

List of Publications by Yu. I. Manin

1956

1. On cubic congruences to a prime modulus. *Russian: Izv. AN SSSR, ser. mat.*, 20:6 (1956), pp. 673–678. *English: AMS Translations, ser. 2*, 13 (1960), 1–7.

1958

2. Algebraic curves over fields with differentiation. *Russian: Izv. AN SSSR, ser. mat.*, 22:6 (1958), 737–756. *English: AMS Translations, ser. 2*, 37 (1964), 59–78.

1959

3. On the moduli of a field of algebraic functions. *Russian: Doklady AN SSSR*, 125:3 (1959), 488–491.

1961

4. The Hasse–Witt matrix of an algebraic curve. *Russian: Izv. AN SSSR, ser. mat.*, 25:1 (1961), 153–172. *English: AMS Translations, ser. 2, vol. 45* (1965), 245–264.
5. On the Diophantine equations over functional fields. *Russian: Doklady AN SSSR*, 139:4 (1961), 806–809.
6. On the ramified coverings of algebraic curves. *Russian: Izv. AN SSSR, ser. mat.*, 25:6 (1961), 789–796.
7. On the theory of abelian varieties. *Russian: PhD Thesis, Steklov Math. Institute, Moscow, 1961, 66 pp.*

1962

8. On the theory of abelian varieties over a field of finite characteristic. *Russian: Izv. AN SSSR, ser. mat.*, 26:2 (1962), 281–292.
9. A remark on Lie p -algebras. *Russian: Sibirskii Mat. Journal*, 3:3 (1962), 479–480.
10. An elementary proof of Hasse’s theorem. *Russian: Chapter 10 in “Elementary Methods in Analytic Number Theory”, by A. O. Gelfond and Yu. V. Linnik, Moscow, Fizmatgiz, 1962. 13 pp.*
11. Two-dimensional formal abelian groups. *Russian: Doklady AN SSSR*, 143:1 (1962), 35–37.
12. On the classification of the formal abelian groups. *Russian: Doklady AN SSSR*, 144:3 (1962), 490–492.
13. On the geometric constructions with compasses and ruler. *Russian: Chapter 6 in “Encyclopaedia of Elementary Mathematics”, vol. 6, Fizmatgiz, 1962, 14 pp.*

1963

14. Rational points of algebraic curves over functional fields. *Russian: Izv. AN SSSR, ser. mat.* 27:6 (1963), 1395–1440. *English: AMS Translations ser. 2, vol. 50 (1966), 189–234.*

15. The theory of commutative formal groups over fields of finite characteristic. *Russian: Uspekhi Mat. Nauk*, 18:6 (1963), 3–90. *English: Russian Math. Surveys*, 18:6 (1963), 1–83.

16. A proof of the analogue of the Mordell conjecture for curves over functional fields. *Russian: Doklady AN SSSR*, 152:5 (1963), 1061–1063.

17. On the arithmetic of rational surfaces. *Russian: Doklady AN SSSR*, 152:1 (1963), 47–49. *English: Soviet Math. Dokl.*, 4 (1963), 1243–1247.

1964

18. The Tate height of points on an abelian variety, its variants and applications. *Russian: Izv. AN SSSR, ser. mat.*, 28:6 (1964), 1363–1390. *English: AMS Translations, ser. 2, 59 (1966), 82–110.*

19. Diophantine equations and algebraic geometry. *Russian: In: Proc. of the 4th All-Union Math. Congress, vol.2, Fizmatgiz, 1964, 15–21.*

20. Rational points on algebraic curves. *Russian: Uspekhi Mat. Nauk*, 19:6 (1964), 83–87.

1965

21. Moduli fuchsiani. *Annali Scuola Norm. Sup. di Pisa*, 19 (1965), 113–126.

22. Minimal models of ruled and rational surfaces (with Yu. R. Vainberg). *Russian: In: Algebraic surfaces, ed. by I. R. Shafarevich, Trudy MIAN, 75 (1965), 75–91.*

23. Algebraic topology of algebraic varieties. *Russian: Uspekhi Mat. Nauk*, 20:6 (1965), 3–12.

1966

24. Rational surfaces over perfect fields. *Russian: Publ. Math. IHES, vol. 30 (1966), 415–457. English: AMS Translations (ser. 2), 84 (1969), 137–186.*

25. Differential forms and sections of elliptic pencils. *Russian: In: Contemporary Problems of the Theory of Analytic Functions, Nauka, Moscow, 1966, 224–229.*

26. Two theorems on rational surfaces. In: *Simp. Int. di Geom. Algebrica*, Roma, 1966, 198–207.

1967

27. Rational G -surfaces. *Russian: Doklady AN SSSR*, 1175:1 (1967), 28–30.

28. Rational surfaces over perfect fields. II. *Russian: Mat. Sbornik*, 72:2 (1967), 161–192. *English: Math. USSR Sbornik*, 1 (1967), 141–168.

1968

29. Correspondences, motives, and monoidal transforms. *Russian: Mat. Sbornik*, 77:4 (1968), 475–507. *English: Mathematics of the USSR Sbornik*, vol. 6 (1968), 439–470.

30. Rational surfaces and Galois cohomology. *In: Proc. Moscow ICM*, MIR, Moscow 1968, 495–509.

31. On some groups related to cubic surfaces. *In: Algebraic geometry*. Tata Press, Bombay, 1968, 255–263.

32. Cubic hypersurfaces. I. Quasigroups of point classes. *Russian: Izv. AN SSSR, ser. mat.*, 32:6 (1968), 1223–1244. *English: Math USSR – Izvestia*, 2 (1968), 1171–1191.

33. Lectures on Algebraic Geometry. *Comp. Center, Moscow University*, 1968, 185 pp.

1969

34. The p -torsion of elliptic curves is uniformly bounded. *Russian: Izv. AN SSSR, ser. mat.*, 33:3 (1969), 459–465. *English: Math. USSR Izvestia*, vol. 3 (1969), 433–438.

35. Hypersurfaces cubiques. II. Automorphismes birationnelles en dimension deux. *Inv. Math.*, 6 (1969), 334–352.

36. Cubic hypersurfaces. III. Moufang loops and Brauer equivalence. *Russian: Mat. Sbornik*, 79:2 (1969), 155–170. *English: Math. USSR–Sbornik*, 24:5 (1969), 1–89.

37. Lectures on the K -functor in algebraic geometry. *Russian: Uspekhi Mat. Nauk*, 24:5 (1969), 3–86. *English: Russian Math. Surveys*, 24:5 (1969), 1–89.

38. Comments on the five Hilbert's problems. *Russian: In "Hilbert Problems"*, Nauka, Moscow, 1969, 154–162, 171–181, 196–199.

39. Regular elements in the Cremona group. *Russian: Mat. Zametki*, 5:2 (1969), 145–148.

1970

40. The refined structure of the Néron-Tate height. *Russian: Mat. Sbornik*, 83:3 (1970), 331–348. *English: Math. USSR–Sbornik*, 12 (1970), 325–342.

41. Lectures on Algebraic Geometry I: Affine Schemes. *Russian: Moscow University*, 1970, 133 pp.

1971

42. Le groupe de Brauer-Grothendieck en géométrie diophantienne. *In: Actes Congr. Int. Math. Nice, Gauthier-Villars 1971*, vol. 1, p. 401–411.

43. Three-dimensional quartics and counterexamples to the Lüroth conjecture (with V.A.Iskovskih). *Russian: Mat. Sbornik*, 86:1 (1971) 140–166. *English: Math. USSR-Sbornik*, vol. 15 (1972), 141–166.

44. Cyclotomic fields and modular curves. *Russian: Uspekhi Mat. Nauk*, 26:6 (1971), 7–71. *English: Russian Math. Surveys*, 26: (1971), 7–78.

45. Mordell–Weil theorem. *Russian: Appendix to “Abelian Varieties” by D. Mumford*, Mir, Moscow, 1971, 17 pp.

1972

46. Parabolic points and zeta-functions of modular curves. *Russian: Izv. AN SSSR, ser. mat.* 36:1 (1972), 19–66. *English: Math. USSR Izvestija*, publ. by AMS, vol. 6, No. 1 (1972), 19–64.

47. Cubic Forms: Algebra, Geometry, Arithmetic. *Russian: Nauka, Moscow*, 1972, 304 pp.

1973

48. Height on families of abelian varieties (with Ju. G. Zarhin). *Russian: Mat. Sbornik*, 89:2 (1973), 171–181. *English: Math. USSR Sbornik*, 18 (1972), 169–179.

49. Periods of p -adic Schottky groups (with V. G. Drinfeld). *Journ. f. d. reine u. angew. Math.*, vol. 262/263 (1973), 239–247.

50. Periods of parabolic forms and p -adic Hecke series. *Russian: Mat. Sbornik*, 92:3 (1973), 378–401. *English: Math. USSR Sbornik*, 21:3 (1973), 371–393.

51. Explicit formulas for the eigenvalues of Hecke operators. *Acta Arithmetica*, 24 (1973), 239–249.

52. Hilbert’s tenth problem. *Russian: In: Sovr. Probl. Mat.*, 1 (1973), 5–37. *English: Journ of Soviet Math.*

1974

53. The values of p -adic Hecke series at integer points of the critical strip. *Russian: Mat. Sbornik*, 93:4 (1974), 621–626. *English: Math. USSR Sbornik*, 22:4 (1974), 631–637.

54. p -adic Hecke series of imaginary quadratic fields (with M.M.Vishik). *Russian: Mat. Sbornik*, 95:3 (1974), 357–383. *English: Math. USSR Sbornik*, 24:3 (1974), 345–371.

55. p -adic automorphic functions. *Russian: In: Sovrem. Probl. Mat.*, vol. 3 (1974), 5–92. *English: Journ. of Soviet Math.*, 5 (1976), 279–333.

56. Lectures on Mathematical Logic. *Russian: Moscow Institute of Electronic Engineering*, 1974, Part 1, 133 pp., Part 2, 69 pp.

57. Cubic Forms: Algebra, Geometry, Arithmetic. *North Holland, Amsterdam*, 1974, 292 pp.

1975

58. Continuum problem. *Russian: In: Sovrem. Probl. Mat., vol. 5 (1975), 5–72.*
59. Gödel's Theorem. *Russian: Priroda, 12 (1975), 80–87.*

1976

60. Non-Archimedean integration and p -adic Jacquet–Langlands L -series. *Russian: Uspekhi Mat. Nauk, 31:1 (1976), 5–54. English: Russian Math. Surveys, 31:1 (1976), 5–57.*

1977

61. Poisson brackets and the kernel of the variational derivation in the formal calculus of variations (with I. M. Gelfand, M. A. Shubin). *Russian: Funkc. Anal. i ego Prilozen., 10:4 (1977), 31–42. English: Func. Anal. Appl., 10:4 (1977).*
62. Convolutions of Hecke series and their values at lattice points (with A.A.Pan-chishkin). *Russian: Mat. Sbornik, 104:4 (1977), 617–651. English: Math. USSR Sbornik, 33:4 (1977), 539–571.*
63. Long wave equations with a free surface . I. Conservation laws and solutions (with B. Kupershmidt). *Russian: Funkc. Anal. i ego Prilozen., 11:3 (1977), 31–42. English: Func. Anal. Appl., 11:3 (1977), 188–197.*
64. A Course in Mathematical Logic. *Springer Verlag, 1977. XIII+286 pp.*
65. Assioma/Postulato. *In: Enciclopedia Einaudi, vol. 1 (1977), 992–1010, Torino, Einaudi.*
66. Applicazioni. *In: Enciclopedia Einaudi, vol. 1 (1977), 701–743, Torino, Einaudi.*
67. Men and Signs. *Russian: In: Priroda, 5 (1977), 150–152.*

1978

68. Long wave equations with a free surface II. The Hamiltonian structure and the higher equations (with B. Kupershmidt). *Russian: Funkcional. Anal. i ego Prilozen., 12:1 (1978), 25–37. English: Func. Anal. Appl., 12:1 (1978), 20–29.*
69. Matrix solitons and vector bundles over singular curves. *Russian: Func. Anal. i ego Prilozen., 12:4 (1978), 53–63. English: Func. Anal. Appl., 12:4 (1978).*
70. Algebraic aspects of non-linear differential equations. *Russian: In: Sovrem. Probl. Mat., vol. 11 (1978), 5–152. English: Journ. of Soviet Math., 11 (1979), 1–122.*
71. Self-dual Yang–Mills fields over a sphere (with V. G. Drinfeld). *Russian: Func. Anal. i ego Prilozen., 12:2 (1978), 78–79. English: Func. Anal. Appl., 12:2 (1978).*

72. On the locally free sheaves on CP^3 connected with Yang–Mills fields (with V. G. Drinfeld). *Russian: Uspekhi Mat. Nauk*, 33:3 (1978), 241–242.
73. Construction of instantons (with M. F. Atiyah, V. G. Drinfeld, N. J. Hitchin). *Phys. Lett. A*, 65:3 (1978), 185–187.
74. Instantons and sheaves on CP^3 (with V. G. Drinfeld). *In: Springer Lecture Notes in Math.*, vol. 732 (1978), 60–81.
75. A description of instantons (with V. G. Drinfeld). *Comm. Math. Phys.*, v. 63 (1978), 177–192.
76. A description of instantons II (with V. G. Drinfeld). *Russian: In: Proc. of Int. Seminar on the Physics of High Energy and Quantum Field Theory, Serpoukhov*, 1978, 71–92.
77. Modular forms and number theory. *In: Proc. Int. Congr. of Math., Helsinki 1978*, vol. 1, 177–186.
78. Continuo/Discreto. *In: Enciclopedia Einaudi*, vol. 3 (1978), 935–986, Torino, Einaudi.
79. Dualitá (with I.M.Gelfand). *In: Enciclopedia Einaudi*, vol. 5 (1978), 126–178, Torino, Einaudi.
80. Divisibilitá. *In: Enciclopedia Einaudi*, vol. 5 (1978), 14–37, Torino, Einaudi.

1979

81. Conservation laws and Lax representation of Benney’s long wave equations (with D. R. Lebedev). *Phys. Lett. A*, 74 (1979), 154–156.
82. Gelfand-Dikii Hamiltonian operator and the co-adjoint representation of the Volterra group (with D.R.Lebedev). *Russian: Func. Anal. i ego Prilozhen.*, 13:4 (1979), 40–46. *English: Func. Anal. Appl.*, 13:4 (1979), 268–273.
83. Yang-Mills fields, instantons, tensor product of instantons (with V.G.Drinfeld). *Russian: Yad. Fiz.*, 29:6 (1979), 1646–1653 *English: Soviet J. Nucl. Phys.*, 29:6 (1979), 845–849.
84. Modular forms and number theory. *In: Proc. Int. Math. Congr. 1978, Helsinki 1979*, vol. 1, 177–186.
85. Mathematics and Physics. *Russian: Znaniye, Moscow*, 1979, 63 pp.
86. Provable and Unprovable. *Russian: Sov. Radio*, 1979, 166 pp.
87. Insieme. *In: Enciclopedia Einaudi*, vol. 7 (1979), 744–776, Torino, Einaudi.
88. Razionale/Algebrico/Transcedente. *In: Enciclopedia Einaudi*, vol. 11 (1979), 603–628, Torino, Einaudi.
89. A new encounter with Alice. *Russian: In: Priroda*, 7 (1979), 118–120.

1980

90. An instanton is determined by its complex singularities (with A.A.Beilinson, S.I.Gelfand). *Russian: Funkc. Analiz i ego Priloz.*, 14:2 (1980), 48–49. *English: Func. Anal. Appl.* 14:2 (1980).
91. Twistor description of classical Yang–Mills fields. *Phys. Lett. B*, 95:3–4 (1980), 405–408.
92. Benney’s long wave equations II. The Lax representation and conservation laws (with D. R. Lebedev). *Russian: Zap. Nauchn. Sem. LOMI*, 96 (1980), 169–178.
93. Penrose transform and classical Yang–Mills fields. *Russian: In: Group Theoretical Methods in Physics, Nauka, 1980, vol. 2, 133–144.*
94. Methods of algebraic geometry in modern mathematical physics (with V. G. Drinfeld, I. Krichever, S. P. Novikov). *Math. Phys. Review*, 1 (1980), Harwood Academic, Chur, 3–57.
95. Computable and Uncomputable. *Russian: Sov. Radio, 1980, 128 pp.*
96. Linear Algebra and Geometry (with A. I. Kostrikin). *Russian: Moscow University, 1980, 319 pp.*

1981

97. Gauge fields and holomorphic geometry. *Russian: In: Sovr. Probl. Mat.*, 17 (1981), 3–55. *English: Journal of Soviet Math.*
98. Hidden symmetries of long waves. *Physica D*, 3:1–2 (1981), 400–409.
99. On the cohomology of twistor flag spaces (with G. M. Henkin). *Compositio Math.*, 44 (1981), 103–111.
100. Expanding constructive universes. *In: Springer Lect. Notes in Comp. Sci.*, 122 (1981), 255–260.
101. Simmetria (with I. M. Gelfand). *In: Enciclopaedia Einaudi, vol. 12 (1981), 916–943, Torino, Einaudi.*
102. Strutture matematiche. *In: Enciclopaedia Einaudi, vol. 13 (1981), 765–798, Torino, Einaudi.*
103. Natural language in scientific texts. *Russian: In: Structure of Text–81, Moscow, Nauka, 1981, 25–27.*
104. Mathematics and Physics. *Birkhäuser, Boston, 1981, 100 pp.*
105. Lo Dimostrabile e Indemostrabile. *Mir, Moscow, 1981, 262 pp.*

1982

106. Null-geodesics of complex Einstein spaces (with I.B.Penkov). *Russian: Funk. Analiz i ego Priloz.*, 16:1 (1982), 78–79. *English: Func. Anal. Appl.*, 16:1 (1982).
107. Yang–Mills–Dirac equations as Cauchy–Riemann equations on the twistor space (with G. M. Henkin). *Russian: Yad. Fiz.*, 35:6 (1982), 1610–1626.

108. Gauge fields and cohomology of spaces of null-geodesics. *In: Gauge Theories, Fundamental Interactions and Related Results, Birkhäuser, 1982, 231–234.*

109. What is the maximum number of points on a curve over F_2 ? *Journ. Fac. Sci. Univ. Tokyo, ser. 1A, 28:3 (1982), 715–720.*

110. Remarks on algebraic supermanifolds. *Russian: In: Algebra (for the 90th anniversary of O. Yu. Schmidt), Moscow University, 1982, 95–101.*

111. Mathematics and Physics. *Bulgarian: Nauka i Izkusstvo, Sofia, 1982, 56 pp.*

112. A Trilogy about Mathematics. *Russian: In: Znaniye–Sila, 3 (1982), 32.*

1983

113. Flag superspaces and supersymmetric Yang–Mills equations. *In: Arithmetic and Geometry, papers to honor I.R. Shafarevich, vol. 2, 175–198, Birkhauser, 1983.*

114. Supersymmetry and supergravity in the superspace of null supergeodesics. *Russian: In: Group Theoretical Methods in Physics, Nauka, Moscow, 1983, vol. 1, 203–208.*

115. Geometric ideas in the field theory. *Russian: In: Geometric ideas in physics, Mir, 1983, 5–16.*

116. Tynyanov and Griboyedov. *Russian: Revue des Etudes Slaves, t. LV, f. 3 (1983), 507–521. Paris.*

1984

117. Geometry of supergravity and Schubert supercells. *Russian: Zapiski Sem. LOMI, 133 (1984), 160–176.*

118. Grassmannians and flags in supergeometry. *Russian: In: Problems of Modern Analysis, Moscow University, 1984, 83–101.*

119. Schubert supercells. *Russian: Func. Analiz i ego Priloz., 18:4 (1984), 75–76. English: Func. Anal. Appl., 18:4 (1984), 329–330.*

120. New exact solutions and a cohomological analysis of the classical and supersymmetric Yang–Mills equations. *Russian: Trudy MIAN, 165 (1984), 98–114.*

121. Holomorphic supergeometry and Yang–Mills superfields. *Russian: In: Sovr. Probl. Mat., 24 (1984), 3–80. English: Journal of Soviet Math.*

122. New directions in geometry. *Russian: Uspekhi Mat. Nauk, 39:6 (1984), 47–73. English: Russian Math. Surveys, 39:6 (1984), 51–83, and Springer Lecture Notes in Math., 1111, 1985, 59–101.*

123. The inverse scattering transform and classical equations of motion. *In: Nonlinear and Turbulent Processes in Physics, Harwood Academic, Chur, 1984, vol. 3, 1487–1502.*

124. Linear codes and modular curves (with S. G. Vladut). *Russian: In: Sovr. Probl. Mat., vol. 25 (1984), 209–257. English: J. Soviet Math., 30 (1985), 2611–2643.*

125. Some applications of algebraic geometry. *Russian: Trudy Mian*, 168 (1984), 110–131.

126. Gauge Fields and Complex Geometry. *Russian: Nauka, Moscow*, 1984. 335 pp.

1985

127. A supersymmetric extension of the Kadomtsev-Petviashvili hierarchy (with A.O.Radul). *Comm. Math. Phys.*, 98 (1985), 65–77.

128. Sun, a Poor Totem. *Russian: In: Priroda*, 6 (1985), 123–127.

129. Geometry unbound. *Science*, 9 (1985), 89–91.

1986

130. The twistor transformation and algebraic–geometric constructions of solutions of the equations of field theory (with M.M.Kapranov). *Russian: Uspekhi Mat. Nauk*, 41:5 (1986), 85–107. *English: Russian Math. Surveys*, 41:5 (1986), 33–61.

131. On the higher Bruhat orders related to the symmetric group. *Russian: Func. Anal. i ego Prilozhen.*, 20:2 (1986), 74–75. *English: Func. Anal. Appl.*, 20:2 (1986), 148–150.

132. Critical dimensions of string theories and a dualizing sheaf on the moduli space of (super)curves. *Russian: Funkc. Anal. i ego Prilozhen.*, 20:3 (1986), 88–89. *English: Func. Anal. Appl.*, 20:3 (1986), 244–246.

133. The partition function of the Polyakov string can be expressed in terms of theta functions. *Phys. Lett. B*, 172(2) (1986), 184–185.

134. The Mumford form and the Polyakov measure in string theory (with A.A.Beilinson). *Comm. Math. Phys.*, 107:3 (1986), 359–376.

135. The Radon-Penrose transformation for the group $SO(8)$ and instantons (with Hoang Le Minh). *Russian: Izv. AN SSSR, ser. mat.*, 50:1 (1986), 195–206. *English: Math. USSR Izvestia*, 50 (1), 1986, 189–200.

136. The multiloop contribution in the fermionic string (with M. A. Baranov, I. V. Frolov, A. S. Schwartz). *Russian: Yad. Fiz.*, 43:4 (1986), 1053–1055. *English: Sov. J. Nucl. Phys.*, 43 (1986), 670–671.

137. Arrangements of real hyperplanes and the Zamolodchikov equations (with V.V.Shekhtman). *Russian: In: Group Theoretical Methods in Physics, vol. 1 (Jurmala, 1985)*, 316–325. *Nauka, Moscow*, 1986. *English: Group Theoretical Methods in Physics, vol. 1 (Yurmala, 1985)*, 151–165, *VNU Sci. Press, Utrecht*, 1986.

138. Rational varieties: algebra, geometry, and arithmetic (with M. Tsfasman). *Russian: Uspekhi mat. Nauk*, 41:2 (1986), 43–94. *English: Russian Math. Surveys*, 41:2 (1986), 51–116.

139. Cubic Forms: Algebra, Geometry, Arithmetic. 2nd edition, revised and completed. *North Holland, Amsterdam*, 1986, 326 pp.

140. Bevezetés a kiszámíthatóság matematikai elméletébe. (*Hungarian translation of Computable and Uncomputable.*) Műszaki Könyvkiadó, Budapest, 1986, 144 pp.

1987

141. Quantum strings and algebraic curves. *In: Proc. Int. Congr. of Math., Berkeley, 1986, AMS, Providence RI, 1987, vol. 2, 1286–1295.*

142. Some remarks on Koszul algebras and quantum groups. *Ann. Inst. Fourier, 37:4 (1987), 191–205.*

143. Values of Selberg's zeta function at integer points (with A.A. Beilinson). *Russian: Func. Analiz i ego Prilozen., 21:1 (1987), 68–69. English: Func. Anal. Appl., 21:1 (1987), 58–60.*

144. Sheaves of the Virasoro and Neveu-Schwarz algebras (with A.A. Beilinson, V.V. Shechtman). *In: Springer Lecture Notes in Math., 1289 (1987), 52–66.*

145. A superanalog of the Selberg trace formula and multiloop contribution for fermionic string (with M. A. Baranov, I. V. Frolov, A. S. Schwartz). *Comm. Math. Phys., 111 (1987), 373–392.*

146. On the problem of the early stages of speech and consciousness (phylogenesis). *Russian: In: Intellectual Processes and their Modeling, Nauka, Moscow, 1987, 154–178.*

147. “It is love.” *Russian: In: Priroda, 4 (1987), 118–120.*

148. The mythological trickster in psychology and history of culture. *Russian: In: Priroda, 7 (1987), 42–52.*

1988

149. Quantum groups and non-commutative geometry. *Montreal University Press, 1988. 88 p.*

150. Neveu-Schwarz sheaves and differential equations for Mumford superforms. *J. of Geometry and Physics, 5:2 (1988), 161–181.*

151. Brouwer Memorial Lecture 1987. *Nieuw Arch. Wisk. (4) 6 (1988), no. 1–2, 1–6.*

152. Elements of supergeometry (with A. A. Voronov, I. B. Penkov). *Russian: In: Sovr. Probl. Mat., vol. 32 (1988), 3–25.*

153. Supercell partitions of flag superspaces (with A. A. Voronov). *Russian: In: Sovr. Probl. Mat., vol. 32 (1988), 27–70.*

154. Methods of the Homological Algebra I. Introduction to the Cohomology Theory and Derived Categories (with S. I. Gelfand). *Russian: Nauka, Moscow, 1988, 416 pp.*

155. Gauge Field Theory and Complex Geometry. *Springer Verlag, 1988. 295 pp.*

156. Homological Algebra (with S. I. Gelfand). *Russian: Sovr. Probl. Mat., vol. 38 (1988), 238 pp.*

1989

157. Arrangements of hyperplanes, higher braid groups, and higher Bruhat orders (with V. V. Schechtman). *In: Advanced Studies in Pure Math., vol. 17, Algebraic Number Theory, 289–308. Academic Press, 1989.*
158. Rational points of bounded height on Fano varieties (with J. Franke, Yu. Tschinkel). *Inv. Math., 95 (1989), 421–435.*
159. Multiparametric quantum deformation of the general linear supergroup. *Comm. Math. Phys., 123 (1989), 123–135.*
160. Determinants of Laplacians on Riemann surfaces. *In: Conformal Invariance and string theory (Poiana Brasov, 1987), Academic Press, Boston, MA, 1989, 285–291.*
161. Reflections on arithmetical physics. *In: Conformal Invariance and string theory (Poiana Brasov, 1987), Academic Press, Boston, MA, 1989, 293–303.*
162. The formalism of left and right connections on supermanifolds (with I. B. Penkov). *In: Lectures on Supermanifolds, Geometrical Methods and Conformal Groups, World Scientific, 1989, 3–13.*
163. Strings. *Math. Intelligencer, 11:2 (1989), 59–65.*
164. Multiparametric quantum deformation of the general linear supergroup. *Comm. Math. Phys., 123 (1989), 123–135.*
165. Letter to the editor. *Russian: Izv. AN SSSR, ser. mat. 53:2 (1989). English: Math. USSR Izvestija, 34:2 (1990), 465–466.*
166. Linear Algebra and Geometry (with A. I. Kostrikin). *Gordon and Breach, 1989, 309 pp.*
167. Elementary Particles: Mathematics, Physics and Philosophy (with I. Yu. Kobzarev). *Reidel, Dordrecht, 1989, 227 pp.*

1990

168. Sur le nombre des points rationnels de hauteur bornée des variétés algébriques (with V. V. Batyrev). *Math. Annalen, 286 (1990), 27–43.*
169. Non-standard quantum deformations of $GL(n)$ and constant solutions of the Yang-Baxter equation (with E. E. Demidov, E. E. Mukhin, D. V. Zhdanovich). *Progress of Theor. Phys. Supplement, 102 (1990), 203–218.*
170. Quantized theta-functions. *Progress of Theor. Phys. Supplement, 102 (1990).*
171. Number Theory (with A. A. Panchishkin). *Russian: Sovr. Probl. Mat., vol. 49 (1990), 348 pp.*
172. Mathematics as metaphor. *Proc. of ICM, Kyoto 1990, vol. II, 1665–1671. The AMS and Springer Verlag.*

1991

173. Three-dimensional hyperbolic geometry as ∞ -adic Arakelov geometry. *Inv. Math.*, 104 (1991), 223–244.
174. Quantum Groups. *Nederl. Wetensk. Verslag, Afd. Naturkunde*, 100 (1991), 55–68.
175. Topics in Non-commutative Geometry. *Princeton University Press*, 1991, 163 pp.

1992

176. Notes on quantum groups and quantum de Rham complexes. *Teoreticheskaya i Matematicheskaya Fizika*, 92:3 (1992), 425–450.
177. The Empty City archetype. *Russian: In: Arbor Mundi*, ed. by E. Meletinsky, 1 (1992), 28–34.

1993

178. Notes on the arithmetic of Fano threefolds. *Comp. Math.* 85 (1993), 37–55.
179. Points of bounded height on del Pezzo surfaces (with Yu. Tschinkel). *Comp. Math.* 85 (1993), 315–332.

1994

180. Homological Algebra (with S. I. Gelfand). *Enc. of Math. Sci.*, vol. 38, Springer Verlag, 1994, 222 pp.
181. Gromov–Witten classes, quantum cohomology, and enumerative geometry (with M. Kontsevich). *Comm. Math. Phys.*, 164:3 (1994), 525–562.

1995

182. Lectures on zeta functions and motives (according to Deninger and Kurokawa). *In: Columbia University Number Theory Seminar, Astérisque 228* (1995), 121–164.
183. Number Theory I. Fundamental Problems, Ideas and Theories. (with A. Panchishkin). *Enc. of Math. Sci.*, vol. 49, Springer Verlag, 1995, 303 pp.
184. Generating functions in algebraic geometry and sums over trees. *In: The Moduli Space of Curves*, ed. by R. Dijkgraaf, C. Faber, G. van der Geer. *Progress in Math.*, vol. 129. Birkhäuser, 1995, 401–417.
185. Problems on rational points and rational curves on algebraic varieties. *Surveys in Differential Geometry*, vol. 2 (1995), Int. Press, 214–245.

1996

186. Quantum cohomology of a product (with M. Kontsevich, Appendix by R. Kaufmann). *Inv. Math.*, 124, f. 1–3 (1996), 313–339 (*Remmert's Festschrift*)

187. Quantum groups and algebraic groups in non-commutative geometry. *In: Quantum Groups and their Applications in Physics*, ed. by L. Castellani and J. Wess, *Proc. of the Int. School of Physics "Enrico Fermi"*, IOS Press 1996, 347–359.

188. Distribution of rational points on Fano varieties. *Publ. RIMS Kokyuroku 958, Analytic Number Theory, 1996*, 98–104.

189. Automorphic pseudodifferential operators (with P. B. Cohen and D. Zagier). *In: Algebraic Aspects of Integrable Systems, (in memory of Irene Dorfman)*, ed. by A. S. Fokas, I. M. Gelfand, Birkhäuser, Boston 1996, 17–47.

190. Stacks of stable maps and Gromov–Witten invariants (with K. Behrend). *Duke Math. Jpurn.*, 85:1 (1996), 1–60.

191. Higher Weil–Petersson volumes of moduli spaces of stable n -pointed curves (with R. Kaufmann, D. Zagier.) *Comm. Math. Phys.*, 181:3 (1996), 763–787.

192. Selected Papers. *World Scientific Series in 20th Century Mathematics, vol. 3*, World Sci., Singapore, 1996, xii + 600 pp.

193. Methods of homological algebra (with S. I. Gelfand, translation of 154) *Enc. of Math. Sci, vol. 38, Algebra V*, Springer Verlag, 1996, xv+372 pp.

1997

194. Mordell-Weil Problem for Cubic Surfaces. *In: Advances in the Mathematical Sciences—CRM's 25 Years (L. Vinet, ed.) CRM Proc. and Lecture Notes, vol. 11*, Amer. Math. Soc., Providence, RI, 1997, pp. 313–318.

195. Semisimple Frobenius (super)manifolds and quantum cohomology of \mathbf{P}^r (with S. A. Merkulov). *Topological Methods in Nonlinear Analysis*, 9:1 (1997), 107–161 (*Ladyzhenskaya's Festschrift*).

196. Vatican, Fall 1996. *Russian, In: Priroda*, 8 (1997), 61–66.

197. Gauge Field Theory and Complex Geometry. *Second Edition, with Appendix by S. Merkulov*. Springer Verlag, 1997, XII+346 pp.

198. Linear Algebra and Geometry (with A. I. Kostrikin). *Paperback Edition, Gordon and Breach*, 1997, ix + 308 pp.

199. Elementary Particles (with I. Yu. Kobzarev). *Russian version of 167, Phasis, Moscow 1997*, 206 pp.

1998

200. Sixth Painlevé equation, universal elliptic curve, and mirror of \mathbf{P}^2 . *In: geometry of Differential Equations*, ed. by A. Khovanskii, A. Varchenko, V. Vassiliev. *Amer. Math. Soc. Transl. (2)*, vol. 186, 131–151. Preprint alg-geom/9605010.

201. Relations between the correlators of the topological sigma-model coupled to gravity (with M. Kontsevich). *Comm. Math. Phys.*, 196 (1998), 385–398. Preprint alg-geom/970824.

202. Stable maps of genus zero to flag spaces. *Topological Methods in Nonlinear Analysis*, 11:2 (1998), 207–218 (*Moser’s Festschrift*). Corrections: vol. 15 (2000), 401. Preprint math.AG/9801005.

203. Interrelations between mathematics and physics. *In: Séminaires et Congrès, No 3, Soc. Math. de France, 1998, 158–168.*

204. Truth, rigour, and common sense. *In: Truth in Mathematics, ed. by H. G. Dales and G. Oliveri, Clarendon Press, Oxford, 1998, 147–159.*

1999

205. Three constructions of Frobenius manifolds: a comparative study. *Asian J. Math.*, 3:1 (1999), 179–220 (*Atiyah’s Festschrift*). Preprint math.QA/9801006.

206. Weak Frobenius manifolds (with C. Hertling.) *Int. Math. Res. Notices*, 6 (1999), 277–286. Preprint math.QA/9810132.

207. The work of Maxim Kontsevich. *Notices of the AMS, Jan. 1999, 21–23.*

208. Homological algebra (with S. I. Gelfand), Springer Verlag, 1999, 222 pp. (paperback edition of 179).

209. Frobenius manifolds, quantum cohomology, and moduli spaces. *AMS Colloquium Publications, vol. 47, Providence, RI, 1999, xiii+303 pp.*

2000

210. Classical computing, quantum computing, and Shor’s factoring algorithm. *Séminaire Bourbaki, no. 862 (June 1999), Astérisque, vol 266, 2000, 375–404.* Preprint quant-ph/9903008.

211. Invertible Cohomological Field Theories and Weil–Petersson volumes (with P. Zograf). *Ann. Inst. Fourier*, 50:2 (2000), 519–535. Preprint math.AG/9902051.

212. New moduli spaces of pointed curves and pencils of flat connections (with A. Losev). *Fulton’s Festschrift, Michigan Journ. of Math.*, vol. 48, 2000, 443–472. Preprint math.AG/0001003

213. Mathematics as profession and vocation. *In: Mathematics: Frontiers and Perspectives, ed. by V. Arnold et al., AMS, 2000, 153–159.*

214. Rational curves, elliptic curves and the Painlevé equation. (in Russian). *In: Studencheskie Chteniya MK NMU, 1, McNMO, 2000, 27–36.*

2001

215. Mathematics: recent developments and cultural aspects. *In: Science and the Future of Mankind, Proceedings, Pontifical Ac. Sci., Vatican, 2001, pp. 89–94* and *Max Planck Research, Sci. Mag. of the Max Planck Society*, 2, 2000, 58–59.

216. Composition of points and Mordell–Weil problem for cubic surfaces (with D. Kanevsky). *In: Rational Points on Algebraic Varieties (ed. by E. Peyre, Yu. Tschinkel), Progress in Mathematics, vol. 199, Birkhäuser, Basel, 2001, 199–219.* Preprint math.AG/0011198

217. Theta functions, quantum tori and Heisenberg groups. *Letters in Math. Physics*, 56:3 (2001) (special issue, Euroconference M. Flato, Part III), 295–320. Preprint math.AG/0011197

218. Mirror symmetry and quantization of abelian varieties. *In: Moduli of Abelian Varieties*, ed. by C. Faber et al., *Progress in Math.*, vol. 195, Birkhäuser, 2001, 231–254. Preprint math.AG/0005143

219. Modules and Morita theorem for operads (with M. Kapranov). *Am. J. of Math.*, 123:5 (2001), 811–838. Preprint math.QA/9906063.

220. Moduli, Motives, Mirrors, 22 pp. *In: European Congress of Mathematicians, Barcelona 2000*, vol. I. *Progress in Math.*, vol. 201, Birkhäuser, 2001, 53–74. Preprint math.AG/0005144

221. Holography principle and arithmetic of algebraic curves (with M. Marcolli). *Adv. Theor. Math. Phys.*, 5 (2001), 617–650. Preprint hep-th/0201036

222. A space of freedom. *Interview (in Russian)*. *Computerra*, 2[379], Jan. 23 (2001), 26–28.

2002

223. Continued fractions, modular symbols, and non-commutative geometry (with M. Marcolli). *Selecta math., new ser.* 8 (2002), 475–521. Preprint math.NT/0102006

224. Triangle of Thoughts (review of the book by A. Connes, A. Lichnerowicz, M. P. Schützenberger). *Notices of the AMS*, March 2002, 325–327.

225. Frobenius manifolds, quantum cohomology, and moduli spaces. (*Russian translation of 208*). *Factorial Press, Moscow*, 343 pp.

2003

226. Methods of homological algebra. Second edition. (with S. Gelfand). Springer Monographs in Mathematics. Springer-Verlag, Berlin, 2003. xx+372 pp.

2004

227. Unfoldings of meromorphic connections and a construction of Frobenius manifolds (with C. Hertling). *In: Frobenius Manifolds*, ed. by C. Hertling, M. Marcolli, Vieweg & Sohn Verlag, Wiesbaden, 2004, 113–144. Preprint math.AG/0207089

228. Extended modular operad (with A. Losev). *In: Frobenius Manifolds*, ed. by C. Hertling and M. Marcolli, Vieweg & Sohn Verlag, Wiesbaden, 2004, 181–211. Preprint math.AG/0301003

229. Functional equations for quantum theta functions. *Publ. Res. Inst. Mat. Sci. Kyoto*, 40:3 (2004), 605–624. Preprint math.AG/0307393

230. Multiple zeta–motives and moduli spaces $\overline{M}_{0,n}$ (with A. Goncharov). *Compos. Math.* 140:1 (2004), 1–14. Preprint math.AG/0204102

231. Real multiplication and noncommutative geometry. *In: The legacy of Niels Henrik Abel*, ed. by O. A. Laudal and R. Piene, Springer Verlag, Berlin 2004, 685–727. Preprint math.AG/0202109

232. Moduli stacks $\overline{L}_{g,S}$. *Moscow Math. Journal*, 4:1 (2004), 181–198. e–print math.AG/0206123

233. (Semi)simple exercises in quantum cohomology (with A. Bayer). *In: The Fano Conference Proceedings, ed. by A. Collino, A. Conte, M. Marchisio, Università di Torino, 2004, 143–173*. Preprint math.AG/0103164

234. Georg Cantor and his heritage. *In: Algebraic Geometry: Methods, Relations, and Applications: Collected papers dedicated to the memory of Andrei Nikolaevich Tyurin. Proc. V. A. Steklov Inst. Math. Moscow, vol. 246, MAIK Nauka/Interperiodica, 2004, 195–203*. Preprint math.AG/0209244

235. Non–commutative geometry and quantum theta–functions. (Russian). *In: Globus, Math. Seminar Notes of the Moscow Independent University, vol. 1(2004), 91–108*.

236. Mordell–Weil problem for cubic surfaces. (Russian). *In: Globus, Math. Seminar Notes of the Moscow Independent University, vol. 1(2004), 134–146*.

2005

237. F –manifolds with flat structure and Dubrovin’s duality. *Advances in Math. (M. Artin’s Fest)*, 198 (2005), 5 – 26. Preprint math.DG/0402451

238. Introduction to modern number theory (with A. A. Panchishkin). 2nd edition, revised and expanded. *Encyclopaedia of Mathematical Sciences, vol. 49*. Springer-Verlag, Berlin, 2005, xv+514 pp.

239. Von Zahlen und Figuren. *In: Géométrie au XXe siècle. Histoire et horizons. (Ed. J. Kouneiher, D. Flament, Ph. Nabonnand, J.-J. Szczeciniarz.) Hermann, Paris, 2005, 24–44*. Preprint math.AG/0201005

240. Iterated Shimura integrals. 16 pp. *Moscow Math. Journal, vol. 5, Nr. 4 (2005), 869–881*. Preprint math.AG/0507438

2006

241. Iterated integrals of modular forms and noncommutative modular symbols. *In: Algebraic Geometry and Number Theory. In honor of V. Drinfeld’s 50th birthday. Ed. V. Ginzburg. Progress in Math., vol. 253. Birkhäuser, Boston, pp. 565–597*. Preprint math.NT/0502576.

242. Manifolds with multiplication on the tangent sheaf. *Rendiconti Mat. Appl., Serie VII, vol.26 (2006), 69–85 and Rendiconti della Acc. Naz. Sci detta dei XL, ser. V, vol. XXXI, P. I (2009), 113–128*. Preprint math.AG/0502578

243. The notion of dimension in geometry and algebra. *Bull. of the American Math. Soc., vol. 43, No. 2 (2006), 139–161*. Preprint math.AG/0502016

2007

244. Generalized operads and their inner cohomomorphisms (with D. Borisov). *In: Geometry and Dynamics of Groups and spaces (In memory of Aleksader Reznikov)*.

Ed. by M. Kapranov et al. Progress in Math., vol. 265. Birkhäuser, Boston, pp. 247–308. Preprint math.CT/0609748

245. Mathematics as Metaphor. Selected Essays. *American Math. Society, 2007. xi+232 pp.*

246. Mathematical knowledge: internal, social and cultural aspects. 27 pp. Preprint math.HO/0703427

2008

247. Modular shadows (with M. Marcolli). *In: Modular forms on Schiermonnikoog, ed. by Bas Edixhoven, G. van der Geer, B. Moonen, Cambridge UP, 2008, 189–238. Preprint math.NT/0703718*

248. Matematika kak Metafora. (*Expanded Russian version of 245*). *Moscow Independent University, 2008. 400 pp.*

249. Matematica e conoscenza: aspetti interni, sociali e culturali. Italian version of 248. *In: La matematica II. Problemi e teoremi. A cura di C. Bartocci e P. Odifreddi. Einaudi, 2008.*

2009

250. Quantum theta functions and Gabor frames for modulation spaces (with F. Luef). *Lett. Math. Phys. 88, 1-3 (2009) 131-161. Preprint math.QA/0809.2716. 37 pp.*

251. An update on on semisimple quantum cohomology and F -manifolds (with C. Hertling, C. Teleman). *Proc. Steklov Inst. Math., vol. 264 (2009), 62–69. Preprint math.AG/0803.2769. 12 pp.*

252. Stability Conditions, wall-crossing and weighted Gromov–Witten Invariants (with Arend Bayer). *Moscow Math Journal, vol. 9, Nr 1 (2009) (Deligne’s Festschrift), 3–32. Preprint math.AG/0607580*

253. Introduction to modern number theory (with A. Panchishkin, in Russian, revised version of 238.). *Moscow, MCNMO, 2009. 552 pp.*

254. Lectures on modular symbols. *In: Arithmetic Geometry, Clay Math. Institute Summer School, July 17 –Aug. 11, 2006, Clay Math. Proceedings, vol. 8, 2009, 137–152.*

255. “We do not choose mathematics as our profession, it chooses us.” (interview with M. Gelfand). *Notices AMS, vol. 56:10 (2009), 1268–1274.*

2010

256. Remarks on modular symbols for Maass wave forms. *Algebra and Number Theory, vol. 4, No. 8 (2010), 1091–1114. Preprint math.NT/0803.3270.*

257. A Course in Mathematical Logic for Mathematicians. Second Edition (with collaboration by B. Zilber). Springer Verlag, 2010. xvii+384 pp.

258. Matematika kak Metafora. (*Expanded second Russian edition of 248*). *Moscow Independent University, 2010. 424 pp.*

259. Cyclotomy and analytic geometry over F_1 . *In: Quanta of Maths. Conference in honor of Alain Connes. Clay Math. Proceedings, vol. 11 (2010)*, 385–408. Preprint math.AG/0809.2716. 28 pp.

260. Truth as value and duty: lessons of mathematics. *In: Truth in Science, the Humanities, and Religion. Balzan Symposium 2008. Ed. by N. Mout and W. Stauffacher.* Springer, 2010, pp. 37–45. Preprint math.GM/0805.4057.

261. What then? (Review of the book by J. Gray “Plato’s Ghost: the modernist transformation of mathematics”) *Notices AMS, vol. 57:2 (2010)*, 240–243.

262. Mathematiker als Übersetzer. *Orden pour le mérite für Wissenschaften und Künste. Reden und Gedenkwörter, Bd. 38, 2009–2010.* Wallstein Verlag, Göttingen, 2010, 83–87.

263. Infinities in quantum field theory and in classical computing: renormalization program. *Lecture Notes in Comput. Sci., 6158,* Springer, Berlin (2010), 307–316.

2011

264. Error-correcting codes and phase transitions. (with M. Marcolli). *Mathematics in Computer Science*, vol. 5 (2011), 133–170. Preprint mat.QA/0910.5135

2012

265. Combinatorial cubic surfaces and reconstruction theorems. *Contemporary Mathematics, vol. 566,* AMS, 2012, pp. 99–118. Preprint math.AG/1001.0223

266. A computability challenge: asymptotic bounds and isolated error-correcting codes. *In: WTCS 2012 (Calude Festschrift), Ed. by M.J. Dinneen et al., Lecture Notes in Comput. Sci., 7160,* pp. 174–182, 2012. Preprint arXiv:1107.4246.

267. Foundations as superstructure. (Reflections of a practicing mathematician). *In: “Philosophy, Mathematics, Linguistics: Aspects of Interaction.* Proc. of the International Sci. Conference, St. Petersburg, Euler Int. Math. Institute, May 22–25. St. Petersburg 2012, pp. 98–111. Preprint arXiv:1205.6044

268. Renormalization and Computation II: Time Cut-off and the Halting Problem. *In: Math. Struct. in Comp. Science*, vol. 22, Special issue, pp. 729–751, 2012, Cambridge UP. Preprint math.QA/0908.3430

269. Introduction to schemes and quantum groups. (In Russian). Moscow, Publ. Moscow Center of Continuous Education, 2012. 256 pp.

270. Matematika. (In Russian). *In: New Russian Encyclopaedia*, vol. X (2), Moscow, “Encyclopaedia” Publishers, 2012, pp. 73–78.

2013

271. Renormalization and computation I: motivation and background. *In: Proceedings OPERADS 2009, eds. J. Loday and B. Vallette, Séminaires et Congrès 26, Soc. Math. de France, 2013,* pp. 181–222. Preprint math.QA/0904.4921

272. On the derived category of $\overline{M}_{0,n}$ (with M. Smirnov). *Izvestiya of Russian Ac. Sci.*, vol. 77, No 3, 2013, 93–108. Preprint arXiv:1201.0265

273. Numbers as Functions. *P-adic Numbers, Ultrametric Analysis and Applications*, Vol. 5, no. 4, 2013, 313–325. Preprint arXiv: 1312.5160

274. Dynamic functional asymmetry of brain hemispheres on the civilizational scale. (*In Russian*). <http://7iskusstv.com/2013/Nomer11/Manin1.php>

2014

275. Complexity vs Energy: Theory of computation and theoretical physics. (*Talk at the satellite conference to ECM 2012, “QQQ Algebra, Geometry, Information”, Tallinn, July 9–12, 2012*). *J. Phys: Conference Series*, vol. 532. doi:10.1088/1742-6596/532/1/012018. Preprint arXiv:1302.6695

276. Towards motivic quantum cohomology of $\overline{M}_{0,S}$. (With M. Smirnov). *Proc. of the Edinburg Math. Soc.*, Vol. 57 (ser. II), no 1, 2014, pp. 201–230. Preprint arXiv:1107.4915

277. Non-commutative generalized Dedekind symbols. *Pure and Appl. Math. Quarterly*, Vol.10, Nr. 2, 2014, pp. 245 – 258. Preprint arXiv:1301.0078

278. Kolmogorov complexity and the asymptotic bound for error-correcting codes (with M. Marcolli). *Journ. of Diff. Geom.*, 97, 2014, pp. 91–108. Preprint arXiv:1203.0653

279. Zipf’s law and L. Levin’s probability distributions. *Functional Analysis and its Applications*, vol. 48, no. 2, 2014. DOI 10.107/s10688-014-0052-1. Preprint arXiv: 1301.0427

280. Forgotten motives: the varieties of scientific experience. *In: Alexandre Grothendieck: A Mathematical Portrait*. Ed. by Leila Schneps. Int. Press, 2014, pp. 299–307. Preprint arXiv:1402.2155

281. Point, Atom, Letter. *In: “Philosophy, Mathematics, Linguistics: Aspects of Interaction 2014*. Proc. of the International Sci. Conference, St. Petersburg, Euler Int. Math. Institute and St. Pb. Dept. of Steklov Math. Institute, April 21–25. St. Petersburg 2014, pp. 98–111.

282. Big Bang, Blow Up, and Modular Curves: Algebraic Geometry in Cosmology (with M. Marcolli). *SIGMA Symmetry Integrability Geom. Methods Appl. 10 (2014), Paper 073*, 20 pp. Preprint arXiv:1402.2158

2015

283. Kolmogorov complexity as a hidden factor of scientific discourse: from Newton’s law to data mining. *In: “Complexity and Analogy in Science: Theoretical, Methodological and Epistemological Aspects”, Proceedings of the Plenary session of Pontifical Ac. Sci., November 5–7, 2012*. Libreria Editrice Vaticana, 2015. Preprint arXiv:1301.0081.

284. Arithmetic differential equations of Painlevé VI type (with A. Buium). *In: Arithmetic and Geometry, ed. by Luis Dieulefait et al.* LMS Lecture Note Series, No. 420, 2015, pp. 114–138. Preprint arXiv: 1307.3841

285. Physics in the world of ideas: Complexity as Energy. *Keynote talk. In: A. Sanayei et al. (eds.) ISCS 2014: Interdisciplinary Symposium on Complex Systems. Emergence, Complexity and Computation 14, DOI: 10.1007/978-3-319-10759-4_2 1. Springer IP Switzerland 2015.* pp. 3–13.

286. Mais où sont les neiges d’antan? *Interview by Alex Cecchetti. In CAC/ŠMC Interview, Nr 24, 2015, pp. 6–14.*

287. Mathematik, Kunst und Zivilisation. *Enterprise*, 2015, 109 pp.

288. Mathematics, Art, Civilization. *in: I, Mathematician. Ed. by P. Casazza et. al.* The Math. Association of America, pp. 203–216. (English version of 288).

289. De Novo Artistic Activity, Origins of Logograms, and Mathematical Intuition. *In: Art in the Life of Mathematicians, Ed. Anna Kepes Szemerédi, AMS, 2015* pp. 187–208.

290. Neural codes and homotopy types: mathematical models of place field recognition. 9 pp. *Moscow Math. Journal, vol. 15, Oct.-Dec. 2015*, pp. 741–748 . Preprint arXiv:1501.00897

2016

291. Symbolic dynamics, modular curves, and Bianchi IX cosmologies (with M. Marcolli). *Annales de Fac. de Sci. de Toulouse, Vol. XXV, n. 2–3, 2016*, pp. 517–542. Preprint arXiv:1504.04005 [gr-qc]

292. Moduli Operad over F_1 (with M. Marcolli). *In: Absolute Arithmetic and F_1 -Geometry, ed. Koen Thas*, pp. 331–361. EMS Tracts in Mathematics, vol. 25, 2016. Preprint arXiv:1302.6526

293. Local zeta factors and geometries under Spec \mathbf{Z} . *Izvestiya: Mathematics, vol. 80:4, 2016*, pp. 751–758. DOI 10.1070/IM8392 Preprint arXiv:1407.4969

294. Mathematik als Metapher. Ausgewählte Essays. Bd 1. *Enterprise*, 291 pp.

295. Time between real and imaginary: what geometries describe Universe near Big Bang? *Math. Journal, Kazakhstan, vol. 16, No 2 (60), 2016*, pp. 180–205.

296. Cognition and Complexity. *In: M. Burgin, C.S. Calude (eds.). Information and Complexity.* World Scientific Series in Information Studies, 2016, pp. 344–357.

297. Modular forms of real weights and generalized Dedekind symbols. arXiv:1601.00096

298. Semantic spaces (with M. Marcolli). *Math. Comput. Sci. 10, no. 4, 2016*, pp. 459–477, arXiv: 1605.04328

299. Painlevé VI equations in p -adic time. *p -Adic Numbers, Ultrametric Analysis and Applications, vol. 8, no. 3, 2016*, pp. 217–224.

300. Error-correcting codes and neural networks. *Selecta Math. New. Ser. (2016)*. doi:10.1007/s00029-016-0284-4 . 10 pp.

301. Grohendieck–Verdier duality patterns in quantum algebra. *Submitted to Izvestiya: Mathematics.*