. Mumbai, June 2023.

web.math.rochester.edu/people/faculty/dthakur2/Kumarkaka.pdf

The actual printed version below has a different title ‘Pulakit Swarmaitree’ chosen by the editor, and has a typo in a date, and some photos are wrongly cropped unfortunately, though the text is the same. It has one additional photo.

web.math.rochester.edu/people/faculty/dthakur2/KumarkakaLoksatta.pdf

web.math.rochester.edu/people/faculty/dthakur2/KumarkakaLoksatta2.pdf

(10) ‘Manaatun Umatanari daad marathich!’ (in Marathi), pages 42-45 in ‘Marathine ghadavalele’, published by Loksatta pub. Pune, March 2025. The published (Loksatta) version has the title given by the editor and the first line from the original (‘Shri Kuberaani marathi madhyamaatun vidnyan aani

ganit shikanyaachyaa mazyaa anubhavaanvar kahi lihayalaa suchavale, tevha tyaaabarobar kaahi vichaar mandun yaa shikshanaat madat karanaaryaanbadal krutadnyataaa vyakta karaayachi sandhi ghet aahe'), which described the abstract and the aim of the article, was unfortunately dropped in it (with good intentions of not including the editor's name!), and has introduction added.

web.math.rochester.edu/people/faculty/dthakur2/MarathiLoksatta.pdf

(11) 'Bhimsenkaka' (in Marathi) invited article written in 2021 for Bhimsen Joshi janmashataabdi book (editor: Mukund Sangoram, Srinivas Joshi) not published yet.

web.math.rochester.edu/people/faculty/dthakur2/Bhimsenkaka.pdf