

A.D. Bruno (Brjuno, Bryuno)

List of publications

- 1 The asymptotic behavior of solutions of nonlinear systems of differential equations. Dokl. Akad. Nauk SSSR 143:4 (1962) 763-766 (Russian) = Soviet Math. Dokl. 3 (1962) 464-467 (English).
- 2 Continued fraction expansion of algebraic numbers. Zhurnal vychisl. matem. i matem. fiziki 4:2 (1964) 211-221 (R) = USSR Comput. Math. math. Phys. 4:2 (1964) 1-15 (E).
- 3 Normal form of differential equations. Dokl. Akad. Nauk SSSR 157:6 (1964) 1276-1279 (R) = Soviet Math. Dokl. 5 (1964) 1105-1108 (E).
- 4 Power asymptotics of solutions of nonlinear systems. Izv. Akad. Nauk SSSR., Ser. Mat. 29:2 (1965) 329-364 (Russian).
- 5 Convergence of transformations of differential equations to normal form. Dokl. Akad. Nauk SSSR 165:5 (1965) 987-989 (R) = Soviet Math. Dokl. 6 (1965) 1536-1538 (E).
- 6 Normal Form of Differential Equations. Candidate (Ph.D.) Dissertation. Inst. Appl. Math.: Moscow, 1965. 52 p. (Russian).
- 7 Formal and analytical integrals in a singular point. Intern. Congress of Math. in Moscow. Abstracts of Brief. Sci. Comm., Section 6 (1966) p. 22 (Russian).
- 8 Formal stability of Hamiltonian systems. Mat. Zametki 1:3 (1967) 325-330 (R) = Math. Notes 1:3 (1967) 216-219 (E).
- 9 Divergence of transformations of differential equations to normal form. Dokl. Akad. Nauk SSSR 174:5 (1967) 1003-1006 (R) = Soviet Math. Dokl. 8:3 (1967) 692-695 + 8:4 (1967) v-vi (E).
- 10 Analytical Form of Differential Equations. Doctoral (Professorial) Dissertation. Inst. Appl. Math.: Moscow, 1968. 372 p. (Russian).
- 11 An analytic form of differential equations. Matem. Zametki 6:6 (1969) 771-778 (R) = Math. Notes 6:6 (1969) 927-931 (E).
- 12 The normal form of nonlinear oscillations. Inst. Appl. Math., Preprint, Moscow, 1969. 12 p. (Russian).
- 13 Normal form of nonlinear oscillations. Proc. Fifth Intern. Conf. on Non-Linear Oscillations. (Ju. A. Mitropolskii, ed.) Inst. Math.: Kiev, v. 1 (1970) 112-119 (Russian).
- 14 Instability in a Hamiltonian system and distribution of asteroids. Mat. Sbornik (N.S.) 83:2 (1970) 273-312 (R) = Math. USSR - Sbornik 12:2 (1970) 271-312 (E).
- 15 Analytical form of differential equations (I). Trudy Moskov. Mat. Obsc. 25 (1971) 119-262 (R) = Trans. Moscow Math. Soc. 25 (1971) 131-288 (E).
- 16 Analytical form of differential equations (II). Ibid. 26 (1972) 199-239 (R) = Ibid. 26 (1972) 199-239 (E).
- 17 Research on the restricted three-body problem. I. Periodic solutions of the Hamiltonian system. Inst. Appl. Math.,

- Preprint No. 18, Moscow, 1972. 44 p. (Russian).
- 18 Research on the restricted three-body problem. II. Periodic solutions and solutions with consecutive collisions for  $m = 0$ . Inst. Appl. Math., Preprint No. 75, Moscow, 1972. 67 p. (Russian).
  - 19 On the motion of a gyroscope in the Cardan suspension. Izv. Akad. Nauk SSSR, Mekh. Tverd. Tela 1972:6 (1972) 5-18 (R) = Mechanics of Solids 7:6 (1972) 1-10 (E).
  - 20 Local method in nonlinear resonances. Archivum Math. (Brno) 4:8 (1972) 177-178 (Russian).
  - 21 Research on the restricted three-body problem. III. Properties of solutions for  $m = 0$ . Inst. Appl. Math., Preprint No. 25, Moscow, 1973. 70 p. (Russian).
  - 22 Elements of Nonlinear Analysis. Course of Lectures. Samarkand University, 1973. 160 p. (Russian).
  - 23 On the power asymptotics of solutions of nonlinear systems. Inst. Appl. Math., Preprint No. 54, Moscow, 1973. 41 p. (Russian).
  - 24 Local invariants of differential equations. Matem. Zametki 14:4 (1973) 499-507 (R) = Math. Notes 14:4 (1973) 844-848 (E).
  - 25 On local problems of Mechanics. Inst. Appl. Math., Preprint No. 96, Moscow, 1973. 11 p. (Russian).
  - 26 Analytic integral manifolds. Dokl. Akad. Nauk SSSR 216:2 (1974) 253-256 (R) = Soviet Math. Dokl. 15:3 (1974) 768-772 (E).
  - 27 Normal form of differential equations with a small parameter. Matem. Zametki 16:3 (1974) 407-414 (R) = Math. Notes 16:3 (1974) 832-836 (E).
  - 28 The sets of analyticity of a normalizing transformation. I. Inst. Appl. Math., Preprint No. 97, Moscow, 1974. 58 p. (Russian).
  - 29 The sets of analyticity of a normalizing transformation. II. Inst. Appl. Math., Preprint No. 98, Moscow, 1974. 53 p. (Russian).
  - 30 Integral analytic sets. Dokl. Akad. Nauk SSSR 220:6 (1975) 1255-1258 (R) = Soviet Math. Doklady 16:1 (1975) 224-228 (E).
  - 31 Integral analytical sets. Uspehi Matem. Nauk 30:2 (1975) 269 (Russian).
  - 32 Normal form of real differential equations. Matem. Zametki 18:2 (1975) 227-241 (R) = Math. Notes 18:2 (1975) 722-731 (E).
  - 33 Analytical integral sets. Inst. Appl. Math., Preprint No. 86, Moscow, 1975. 16 p. (Russian).
  - 34 Normal form in nonlinear problems. Inst. Appl. Math., Preprint No. 18, Moscow, 1976. 8 p. (Russian).
  - 35 Analytic sets of periodic and quasi periodic solutions. IV. Allunion Meeting on Theor. and Applied Mechanics. Annotations of lectures. Naukova Dumka: Kiev, 1976, p. 15 (Russian).
  - 36 Libration of a satellite on an elliptical orbit. Inst. Appl. Math., Preprint No. 53, Moscow, 1976. 20 p. (Russian).

- 37 Periodic solutions of the second kind of the restricted three-body problem. Inst. Appl. Math., Preprint No. 95, Moscow, 1976. 63 p. (Russian).
- 38 Normal form in nonlinear problems. Theoretical and Applied Mechanics. The 14th IUTAM Congress in Delft. Abstracts. North-Holland: Amsterdam etc. 1976, No. 060.
- 39 Normal form and averaging methods. Dokl. Akad. Nauk SSSR 230:2 (1976) 257-260 (R) = Soviet Math. Doklady 17:5 (1976) 1268-1273 (E).
- 40 On local problems of Mechanics. Theoretical and Applied Mechanics. Proceedings (G. Brankov, ed.), Bulgarian Ac. Sci., Sofia 1975, v. 1, p. 541-546 (Russian).
- 41 Local methods in the nonlinear analysis. Functional Analysis and Some Questions of QTDE (E.V. Voskresenskii, ed.), Mordovian University: Saransk, 1976, p. 77-80 (Russian).
- 42 Properties of certain functions of Celestial Mechanics. Matem. Zametki 22:1 (1977) 109-116 (R) = Math. Notes 22:1-2 (1977) 550-554 (E).
- 43 Briot-Bouquet equation. Matem. Encyclopedia. Moscow 1977, v.1, p. 548 (R) = Encyclopaedia of Mathematics (in 10 vols). Kluwer Acad. Publ.: Dordrecht, 1993, v.1, p.481-482 (E).
- 44 Analytical integral sets. VII. Internationale Konferenz uber nichtlineare Schwingungen (Hrsg. G. Schmidt). Berlin, Akademie-Verlag, 1977, Bd. I, 1, S. 119-127.
- 45 Oscillations of a satellite on an elliptical orbit. Problems of the Asymptotic Theory of Nonlinear Oscillations. (N.N. Bogoljubov, ed.), Naukova Dumka: Kiev, 1977, p.46-53. (Russian).
- 46 On periodic flights round moon. Inst. Appl. Math., Preprint No. 91, Moscow, 1978. 25 p. (Russian).
- 47 Extremums of Hamiltonian on the families of arc-solution of the restricted three-body problem for  $m = 0$ . Inst. Appl. Math., Preprint No. 103, Moscow, 1978. 44 p. (Russian).
- 48 Researches on the restricted three-body problem. II. Periodic solutions and arcs for  $m = 0$ . Celestial Mechanics 18:1 (1978) 9-50 (English).
- 49 Researches on the restricted three-body problem. III. Properties of solutions for  $m = 0$ . Ibid. 51-101 (English).
- 50 On divergence of real normalizing transformation. Inst. Appl. Math., Preprint No. 112, Moscow, 1978. 12 p. (Russian).
- 51 On noncanonical invariants of Hamiltonian systems. Inst. Appl. Math., Preprint No. 4, Moscow, 1979. 19 p. (Russian).
- 52 Local Method of Nonlinear Analysis of Differential Equations. Nauka: Moscow, 1979. 256 p. (Russian).
- 53 Two-body problem. Matem. Encyclopedia. Moscow, 1979, v.2, p. 60-61 (R) = Encyclopaedia of Mathematics (in 10 vols). Kluwer Acad. Publ.: Dordrecht, 1993, v.9, p.286 (E).
- 54 Divergence of real normalizing transformation. Inst. Appl. Math., Preprint No. 62, Moscow, 1979. 20 p. (Russian).

- 55 Normal form in perturbation theory. Proc. VIII. Intern. Conf. on Nonlinear Oscillations. (L.Pust, ed.). Academia: Prague, 1979, v. 1, p. 177-182 (English).
- 56 On local equivalence of ordinary differential equations. Inst. Appl. Math., Preprint No. 15, Moscow, 1980. 27 p. (Russian).
- 57 Formal and analytical integral sets. Proc. Intern. Congress of Mathem. (O. Lehto, ed.). Ac. Sci. Fennica: Helsinki, 1980, v. 2, p. 807-810.
- 58 Asymptotics of periodic solutions of the second kind of the restricted three-body problem. Inst. Appl. Math., Preprint No. 51, Moscow, 1980. 22 p. (Russian).
- 59 Trajectories with a collision of the restricted three-body problem for  $m = 0$ . Inst. Appl. Math., Preprint No. 148, Moscow, 1980. 28 p. (Russian).
- 60 Trajectories with consecutive collisions of the restricted three-body problem for  $m = 0$ . Inst. Appl. Math., Preprint No. 149, Moscow, 1980. 28 p. (Russian).
- 61 Generating arc-solutions of the restricted three-body problem. Inst. Appl. Math., Preprint No. 25, Moscow, 1981. 29 p. (Russian).
- 62 Perturbations in the restricted three-body problem. V. Allunion Meeting on Theor. Appl. Mechanics. Abstracts. Alma-Ata, 1981, p. 76 (Russian).
- 63 Generating solutions of the restricted three-body problem. Uspehi Mat. Nauk 36:4 (1981) 240 (Russian).
- 64 Normal form and averaging methods. Stability of Moution. Analytical Mechanics. Traffic Control (V.M.Matrosov, V.G.Demin, eds.). Nauka: Moscow, 1981, p. 93-99 (Russian).
- 65 On periodic flybys of the moon. Celestial Mechanics 24:3 (1981) 255-268 (English).
- 66 Small denominators. Mat. Encyclopedia. Moscow, 1982, v. 3, p. 505-507 (R) = Encyclopaedia of Mathematics (in 10 vols). Kluver Acad. Publ.: Dordrecht, 1993, v. 8, p. 366-368 (E).
- 67 Normal form of a system of differential equations. Ibid., p. 1058-1061 (R) = Ibid., v. 6, p. 474-477 (E).
- 68 Divergence of a real normalizing transformation. Mat. Zametki 31:3 (1982) 403-410 (R) = Math. Notes 31:3 (1982) 207-211 (E).
- 69 Analytical form of a differential equation. Uspehi Mat. Nauk 38:5 (1983) 165 (Russian).
- 70 Noncanonical invariants of Hamiltonian systems. Mat. Zametki 33:3 (1983) 333-344 (R) = Math. Notes 33:3 (1983) 167-174 (E).
- 71 Analytic invariants of a differential equation. Dokl. Akad. Nauk SSSR 273:4 (1983) 781-785 (R) = Soviet Math. Doklady 28:3 (1983) 691-695 (E).
- 72 Resonant terms. Mat. Encyclopedia. Moscow, 1984, v. 4, p. 951-952 (R) = Encyclopaedia of Mathematics (in 10 vols). Kluver Acad. Publ.: Dordrecht, 1993, v.8, p.107 (E).
- 73 On stability in a Hamiltonian system. Inst. Appl. Math., Preprint No.7, Moscow, 1985. 12 p. (Russian).

- 74 Chetaev' function. Mat. Encyclopedia. Moscow, 1985, v.5, p. 859 (R) = Encyclopaedia of Mathematics (in 10 vols). Kluwer Acad. Publ.: Dordrecht, 1993, v. 2, p. 132 (E).
- 75 Stability in a Hamiltonian system. Mat. Zametki 40:3 (1986) 385-392 (R) = Math. Notes 40:3 (1986) 726-730 (E).
- 76 To the question of stability in a Hamiltonian system. Uspehi Mat. Nauk 42:4 (1987) 150 (Russian).
- 77 Local method of nonlinear analysis. Banach Center Publications, v.20, Warszawa, 1988, p.103-120 (English).
- 78 On periodic orbit around the moon. VI. Allunion Meeting on Theoretical and Applied Mechanics. Annotations of Lectures. Tashkent, 1986, p. 138 (Russian).
- 79 The normal form of a Hamiltonian system. Uspehi Mat. Nauk 43:1 (1988) 23-56 (R) = Russian Math. Surveys 43:1 (1988) 25-66 (E).
- 80 Bifurcations of periodic solutions in the case of a multiple pair of purely imaginary eigenvalues with a symmetry. Numerical Solution of Ordinary Differential Equations (S.S. Filippov, ed.). Inst. Appl. Math.: Moscow, 1988, p. 161-176, 232, 239 (Russian).
- 81 Normalization of a Hamiltonian system near an invariant cycle or torus. Uspehi Mat. Nauk 44:2 (1989) 49-78 (R) = Russian Math. Surveys 44:2 (1989) 53-89 (E).
- 82 On small divisors. Banach Center Publications, v.23, Warszawa, 1989, p. 355-359 (English).
- 83 On the question of stability in a Hamiltonian system. Ibid. p. 361-365 (English).
- 84 Local Methods in Nonlinear Differential Equations. Springer-Verlag: Berlin-Heidelberg-New York-London-Paris-Tokyo, 1989. 350 p. (English).
- 85 Bifurcations of periodic solutions in a symmetrical case. Dynamical Systems and Turbulence. (A.N. Sharkovskii, ed.). Inst. Math.: Kiev, 1989. p. 24-32 (Russian).
- 86 The Restricted Three-Body Problem: Plane Periodic Orbits. Nauka, Moscow, 1990. 296 p. (Russian).
- 87 A local analysis of Hamiltonian systems. I.H.E.S., Paris, 1990. Preprint No. M33. 12 p. (English).
- 88 Local uniformization of branches of an algebraic curve (with A.Soleev). Ibid., No. M34. 23 p. (English).
- 89 A comparison of conditions on small divisors. Ibid., No. M36. 12 p. (English).
- 90 The geometry of power exponents. Ibid., No. M42. 17 p. (English).
- 91 Regular generating solutions of the restricted three-body problem. Ibid., No. M57. 14 p. (English).
- 92 On divergence of normalizing transformation. Ibid., No. M72. 13 p. (English).
- 93 The analysis of bifurcations on a Center manifold. Intern. Congress of Mathem., Short Comm. Abstracts. Kyoto, 1990,

- p. 193 (English).
- 94 A general approach to the bifurcation theory. Intern. Conf. on Dynamical Systems and Related Topics. Abstracts, Nagoya, 1990, p. 12-13 (English).
  - 95 System, similar to a normal form. Mat. Zametki 48:3 (1990) 20-31 (R) = Math. Notes 48:3 (1991) 885-893 (E).
  - 96 The normal form of a system, close to a Hamiltonian system. Ibid. 48:5 (1990) 35-46 (R) = Ibid., 48:5/6 (1991) 1100-1108 (E).
  - 97 Local uniformization of branches of a space curve, and Newton polyhedra (with A.Soleev). Algebra i Analis 3:1 (1991) 67-101 (R) = St. Petersburg Math. J. 3:1 (1992) 53-82 (E).
  - 98 On finitely smooth linearization of a system of differential equations near a hyperbolic singular point. Dokl. Akad. Nauk SSSR 318:3 (1991) 524-527 (R) = Soviet Math. Doklady 43:3 (1991) 711-715 (E).
  - 99 General approach to a study of complicated bifurcations. VII. Allunion Meeting on Theoretical and Applied Mechanics. Annotations of Lectures. Moscow, 1991, p. 63 (Russian).
  - 100 Analysis of a system on the center manifold. VII. Allunion Conference on QTDE. Annotations of papers. Riga, 1989, p. 43 (Russian).
  - 101 The analysis of bifurcations in a center manifold. EQUADIFF 7, Abstracts I, Praha, 1989, p. 29 (English).
  - 102 On a finitely smooth linearization of a system of ODEs closed to a hyperbolic stationary point. Uspehi Mat. Nauk 46:6 (1991) 186-187 (R) = Russian Math. Surveys 46:6 (1991) 198-199 (E).
  - 103 Smooth linearization of differential equations. Doklady Akad. Nauk 322:3 (1992) 446-450 (R) = Soviet Math. Doklady 45:1 (1992) 105-109 (E).
  - 104 On conditions for nondegeneracy in Kolmogorov's theorem. Ibid. 322:6 (1992) 1028-1032 (R) = Ibid. 221-225 (E).
  - 105 A general approach to the study of complex bifurcations. Prikladnaja Mekhanika 28:12 (1992) 83-86 (R) = International Applied Mechanics 28:12 (1993) 849-853 (E).
  - 106 The local uniformization of branches of an algebraic curve (with A. Soleev). Contemporary Mathematics 131:3 (1992) 361-378 (English).
  - 107 Bifurcation of the periodic solutions in the symmetric case of a multiple pair of imaginary eigenvalues. Selecta Math. formerly Sovietica 12:1 (1993) 1-12 (English).
  - 108 Divergence of the real normalizing transformation. Ibid. 13-23 (English).
  - 109 Finitely smooth linearization of an ODE system near a hyperbolic fixed point. Proceedings of the Intern. Conf. on Differential Equations (Barselona). (C.Perello, C.Simo, J.Sola-Moreles, eds.) World Scientific: Singapore etc., 1993, v. 1, p. 342 (English).

- 110 A general approach to the bifurcation theory. Ibid., p. 343-344 (English).
- 111 Ordering in complicated problems and Newton polyhedra (with A.Soleev). University of Toronto, Department of Computer Sci., Preprint 301/93. (1993) 8 p. (English).
- 112 Computation of periodic oscillations of a satellite. The regular case (with V.Ju. Petrovich). Inst. Applied Math., Preprint No. 65, Moscow, 1993. 30 p. (Russian).
- 113 Simple periodic solutions of the restricted three-body problem in the Sun-Jupiter case. Ibid., No. 66, Moscow, 1993. 27 p. (Russian).
- 114 Double periodic solutions of the restricted three-body problem in the Sun-Jupiter case. Ibid. No. 67, Moscow, 1993. 30 p. (Russian).
- 115 Multiple periodic solutions of the restricted three-body problem in the Sun-Jupiter case. Ibid., No. 68, Moscow, 1993. 23 p. (Russian).
- 116 Regularization of satellite's oscillations on a very stretched orbit (with V. Ju. Petrovich). Ibid., No. 4, Moscow, 1994. 16 p. (Russian).
- 117 Classification of singularities of the position's function of mechanisms (with A. Soleev). Problemy mashinovedeniya i nadezhnosti mashin, 1994, No. 1, 102-108 (R) = Journal of Machinery Manufacture and Reliability 1994, No. 1 (E).
- 118 First approximations of algebraic equations (with A.Soleev). Doklady Akademii Nauk 335:3 (1994) 277-278 (R) = Russian Ac. Sci. Doklady. Mathem. 49:2 (1994) 291-293 (E).
- 119 First approximations of differential equations. Ibid. 335:4 (1994) 413-416 (R) = 49:2 (1994) 334-339 (E).
- 120 Computation of periodic oscillations of a satellite. The singular case (with V. Yu. Petrovich). Preprint of the Institute of Applied Math. N 44, Moscow, 1994. 28 p. (Russian)
- 121 Klein's polyhedra for the two cubic forms of Davenport (with V. I. Parusnikov). Ibid. N 48, Moscow, 1994. 32 p.
- 122 On an ODE system related to the Schroedinger equation (with S. Yu. Sadov). Ibid. N 49, Moscow, 1994. 31 p.
- 123 Comparison of different generalizations of continued fractions (with V. I. Parusnikov). Ibid. N 52, Moscow, 1994. 31 p.
- 124 The Restricted 3-Body Problem: Plane Periodic Orbits. Walter de Gruyter, Berlin-New York, 1994. 362 p.
- 125 Symmetries and convergence of normalizing transformations (with S. Walcher). J. of Mathem. Analysis and Applications 183:3 (1994) 571-576.
- 126 Klein's polyhedra and multidimensional generalizations of continued fractions (with V.I. Parusnikov). ICM94, Abstracts, Short Communications, Zurich, 1994, p. 37.
- 127 First approximations of differential equations. Ibid., p. 190.
- 128 Klein polyhedrals for two cubic Davenport forms (with V. I. Parusnikov). Mat. Zametki 56:4 (1994) 9-27 (R) = Math.

- Notes 56:3-4 (1994) 994-1007 (E)
- 129 Singular perturbations in Hamiltonian Mechanics. Hamiltonian Mechanics (J. Seimenis, ed.). Plenum Press: N.Y., 1994, p.43-49.
- 130 Local analysis of a singularity of an reversible ODE system. Simple cases (with A. Soleev). Inst. Appl. Math., Preprint No. 40, Moscow, 1995. 28 p. (Russian)
- 131 Newton polyhedra and the asymptotic analysis of the viscous fluid flow around a flat plate (with M.M. Vasil'ev) Inst. Appl. Math., Preprint No. 44, 1995. 20 p. (Russian)
- 132 Local analysis of a singularity of an reversible ODE system. Complicated cases (with A. Soleev). Inst. Appl. Math., Preprint No. 47, Moscow, 1995. 30 p. (Russian)
- 133 The Newton polyhedron in nonlinear Analysis. Ibid., No. 48, 1995. 12 p. (Russian)
- 134 Homoclinic solutions of an reversible ODE system (with A. Soleev). Ibid., No. 54, 1995. 23 p. (Russian)
- 135 The Hamiltonian truncations of a Hamiltonian system (with A. Soleev). Ibid., No. 55, 1995. 26 p. (Russian)
- 136 Formal integral of a divergence free system (with S.Yu. Sadov). Matematicheskie Zametki 57:6 (1995) 803-813 (Russian) = Math. Notes 57:6 (1995) 565-572 (English)
- 137 General approach to the asymptotic analysis of singular perturbations.// Dynamical Systems and Chaos (N. Aoki, K. Shiraiwa, Y. Takahashi, eds.). World Scientific, Singapore, 1995, v. 1, p. 11-17.
- 138 First approximations of the Navier-Stokes differential equations. Uspehi Matematicheskikh Nauk 50:4 (1995) 138 (R) = Russian Math. Surveys 50:4 (1995) (E)
- 139 Ways of computing of a normal form. Doklady Akademii Nauk 344:3 (1995) 298-300 (R) = Russian Acad. Sci. Doklady. Mathem. 52:2 (1995) 200-202 (E)
- 140 Newton polyhedron in Nonlinear Analysis. Vestnik Moskovskogo Universiteta, ser. 1, no. 6 (1995) 45-51 (R) = Moscow University Mathem. Bulletin 50:6 (1995) 4-9 (E)
- 141 Newton polyhedra and Hamiltonian systems (with A. Soleev). Ibid. 84-86 (R) = Ibid. 50:6 (1995) 36-38 (E)
- 142 Local analysis of singularities of a reversible ODE system (with A. Soleev). Uspehi Mat. Nauk 50:6 (1995) 169-170 (R) = Russian Math. Surveys 50:6 (1995) 1258-1259 (E)
- 143 Bifurcations of solutions in a reversible ODE system (with A. Soleev). Doklady Akademii Nauk 345:5 (1995) 590-592 (R) = Russian Acad. Sci. Doklady. Mathematics 52:3 (1995) 419-421(E)
- 144 On singular positions of some mechanisms (with A. Soleev). Uzbek Mathem. Journal no. 3 (1995)31-39 (R)
- 145 The first limit problem for the equation of oscillations of a satellite (with V.P. Varin). Inst. Appl. Math., Preprint No. 124, Moscow, 1995. 31 p.(Russian)
- 146 The second limit problem for the equation of oscillations of a satellite (with V.P. Varin). Ibid. No. 128. 29 p. (Russian)
- 147 The local uniformization of branches of a space curve (with



- A. Soleev). Proceedings of 22-nd Annual Iranian Math. Conference. Ferdowsi University of Mashhad, Mashhad, Iran, March 13-16, 1991, pp. 72-85.
- 148 Hamiltonian truncated systems of a Hamiltonian system (with A. Soleev). Doklady Akad. Nauk 349:2 (1996) 153-155 (R) = Russian Ac. Sci. Doklady. Mathem. 54:1 (1996) 512-514 (E)
- 149 General approach to the asymptotic nonlinear analysis// Vestnik moskovskogo universiteta, ser. 1, Matem., Meh. no. 6 (1996) 24-27 (R) = Moscow University Mathem. Bulletin 51:6 (1996) 13-15 (E)
- 150 New applications of the Newton polyhedron// Problems of Nonlinear Analysis in Engineering Systems, Kazan, no. 2 (1996) 37-45 (E)
- 151 Program of the lecture course "Nonlinear Analysis", Russian Open University, Moscow, 1992. 20 p. (R)
- 152 Algorithms of the nonlinear analysis// Uspehi matem. nauk 51:5(1996)186(R) = Russian Math. Surveys 51:5 (1996) 956 (E)
- 153 Newton polyhedron in singular perturbations//Differentsial'nye uravnenija 32:11(1996)1577(R) = Diff. Equations 32:11 (1996) (E)
- 154 The fractal structure of periodic oscillations of a satellite (with V.P. Varin)//Proc. Intern. Conference and Chebyshev Readings, Celebrated the 175 Annivesary of the P.L. Chebyshev Birthday, Moscow, MGU, 1996, v.1, p. 75-77 (R)
- 155 The asymptotic analysis of a flow around a semiinfinite plate by the method of the Newton polyhedron (with M.M. Vasil'ev)// Ibid., p. 78-80 (R)
- 156 Zero-multiple and retrograde periodic solutions of the restricted three-body problem. Inst. Applied Math.,Preprint no. 93, Moscow, 1996. 32 p. (R)
- 157 The limit problems for the equation of oscillations of a satellite (with V.P. Varin) // Celestial Mechanics and Dynamical Astronomy 67:1 (1997) 1-40 (E).
- 158 Comparison of various generalizations of continued fractions (with V.I. Parusnikov) // Matem. Zametki 61:3 (1997) 339-348 (R) = Mathem. Notes 61:3 (1997) 278-286 (E).
- 159 Computation of periodic oscillations of a satellite (with V.Yu. Petrovich) // Matematicheskoe Modelirovanie (Mathematical Modelling) 9:6 (1997) 82-94 (R).
- 160 Algorithms of the local nonlinear analysis // Nonlinear Analysis, Theory, Methods and Applications 30:7 (1997) 4683-4694 (E).
- 161 Singularities of oscillations of a satellite on highly eccentric elliptic orbits (with V.P. Varin) // Ibid. 30:4 (1997) 2541-2546 (E).
- 162 Asymptotic analysis of the viscous fluid flow around a flat plate by the Newton polyhedra (with M.M. Vasil'ev) // Ibid. 30:8 (1997) 4765-4770 (E).
- 163 Local analysis of a reversible ODE system and the Newton polyhedron (with A. Soleev) // Ibid. 30:8 (1997) 4833-4838 (E).

- 164 Power geometry // J. of Dynamical and Control Systems 3:4 (1997) 471-491 (E).
- 165 Newton polyhedron and Prandtl equations for a boundary layer (with M.M. Vasil'ev) // ZAMM 78 (1998), Supplement 1, 309-310 (E).
- 166 Power Geometry in Algebraic and Differential Equations. Moscow, Fizmatlit, 1998. 288 p. (R).
- 167 Simplification. Foreword of systems of algebraic and differential equations // Mathematics and Computers in Simulation 45: 5-6 (1998) 409-412.
- 168 Normal forms // Ibid. 413-428.
- 169 Newton polyhedra and power transformations // Ibid. 429-444.
- 170 The local analysis of singularities of a reversible ODE system (with A. Soleev) // Trudy Mosk. Mat. Obshch. 59 (1998) 3-72 (R) = Trans. Moscow Math. Soc. 59 (1998) 3-72 (E).
- 171 Newton polyhedron and applications // First International Conference on Nonlinear Problems in Aviation and Aerospace (Daytona Beach, FL, 1996). Embri-Riddle Aeronaut. Univ. Press, Daytona Beach, FL, 1998, p. 55-60.
- 172 The fractal structure of periodic oscillations of a satellite (with V.P.Varin) // Ibid., p. 61-66.
- 173 Power geometry and four applications // Journal of Mathematical Sciences 95:5 (1999) 2483-2512.
- 174 Generalized periodic solutions to the equation of oscillations of a satellite (with V.P.Varin) // ZAMM 79: Supplement 2 (1999) S283-S284.
- 175 Finding self-similar solutions by means of Power Geometry // Inst. Appl. Math., Preprint No. 57, 1999. 32 p. (R)
- 176 On complexity of problems of Power Geometry // Ibid. No. 59, 1999. 15 p. (R)
- 177 New generalization of the continued fraction // Ibid. No. 82, 1999. 16 p. (R)
- 178 Algorithms of the asymptotic nonlinear analysis // Direct and Inverse Problems of Mathematical Physics (R.P.Gilbert, J.Kajiwara, Y.S.Xu, eds.). Kluwer, Boston etc., 1999, p. 1-20.
- 179 Self-similar solutions and Power Geometry // Uspekhi Mat. Nauk 55:1 (2000) 3-44 (R) = Russian Math. Surveys 55:1 (2000) 1-42 (E)
- 180 Simplest applications of Power Geometry to differential equations // Problems of Nonlinear Analysis in Engineering Systems, Kazan', 6:1 (2000) 23-32 (R)
- 181 The meromorphic reducibility of a linear triangular ODE system // Doklady Akademii Nauk 371:5 (2000) 587-590 (R) = Doklady Mathematics 61:2 (2000) 243-246 (E)
- 182 Normal forms of the ODE system (with V.Yu. Petrovich) // Preprint of the Inst. Appl. Math. N 18, Moscow, 2000, 24 p. (R)
- 183 Power Geometry in Algebraic and Differential Equations. Elsevier Science (North-Holland), Amsterdam, 2000. 385 p.
- 184 Families of periodic solutions to the Beletsky equation // Preprint of IAM N 51, Moscow, 2000, 36 p. (R)
- 185 Power expansions of solutions to one algebraic or differential equation // Preprint of IAM N 63, Moscow 2000, 22 p. (R)

- 186 Power expansions of solutions to a system of algebraic and differential equations // Preprint of IAM N 68, Moscow 2000, 32 p. (R)
- 187 The modified system of equations describing motions of a rigid body (with V.V. Lunev) // Preprint of IAM N 49, Moscow, 2001, 36 p. (R)
- 188 Power expansions of solutions to a single algebraic or differential equation // Doklady Akademii Nauk 380:2 (2001) 155-159 (R) = Doklady Mathematics 64:2 (2001) 160-164 (E)
- 189 Power expansions of solutions to the system of algebraic and differential equations // Doklady Akademii Nauk 380:3 (2001) 298-304 (R) = Doklady Mathematics 64:2 (2001) 180-186 (E)
- 190 An application of Power Geometry to finding self-similar solutions // Functional Differential Equations 8:1-2 (2001) 69-88
- 191 Local expansions of modified motions of a rigid body (with V.V. Lunev) // Preprint of IAM N 73, Moscow, 2001, 39 p. (R)
- 192 Asymptotical expansions of modified motions of a rigid body (with V.V. Lunev) // Preprint of IAM N 90, Moscow, 2001, 34 p. (R)
- 193 Properties of expansions of modified motions of a rigid body (with V.V. Lunev) // Preprint of IAM N 23, Moscow, 2002, 44 p. (R)
- 194 Families of periodic solutions to the Beletsky equation // Kosmicheskie Issledovaniya 40:3 (2002) 295-316 (R) = Cosmic Research 40:3 (2002) 274-295 (E)
- 195 Asymptotics of solutions to the ordinary differential equations // Preprint of IAM N 40, Moscow 2002, 23 p. (R)
- 196 Computation of power expansions of modified motions of a rigid body (with V.V. Lunev) // Doklady Akademii Nauk 386:1 (2002) 11-17 (R) = Doklady Mathematics 66:2 (2002) 161-167 (E)
- 197 Algorithmic analysis of singular perturbations and boundary layers by Power Geometry // Proceedings of BAIL 2002 (Eds. S. Wang and N. Fowkes). The University of Western Australia, Perth, 2002. P. 61-66. (E)
- 198 Analysis of Euler-Poisson equations by methods of Power Geometry // Preprint of KIAM N 41, Moscow 2002, 20 p. (R)
- 199 Families of power expansions of modified motions of a rigid body (with V.V. Lunev) // Doklady Akademii Nauk 387:3 (2002) 287-303 (R) = Doklady Mathematics 66:3 (2002) 340-347 (E)
- 200 On an axially symmetric flow of a viscous incompressible fluid around a needle (with T.V. Shadrina) // Ibid. 387:5 (2002) 589-595 (R) = Ibid. 66:3 (2002) 396-402 (E)
- 201 Power properties of motions of a rigid body // Ibid. 387:6 (2002) 727-732 (R) = Ibid. 66:3 (2002) 415-420 (E)
- 202 Classes of families of generalized periodic solutions to the Beletsky equation (with V.P. Varin) // Preprint of KIAM N 64, Moscow 2002, 21 p. (R)
- 203 Analysis of Euler-Poisson equations by methods of Power Geometry // Mekhanika Tverdogo Tela (Donetsk) 32 (2002) 3-15 (R)
- 204 Asymptotics and expansions of solutions to an ordinary differential equation // Preprint of KIAM N 9, Moscow 2003, 39 p. (R)
- 205 Asymptotical solve of nonlinear equations by means of Power Geometry // Preprint of KIAM N 28, Moscow 2003, 20 p. (R)

- 206 Asymptotically close solutions to an ordinary differential equation // Preprint of KIAM N 31, Moscow 2003, 12 p. (R)
- 207 Power series and nonpower asymptotics of solutions to the second Painleve equation (with Yu. V. Zavgorodnyaya). Preprint of KIAM N 48, Moscow 2003. 32 p. (R)
- 208 Power expansions of solutions to the sixth Painleve equation (with I. V. Chukhareva). Preprint of KIAM N 49, Moscow 2003. 32 p. (R)
- 209 Power expansions of solutions to the fifth Painleve equation (with E.S. Karulina). Preprint of KIAM N 50, Moscow 2003. 32 p. (R)
- 210 Power and exponential expansions of solutions to the third Painleve equation (with A.V. Gridnev). Preprint of KIAM N 51, Moscow 2003. 32 p. (R)
- 211 Invariant relations of the Fokker-Planck system (with V.V. Lunev) // Doklady Akademii Nauk 390:6 (2003) 733-739 (R) = Doklady Mathematics 67:3 (2003) 416-422 (E)
- 212 Expansions of solutions to an ODE system. Preprint of KIAM N 59, Moscow 2003. 27 p. (R)
- 213 Asymptotically close solutions to an ODE system. Preprint of KIAM N 58, Moscow 2003. 12 p. (R)
- 214 Power Geometry as a new calculus // Analysis and Applications - ISAAC 2001 (Eds. H.G.W. Begehr, R.P. Gilbert and M.W. Wong). Kluwer Academic Publishers: Dordrecht/ Boston/ London, 2003, p. 51-71.
- 215 Axisymmetric boundary layer on a needle (with T.V. Shadrina)// Preprint of KIAM N 64, Moscow 2003. 32 p.
- 216 Power asymptotics of solutions to an ordinary differential equation// Doklady Akademii Nauk 392:3 (2003) 295-300 (R) = Doklady Mathematics 68:2 (2003) 199-203 (E)
- 217 Power-logarithmic expansions of solutions to an ordinary differential equation // Ibid. 392:4 (2003) 439-444 (R) = Ibid. 68:2 (2003) 221-226 (E)
- 218 Nonpower asymptotics of solutions to an ordinary differential equation // Ibid. 392:5 (2003) 586-591 (R) = Ibid. 68:2 (2003) 242-246 (E)
- 219 Asymptotically close solutions to an ordinary differential equation // Ibid. 393:4 (2003) 448-452 (R) = Ibid. 68:3 (2003) 380-384 (E)
- 220 Correct generalization of the continued fraction // Preprint of KIAM N 86, 2003. 17 p. (R)
- 221 Polyhedra of absolute values of triples of linear forms (with V.I. Parusnikov) // Preprint of KIAM N 93, 2003. 20 p. (R)
- 222 Axisymmetric boundary layer on a needle (with T.V. Shadrina) // Doklady Akademii Nauk 394:3 (2004) 298-304 (R) = Doklady Mathematics 69:1 (2004) 57-63. (E)
- 223 On generalizations of the continued fraction // Preprint of KIAM N 10, 2004. 31 p. (R)
- 224 Classes of families of generalized periodic solutions to the Beletsky equation (with V.P. Varin) // Celestial Mechanics and Dynamical Astronomy, 88:4 (2004) 325-341. (E)
- 225 Expansions of solutions to the fifth Painleve equation (with E.S. Karulina) // Doklady Akademii Nauk 395:4 (2004) 439-444 (R) = Doklady Mathematics 69:2 (2004) 214-220 (E)

- 226 Expansions of solutions to the sixth Painleve equation  
(with I.V. Goruchkina) // Ibid. 395:6 (2004) 733-737 (R) =  
Ibid. 69:2 (2004) 268-272 (E)
- 227 Asymptotics and expansions of solutions to an ordinary differential  
equation // Uspekhi Matem. Nauk 59:3 (2004) 31-80 (R) = Russian Mathem.  
Surveys 59:3 (2004) 429-480 (E)
- 228 Methods of a study of the boundary layer on a needle (with  
T.V. Shadrina) // Preprint of KIAM N 35, 2004, 27 p. (R)
- 229 About incompressible boundary layer on a needle (with T.V. Shadrina)//  
Preprint of KIAM N 36, 2004, 21 p. (R)
- 230 The compressible heat conductive boundary layer on a needle (with  
T.V. Shadrina) // Preprint of KIAM N 37, 2004. 32 p. (R)
- 231 The axially symmetric boundary layer on a needle (with T.V. Shadrina)//  
An International Conference on Boundary And Interior Layers, ONERA,  
Toulouse, 2004. July 5th, 11.20, p. 1--10.
- 232 Algorithm of the generalized continued fraction  
// Preprint of KIAM N 45, 2004, 32 p. (R)
- 233 Singularities of solutions to the first Painleve equation  
(with V.Yu. Petrovich) // Preprint of KIAM N 75, 2004, 17 p. (R)
- 234 Expansions of solutions to the sixth Painleve equation near  
a regular point (with I.V. Goruchkina) // Preprint of KIAM N 4,  
2005. 19 p. (R)
- 235 On families of peiodic solutions to the restricted three-body problem  
(with V.P. Varin) // Preprint of KIAM N 10, 2005. 20 p. (R)
- 236 Power expansions of solutions to an analogy to the first Painleve  
equation (with N.A. Kudryashov) // Preprint of KIAM N 17, 2005.  
25 p. (R)
- 237 Complicated expansions of solutions to an ordinary differential  
equation // Preprint of KIAM N 36, 2005. 16 p. (R)
- 238 Further generalization of the continued fraction (with V.I. Parusnikov)  
// Preprint of KIAM N 40, 2005. 19 p. (R)
- 239 New generalizations of the continued fractions (with V.I. Parusnikov)  
// Preprint of KIAM N 52, 2005. 20 p. (E)
- 240 On the viscous incompressible fluid flow around a plate (with T.V.  
Shadrina) // Preprint of KIAM N 54, 2005. 20 p. (R)
- 241 The family  $h$  of periodic solutions of the resticted problem for small  
 $1/\mu$  (with V.P. Varin) // Preprint of KIAM N 67, 2005. 32 p. (R)
- 242 Structure of best Diophantine approximations // Doklady Akademii Nauk  
402:4 (2005) 439-444 (R) = Doklady Mathematics 71:3 (2005) 396-400 (E)
- 243 Generalized continued fraction algorithm // Ibid. 402:6 (2005) 732-736  
(R) = Ibid. 71:3 (2005) 446-450 (E)
- 244 The family  $h$  of periodic solutions of the resticted problem for big  
 $1/\mu$  (with V.P. Varin) // Preprint of KIAM N 64, 2005. 31 p. (R)
- 245 Last expansions of the modfied motions of a rigid body (with I.N.  
Gashenenko) // Preprint of KIAM N 65, 2005. 13 p. (R)
- 246 Simple finite solutions of the N. Kowalewski equations (with I.N.  
Gashenenko) // Preprint of KIAM N 68, 2005. 32 p. (R)
- 247 Normal forms and integrability of the Euler-Poisson equations  
// Preprint of KIAM N 66, 2005. 22 p. (R)

- 248 Properties of the modulus polyhedron // Preprint of KIAM N 72, 2005. 31 p. (R)
- 249 Normal forms and integrability of ODE systems (with V.F. Edneral) // Proceedings of CASC 2005. (V.G. Ganzha, E.W. Mayr, and E.V. Vorozhtsov, Eds.), LNCS 3718, Springer-Verlag, Berlin, Heidelberg, 2005, p. 65-74. (E)
- 250 Theory of normal forms of the Euler-Poisson equations // Preprint of KIAM N 100, 2005. 27 p. (R)
- 251 Normal forms and integrability of the Euler-Poisson equations// Mekhanika Tverdogo Tela (Donetsk), 2005, N 35, p. 1-16. (R)
- 252 Finite solutions of the N.Kowalewski equations (with I.N.Gashenenko) // Mekhanika Tverdogo Tela (Donetsk), 2005, N 35, p. (R)
- 253 Expansions of solutions to the sixth Painleve equation in cases  $a=0$  and  $b=0$  (with I.V. Goruchkina)// Preprint of KIAM N 2, 2006, 30 p. (R)
- 254 Complicated expansions of solutions to an ordinary differential equation // Doklady Akademii Nauk 406:6 (2006) 730-733 (R) = Doklady Mathematics 73:1 (2006) 117-120 (E)
- 255 Normal forms and integrability of ODE systems (with V.F. Edneral) // Programirovanie 32:3 (2006) 22-29 (R) = Programming and Computer Software 32:3 (2006) 139-144 (E)
- 256 Expansions of solutions to the sixth Painleve equation near singular points  $x=0$  and  $x=(\infty)$  (with I.V. Goruchkina). Preprint of KIAM N 13. Moscow, 2006. 32 p. (R)
- 257 On movable singular points of solutions to the ordinary differential equations. Preprint of KIAM No 26. Moscow, 2006. 16 p. (R)
- 258 Periodic solutions to a Hamiltonian system // Kosmicheskie Issledovaniya 44:3 (2006) 258-271 (R) = Cosmic Research 44:3 (2006) 245-257 (E)
- 259 News on motions of a top // IX Allrussian Congress on Theoretic and Applied Mechanics. Abstracts. V. I. N. Novgorod, 2006, p. 28.
- 260 The generating family  $i$  of periodic solutions of the restricted problem (with V.P. Varin). Preprint of KIAM No 36. Moscow, 2006. 27 p. (R)
- 261 Local integrability of the Euler-Poisson equations // Doklady Akademii Nauk 409:3 (2006) 295-299 (R) = Doklady Mathematics 74:1 (2006) 512-516. (E)
- 262 Simple exact solutions to the N. Kowalewski equations (with I.N. Gashenenko) // Doklady Akademii Nauk 409:4 (2006) 439-442 (R) = Doklady Mathematics 74:1 (2006) 536-539 (E)
- 263 Further generalization of the continued fraction (with V.I. Parusnikov) // Doklady Akademii Nauk 410:1 (2006) 12-16 (R) = Doklady Mathematics 74:2 (2006) 628-632 (E)
- 264 Expansions of solutions to the sixth Painleve equation in cases  $a=0$  and  $b=0$  (with I.V. Goryuchkina) // Doklady Akademii Nauk 410:3 (2006) 295-300 (R) = Doklady Mathematics 74:2 (2006) 660-665 (E)
- 265 On computation of the Hamiltonian normal form (with A.G. Petrov) // Doklady Akademii Nauk 410:4 (2006) 474-478 (R) = Doklady Physics 51:10 (2006) 555-559 (E)
- 266 Power asymptotics of solutions to an ODE system // Doklady Akademii Nauk 410:5 (2006) 583-586 (R) = Doklady Mathematics 74:2 (2006)

- 712-715 (E)
- 267 Desingularizations of the restricted three-body problem (with V.Yu. Petrovich). Preprint of KIAM No 53. Moscow, 2006. 11 p. (R)
- 268 Exotic expansions of solutions to an ordinary differential equations. Preprint of KIAM No 66. Moscow, 2006. 26 p. (R)
- 269 On integrability of the Euler-Poisson equations (with V.F. Edneral) // J. Calmet, W.M. Seiler, R.W. Tucker (Eds.): Global Integrability of Field Theories, Universitaets-Verlag Karlsruhe, 2006, p. 39-56
- 270 Complicated expansions of solutions to an ODE system. Preprint of KIAM No 81. Moscow, 2006. 13 p. (R)
- 271 On families of periodic solutions of the restricted three-body problem (with V.P. Varin) // Celestial Mechanics and Dynamical Astronomy, 2006, v. 95, p. 27-54.
- 272 Computation of normal forms of the Euler-Poisson equations (with V.F. Edneral). Preprint of KIAM No 1. Moscow, 2007. 17 p. (R)
- 273 Analysis of the Euler-Poisson equations by methods of Power Geometry and Normal Form // Prikladnaja Matem. Mekhan. 71:2 (2007) 192-227 (R) = J. Appl. Math. Mech. 71:2 (2007) 168-199. (E)
- 274 Axisymmetric boundary layer on a needle (with T.V. Shadrina) // Trudy Mosk. Mat. Obsch. 68 (2007) 224-287. (R) = Transactions of Moscow Math. Soc. 68 (2007) 201--259 (E)
- 275 All asymptotic expansions of solutions to the sixth Painleve equation (with I.V. Goryuchkina). Preprint of KIAM No 19. Moscow, 2007. 19 p. (R)
- 276 On integrability of the Euler-Poisson equations (with V.F. Edneral) // Fundamental and Applied Mathematics 13:1 (2007) 45-59. (R) = J. Math. Sci. 152:4 (2008) 479-489 (E).
- 277 Power Geometry as a new Mathematics. Preprint of KIAM No 28. Moscow, 2007. 26 p. (E)
- 278 Periodic solutions of the restricted three-body problem for small  $\mu$  (with V.P. Varin). Preprint of KIAM No 34. Moscow, 2007. 30 p. (R)
- 279 Complicated families of periodic solutions to the restricted problem (with V.P. Varin). Preprint of KIAM No 35. Moscow, 2007. 27 p. (R)
- 280 Exotic expansions of solutions to an ordinary differential equation // Doklady Akademii Nauk 416:5 (2007) 583-587 (R) = Doklady Mathematics 76:2 (2007) 714-718. (E)
- 281 All asymptotic expansions of solutions to the sixth Painleve equation (with I.V. Goryuchkina) // Doklady Akademii Nauk 417:3 (2007) 298-302 (R) = Doklady Mathematics 76:3 (2007) 851-855. (E)
- 282 Generalizations of continued fraction // Chebyshevskii sbornik, 7:3 (2006) 4-71. (R)
- 283 Periodic solutions of the restricted three-body problem for small mass ratio (with V.P. Varin) // Prikladnaja Matem. Mekhan. 71:6 (2007) 1034-1066 (R) = J. Appl. Math. Mech. 71:6 (2007) 933-960. (E)
- 284 Generating family  $c$  of periodic solutions of the restricted

- problem (with V.P. Varin). Preprint of KIAM No 51. Moscow, 2007. 14 p. (R)
- 285 Analisis of the local integrability by methods of normal form and power geometry (with V.F. Edneral). Preprint of KIAM No 53. Moscow, 2007. 16 p. (R)
- 286 Review of all asymptotic expansions of solutions to the equation P6 (with I.V. Goryuchkina). Preprint of KIAM No 60. Moscow, 2007. 16 p. (R)
- 287 Methods used for researching asymptotic expansions of solutions to the equation P6 (with I.V. Goryuchkina). Preprint of KIAM No 61. Moscow, 2007. 30 p. (R)
- 288 All basic asymptotic expansions of solutions to the equation P6 in case  $ab \neq 0$  (with I.V. Goryuchkina). Preprint of KIAM No 62. Moscow, 2007. 30p. (R)
- 289 All basic asymptotic expansions of solutions to the equation P6 for  $ab=0$  (with I.V. Goryuchkina). Preprint of KIAM No 70. Moscow, 2007. 30p. (R)
- 290 All asymptotic expansions of solutions to equation P6 obtained from basic ones (with I.V. Goryuchkina). Preprint of KIAM No 77. Moscow, 2007. 28 p. (R)
- 291 On families of periodic solutions of the restricted three-body problem (with V.P. Varin) // *Astronom. Vestnik*, 42:2 (2008) 163-185 (R) = *Solar System Research* 42:2 (2008) 158-180. (E)
- 292 Power geometry in nonlinear partial differential equations // *Ukrainean Mathem. Bulletin* 5:1 (2008) 32-45. (E)
- 293 Power-logarithmic expansions of solutions to a system of ordinary differential equations // *Doklady Akademii Nauk* 419:3 (2008) 298-302 (R) = *Doklady Mathematics* 77:2 (2008) 215-218. (E)
- 294 Nonpower asymptotic forms of solutions to a system of ordinary differential equations // *Doklady Akademii Nauk* 420:1 (2008) 7-10 (R) = *Doklady Mathematics* 77:3 (2008) 325-328. (E)
- 295 Complicated expansions of solutions to a system of ordinary differential equations // *Doklady Akademii Nauk* 421:1 (2008) 7-10 (R) = *Doklady Mathematics* 78:1 (2008) 477-480. (E)
- 296 The families  $c$  and  $i$  of periodic solutions of the restricted problem for  $\mu=5 \cdot 10^{-5}$  (with V.P. Varin). Preprint of KIAM No. 22. Moscow, 2008. 26 p. (R)
- 297 The Boutroux asymptotic forms of solutions to Painleve equations and Power Geometry (with I.V. Goryuchkina) // *Doklady Akademii Nauk* 422:2 (2008) 157-160 (R) = *Doklady Mathematics* 78:2 (2008) 681-685. (E)
- 298 Asymptotic forms of solutions to the third Painleve equation (with I.V. Goryuchkina) // *Doklady Akademii Nauk* 422:6 (2008) 729-732 (R) = *Doklady Mathematics* 78:2 (2008) 765-768. (E)
- 299 Two-sided generalization of continued fraction (with V.I. Parusnikov). Preprint of KIAM No. 58. Moscow. 2008. 25 p.
- 300 Asymptotic forms of solutions to the fourth Painleve equation (with I.V. Goryuchkina) // *Doklady Akademii Nauk* 423:4 (2008) 443-448. (R) = *Doklady Mathematics* 78:3 (2008) 868-873. (E)
- 301 All expansions of solutions to the sixth Painleve equation near its nonsingular point (with I.V. Goryuchkina). Preprint of KIAM No. 75. Moscow, 2008. 30p. (R)



- 302 Basic expansions of solutions to the sixth Painleve equation in the generic case (with I.V. Goryuchkina) // *Differentsial'nye Uravneniya*, 45:1 (2009) 19-33 (R) = *Differential Equations*, 45:1 (2009) 18-32 (E).
- 303 Algorithmic analysis of local integrability (with V.F. Edneral) // *Doklady Akademii Nauk* 424:3 (2009) 299-303 (R) = *Doklady Mathematics* 79:1 (2009) 48-52 (E).
- 304 Family  $h$  of periodic solutions of the restricted problem for small  $\mu$  (with V.P. Varin) // *Astronomicheskii Vestnik* 43:1 (2009) 4-27 (R) = *Solar System Research* 43:1 (2009) 2-25 (E).
- 305 Families  $c$  and  $i$  of periodic solutions of the restricted problem for  $\mu=5 \cdot 10^{-5}$  (with V.P. Varin) // *Astronomicheskii Vestnik* 43:1 (2009) 28-43 (R) = *Solar System Research* 43:1 (2009) 26-40 (E).
- 306 Family  $h$  of periodic solutions of the restricted problem for big  $\mu$  (with V.P. Varin) // *Astronomicheskii Vestnik* 43:2 (2009) 167-186 (R) = *Solar System Research* 43:2 (2009) 158-177 (E).
- 307 Closed families of periodic solutions of the restricted problem (with V.P. Varin) // *Astronomicheskii Vestnik* 43:3 (2009) 265-288 (R) = *Solar System Research* 43:3 (2009) 253-276 (E).
- 308 All expansions of solutions to the sixth Painleve equation near its nonsingular point (with I.V. Goryuchkina) // *Doklady Akademii Nauk* 426:5 (2009) 586-591 (R) = *Doklady Mathematics* 79:3 (2009) 397-402 (E).
- 309 Elliptic asymptotic forms of solutions to Painleve equations (with I.V. Goryuchkina). Preprint of KIAM N 6. Moscow, 2009. 28 p. (R)
- 310 Integrability analysis of polynomial ODE systems (with V. Edneral) // *Polynomial Computer Algebra*. St. Petersburg, Intern. Euler Inst., 2009. P. 114-119.
- 311 Expansions of solutions to the equation  $P_1^2$  by algorithms of power geometry (with N.A. Kudryashov) // *Ukrainian Mathematical Bulletin* 6:3 (2009) 311-337.
- 312 On integrability of a planar ODE system near a degenerate stationary point (with V. Edneral) // *Computer Algebra in Scientific Computing* (V.P. Gerdt, E.W. Mayr, E.V. Vorozhtsov - Eds.), Springer, LNCS 5743, Berlin, 2009, p. 45-53.
- 313 Two-way generalization of the continued fraction (with V.I. Parusnikov) // *Doklady Akademii Nauk* 429:6 (2009) 727-730 (R) = *Doklady Mathematics* 80:3 (2009) 887-890 (E).
- 314 Power geometry in differential equations // "Contemporary Problems of Mathematics and Mechanics". Mathematics. Dynamical Systems. MGU. Moscow, 2009. V. 4, issue 2, p. 24-54 (R).
- 315 Nonformal solutions of ODE (with I.V. Goryuchkina). Preprint of KIAM No. 61. Moscow, 2009. 13 p. (R)
- 316 On the integrability of a planar system of ODE's near a degenerate stationary point (with V.F. Edneral) // *Zapiski nauchnykh seminarov POMI*, 373 (2009) 34-47 (R) = *J. of Math. Sci.* 166:3 (2010) 326-333 (E).
- 317 Sets of stability of multiparameter problems. Preprint of KIAM No. 3. Moscow, 2010. 14 p. (R)
- 318 The stability set of gyroscopic problem (with A.B. Batkhin, V.P. Varin). Preprint of KIAM No. 4. Moscow, 2010. 30 p. (R)

- 319 Nonpower expansions of solutions to the third Painleve equation (with A.V. Gridnev). Preprint of KIAM No. 10. Moscow, 2010. 18 p. (R)
- 320 Structure of multidimensional Diophantine approximations. Preprint of KIAM No. 11. Moscow, 2010. 8 p. (R)
- 321 On the convergence of a formal solution to an ordinary differential equation (with I.V. Goruchkina)// Doklady Akademii Nauk 432:2 358-361(2010) 151-154 (R)  
=Doklady Mathematics 81:3(2010) 358-361 (E)
- 322 The set of stability of a gyroscope problem (with A.B. Batkhin, V.P. Varin)//Polynomial Computer Algebra. Saint Petersburg, International Euler Institute, 2010, p.7-10 (E).
- 323 Integrability of a planar multiparameter system of ODE (with V. Edneral)//Polynomial Computer Algebra. Saint Petersburg, International Euler Institute, 2010, p.11-14 (E).
- 324 Computation of the sets of stability in multiparameter problems (with A.B. Batkhin and V.P. Varin). Preprint of KIAM No. 23, Moscow, 2010.22p. (R).
- 325 The structure of multidimensional Diophantine approximations// Doklady Akademii Nauk 433:5 (2010) 587-589 (R)  
= Doklady Mathematics 82:1 (2010)(E)
- 326 Asymptotic expansions of solutions of the sixth Painleve equation (with I.V. Goruchkina)// Trudy Mosk. Mat.Obs. 71 (2010) 6- 118(R)= Transactions of Moscow Math. Soc. 71 (2010) 1-104 (E).
- 327 Asymptotic expansions of solutions to the fifth Painleve equation (with A.V. Parusnikova). Preprint of KIAM No. 39. Moscow, 2010. 25 p. (R)
- 328 Structure of the best Diophantine approximations and multidimensional generalizations of the continued fraction// Chebyshevskii Sbornik (Tula) 11:1 (2010) 68-73.
- 329 Power expansions of the shifted solutions to the N. Kowalewski system (with A.B. Aranson). Preprint of KIAM No. 48. Moscow, 2010. 32 p. (R)
- 330 New generalizations of continued fraction, I// Functiones et Approximatio. 43.1 (2010) 55-104.
- 331 Local expansions of solutions to the fifth Painleve equation (with A.V. Parusnikova). Preprint of KIAM No. 72. Moscow, 2010. 27 p. (R)
- 332 Resolution of an algebraic singularity by Power Geometry algorithms (with A.B. Batkhin). Preprint of KIAM No. 10. Moscow, 2011. 30 p. (R)
- 333 On complicated expansions of solutions to ODE. Preprint of KIAM No. 15. Moscow, 2011. 26 p. (R)
- 334 Expansions of solutions to the fifth Painleve equation near its nonsingular point (with A.V. Parusnikova). Preprint of KIAM No. 18. Moscow, 2011. 16 p. (R)
- 335 Asymptotic solution of an algebraic equation // Polynomial Computer Algebra. Euler International Mathematical Institute. 2011, p. 29-32.
- 336 Local expansions of solutions to the fifth Painleve equation

- (with A. V. Parusnikova) // Doklady Akademii Nauk 438:4 (2011)439-443 (R)=Doklady Mathematics 83:3(2011) 348-352 (E)
- 337 On asteroid distribution (with V.P. Varin) // Astronomicheskii Vestnik 45:4 (2011) 334-340(R)=Solar System Research 45:4 (2011) 323-329 (E).
- 338 Exponential expansions of solutions to ODE. Preprint of KIAM No. 36. Moscow, 2011. 16 p. (R)
- 339 Plane Power Geometry for single ODE and Painleve equations // International Conference "Painleve Equations and Related Topics". St. Petersburg, June, 2011. P. 30-35.
- 340 Space Power Geometry for an ODE and Painleve equations // International Conference "Painleve Equations and Related Topics". St. Petersburg, June, 2011. P. 36-41.
- 341 Asymptotic solution of an algebraic equation (with A.B. Batkhin) // Doklady Akademii Nauk, 440:3 (2011) 295-300 (R) = Doklady Mathematics 84:2 (2011) 634-639 (E).
- 342 Sets of stability of multiparameter Hamiltonian systems (with A.B. Batkhin and V.P. Varin). Preprint of KIAM N 42. Moscow, 2011. 32 p. (R).
- 343 Sets of stability of Hamiltonian multiparameter systems (with A.B. Batkhin)// Vestnik Nizhegorodskogo Universiteta im. N.I. Lobachevskogo. 4:2 (2011), 57-58 (R).
- 344 Power-exponential expansions of solutions to an ODE. Preprint of KIAM No. 54. Moscow, 2011. 11 p. (R)
- 345 Power-elliptic expansions of solutions to an ODE. Preprint of KIAM No. 60. Moscow, 2011. 18 p. (R)
- 346 Periodic and elliptic asymptotic forms of solutions to the fifth Painleve equation (with A.V. Parusnikova). Preprint of KIAM No. 61. Moscow, 2011. 18 p. (R)
- 347 Analysis of singularities and integrability of ODE's by algorithms of Power Geometry // Banach Center Publications 94 (2011) 83-98.
- 348 Expansions of solutions to the fifth Painleve equation near its nonsingular point (with A. V. Parusnikova)// Doklady Akademii Nauk, 442:5 (2012) 583-588 (R) =Doklady Mathematics 85:1 (2012) 87-92 (E)
- 349 Sets of stability of multiparameter Hamiltonian systems (with A. B. Batkhin and V. P. Varin)// Prikladnaja Matematika i Mekhanika. 76:1 (2012) 80-133(R) = J. Appl. Math. Mech. 76:1 (2012) 56-92 (E).
- 350 Exponential expansions of solutions to an ordinary differential equation // Doklady Akademii Nauk, 443:5 (2012) 539-544 (R) = Doklady Mathematics, 85:2 (2012) 259-264 (E).
- 351 Resolution of algebraic singularity by algorithms of Power Geometry (with A. B. Batkhin)// Programirovanie 38:2 (2012) 12-30 (R) = Programming and Computer Software 38:2 (2012) 57-72 (E).
- 352 Power-exponential expansions of solutions to an ordinary differential equation // Doklady Akademii Nauk, 444:2 (2012) 137-142 (R) = Doklady Mathematics, 85:3 (2012) 336-340 (E).

- 353 Plane Power Geometry for an ODE and P\_1-P\_6// Painleve Equations and Related Topics (Eds. A.D. Bruno and A.B. Batkhin), De Gruyter, Berlin/Boston, 2012. P. 3-12.
- 354 Space Power Geometry for an ODE and P\_1-P\_4, P\_6// Painleve Equations and Related Topics (Eds. A.D. Bruno and A.B. Batkhin), De Gruyter, Berlin/Boston, 2012. P. 41-51.
- 355 Elliptic and periodic asymptotic forms of solutions to P\_5 (with A.V. Parusnikova)// Painleve Equations and Related Topics (Eds. A.D. Bruno and A.B. Batkhin), De Gruyter, Berlin/Boston, 2012. P. 53-65.
- 356 Regular asymptotic expansions of solutions to one ODE and P\_1-P\_5// Painleve Equations and Related Topics (Eds. A.D. Bruno and A.B. Batkhin), De Gruyter, Berlin/Boston, 2012. P. 67-82.
- 357 Preface (with A.B. Batkhin) // Ibid. P. v-vi
- 358 Comments // Ibid. P. 271-272.
- 359 Power-elliptic expansions of solutions to an ordinary differential equation// *Zurnal Vychislitel'noi Matematiki i Matematicheskoi Fiziki* 51:12 (2012) 2206-2218 (R)=*Computational Mathematics and Mathematical Physics* 52:12 (2012) 1650-1661 (E)
- 360 Calculation of normal forms of the Euler-Poisson equations (with V.F. Edneral) // *Computer Algebra in Scientific Computing* (V.P. Gerdt, W. Koepf, E.W. Mayr, E.V. Vorozhtsow Eds.), Springer: Heidelberg-New York, 2012, pp. 60-71.
- 361 Expansions and asymptotic forms of solutions to the fifth Painleve equation near infinity (with A.V. Parusnikova). Preprint of KIAM, No 61. Moscow, 2012. 32 p. (Russian)
- 362 Periodic solutions of the restricted three body problem for small  $\mu$  and the motion of small bodies of the Solar system (with V.P. Varin) // *Astronomical and Astrophysical Transactions (AApTr)*, 2012, vol. 27, Issue 3, pp. 479-488.
- 363 Asymptotic Solving Nonlinear Equations and Idempotent Mathematics. Preprint of KIAM, No 56. Moscow, 2013. 32 p. (E)
- 364 On possibility of additional solutions of the degenerate system near double degeneration at the special value of the parameter (with V.F. Edneral) // *Proceedings of the 15th International Workshop "Computer Algebra in Scientific Computing"*, LNCS 8136, 2013, SPRINGER-VERLAG HEIDELBERG, DORDRECHT LONDON NEW-YORK, pp. 78-87.
- 365 Power Geometry and elliptic expansions of solutions to the Painleve equations. Preprint of KIAM, No 88. Moscow, 2013. 28 p. (E)
- 366 Convergence of power expansions of solutions to an ODE (with I.V. Goryuchkina). Preprint of KIAM, No 94. Moscow, 2013. 16 p. (Russian)
- 367 On geometric methods in works by V. I. Arnold and V. V. Kozlov. Preprint of arXiv, No 1401.6320
- 368 On an integrable Hamiltonian system // *Doklady Akademii Nauk*, 457:6 (2014) 631-634 (R) = *Doklady Mathematics* 90:1 (2014) 499-502 (E).
- 369 On investigation of the certain real algebraic surface (with A.B. Batkhin). Preprint of KIAM, No 83. Moscow, 2014. 28 p. (R)

- 370 Power geometry and elliptic expansions of solutions to the Painleve equations // International Journal of Differential Equations, V.2015. Article ID 340715, 13p.  
<http://dx.doi.org/10.1155/2015/340715>
- 371 Investigation of a real algebraic surface (with A.B.Batkhin)// Programirovanie 41:2 (2015) 7-17 (R) = Programming and Computer Software 41:2 (2015) 74-82 (E).
- 372 Investigation of a real algebraic surface (with A.B.Batkhin)// Polynomial and Computer Algebra, April 13-18, 2015; The Euler International Mathematical Institute, p. 13-16.
- 373 Universal generalization of the continued fraction algorithm // Chebyshevskii Sbornik. 16:2 (2015) 35-65 (R).
- 374 Elements of Nonlinear Analysis // Mathematical Forum, Ser. "Itogi nauki. Yug Rossii". Yuzh. Math. Inst. Vladikavkaz Scien. Center. (2015), 13-33 (R).
- 375 Asymptotic Solution of Nonlinear Algebraic and Differential Equations // International Mathematical Forum, Vol. 10, 2015, no. 11, 535-564. <http://dx.doi.org/10.12988/imf.2015.5974>
- 376 From Diophantine approximations to Diophantine equations. Preprint of KIAM, No. 1. Moscow, 2016. 20 p. (R)  
 doi:10.20948/prepr-2016-1  
[http://keldysh.ru/papers/2016/prep2016\\_01.pdf](http://keldysh.ru/papers/2016/prep2016_01.pdf)
- 377 Asymptotic Solving Essentially Nonlinear Problems // Mathematics and Statistics, Vol. 4(1):27-39, 2016.  
 DOI: 10.13189/ms.2016.040104.  
<http://www.hrpub.org/download/20160229/MS4-13405331.pdf>
- 378 Computation of the best Diophantine approximations and the fundamental units of the algebraic fields // Doklady Akademii Nauk, 468:1 (2016) 7-11 (R)= Doklady Mathematics, 93:3 (2016) 243-247 (E).  
 DOI: 10.1134/S1064562416030017
- 379 Vladimir Igorevich Parusnikov (with A.I.Aptekarev and A.B.Batkhin)// Chebyshevskii Sbornik (Tula), 17:1 (2016) 286-298 (R).
- 380 On solution of an algebraic equation. Preprint of KIAM, No. 70, Moscow, 2016. 20 p. (R) doi:10.20948/prepr-2016-70  
[http://keldysh.ru/papers/2016/prep2016\\_70.pdf](http://keldysh.ru/papers/2016/prep2016_70.pdf)
- 381 From Diophantine approximations to Diophantine equations // Chebyshevskii Sbornik (Tula), 17:3 (2016) 38-52 (R).
- 382 Solving the polynomial equations by algorithms of power geometry. Preprint of KIAM, No.34, Moscow, 2017. 28 p.(R)  
 doi:10.20948/prepr-2017-34  
[http://keldysh.ru/papers/2016/prep2017\\_34.pdf](http://keldysh.ru/papers/2016/prep2017_34.pdf)
- 383 Calculation of fundamental units of number rings by means of the generalized continued fractions. Preprint of KIAM, No.46, Moscow, 2017. 28 p.(R) doi:10.20948/prepr-2017-46  
[http://keldysh.ru/papers/2016/prep2017\\_46.pdf](http://keldysh.ru/papers/2016/prep2017_46.pdf)
- 384 Calculation of complicated asymptotic expansions of solutions to the Painleve equations. Preprint of KIAM, No.55, Moscow, 2017. 27 p.(R) doi:10.20948/prepr-2017-55
- 385 On new integrals of the Algaba-Gamero-Garcia system (with V.F.Edneral

- and V.G. Romanovski) // Proceedings CASC 201, LNCS 10490, V.P.Gerdt et al (Eds.), Springer, 2017, pp.40-50. DOI: 10.1007/978-3-319-66320-3\_4
- 386 On study of degenerate system (with V.Edneral) // Computer Algebra Systems in Teaching and Research, 2017, v. VI, pp. 5-15.
- 387 Calculation of exotic expansions of solutions to the third Painleve equation. Preprint of KIAM No. 96, Moscow, 2017, 22 p.(R)  
doi:10.20948/prepr-2017-96  
[http://keldysh.ru/papers/2016/2017\\_96.pdf](http://keldysh.ru/papers/2016/2017_96.pdf)
- 388 On some geometric methods in differential equations // Transnational Journal of Mathematical Analysis and Applications, Vol. 4, Issue 1-2, 2016, Pages 37-47.
- 389 Calculation of complicated asymptotic expansions of solutions to the ODE // Computer Algebra, International Conference Materials (S.A.Abramov and T.M.Sadykov Eds.) Moscow, PRUE, 2017, pp.17-22. (R)
- 390 Complicated and exotic expansions of solutions to the fifth Painleve equation. Preprint of KIAM, N107, Moscow, 2017. 18 p. (R)  
Doi:10.20948/prepr-2017-107.  
URL: <http://library.keldysh.ru/preprint.asp?id=2017-107>
- 391 On Some Geometric Methods in Mathematics and Mechanics // Global Journal of Science Frontier Research (F), V. XVII, Is. VIII, 2017. P. 43-49.
- 392 Convex polyhedron in the asymptotic analysis // Mathematical Forum, Ser. "Itogi nauki. Yug Rossii". Yuzh. Math. Inst. Vladikavkaz Scien. Center. (2017), V. 11, 37-54 (R).
- 393 Power geometry and expansions of solutions to the Painleve equations // Keldysh Institute Preprints, N~21, Moscow, 2018. 15 p. (E)  
Doi:10.20948/prepr-2018-21.  
URL: <http://library.keldysh.ru/preprint.asp?id=2018-21>
- 394 On complicated expansions of solutions to ODEs // Zhurnal Vychislitelnoi Matematiki i Matematicheskoi Fiziki, 2018, V. 58, no. 3, pp. 346-364. (R)  
DOI: 10.7868/S0044466918030043 = Computational Mathematics and Mathematical Physics, 2018, V. 58, no. 3, pp. 328-347 (E)  
DOI: 10.1134/S0965542518030041
- 395 Asymptotic solution of some nonlinear problems // Keldysh Institute Preprints, N~35, Moscow, 2018. 24 p. (E)  
Doi:10.20948/prepr-2018-35.  
URL: <http://library.keldysh.ru/preprint.asp?id=2018-35>
- 396 Power geometry and expansions of solutions to the Painleve equations // Transnational Journal of Pure and Applied Mathematics, Vol. 1, Issue 1, 2018, Pages 43-61.
- 397 Expansion of ODE solutions into transseries // Keldysh Institute Preprints. 2018. No. 117. 19 p. (R) Doi:10.20948/prepr-2018-117  
URL: <http://library.keldysh.ru/preprint.asp?id=2018-117>
- 398 Complicated and exotic expansions of solutions to the Painleve equations // Keldysh Institute Preprints. 2018. No. 118. 44 p. (E)  
Doi:10.20948/prepr-2018-118-e  
URL: <http://library.keldysh.ru/preprint.asp?id=2018-118&lg=e>
- 399 Elements of nonlinear analysis // Formal and Analytic Solutions of Diff. Equations, G. Filipuk et al. (eds.), Springer Proceedings in Mathematics & Statistics 256, 2018, pp. 3-23.

- [https://doi.org/10.1007/978-3-319-99148-1\\_1](https://doi.org/10.1007/978-3-319-99148-1_1)
- 400 Complicated and exotic expansions of solutions to the Painleve equations // Formal and Analytic Solutions of Diff. Equations, G. Filipuk et al. (eds.), Springer Proceedings in Mathematics & Statistics 256, 2018, pp. 103-145  
[https://doi.org/10.1007/978-3-319-99148-1\\_7](https://doi.org/10.1007/978-3-319-99148-1_7)
- 401 Normal form of the periodic Hamiltonian system with n degrees of freedom // Keldysh Institute Preprints. 2018. No. 223. 15 p. (R)  
Doi:10.20948/prepr-2018-223  
URL: <http://library.keldysh.ru/preprint.asp?id=2018-223>
- 402 Algorithms for solving an algebraic equation // Programirovanie. 2019, no. 1, 59-72. DOI: 10.1134/S0132347419010084 (R) = Programming and Computer Software, 2018, Vol. 44, No. 6, pp. 533545. DOI: 10.1134/S0361768819100013 (E).
- 403 Expansion of Solutions to an Ordinary Differential Equation into Transseries // Doklady Akademii Nauk, 2019, Vol. 484, No. 3 (R) = Doklady Mathematics, 2019, Vol. 99, No. 1, pp. 3639. DOI: 10.1134/S1064562419010113 (E).
- 404 Computation of the fundamental units of number rings using a generalized continued fraction // Programirovanie. 2019, no. 2, 17-31. DOI: 10.1134/S0132347419020055 (R) = Programming and Computer Software, 2019, Vol. 45, No. 2, pp. 3750. Doi: 10.1134/S036176881902004X (E).
- 405 Normal form of a Hamiltonian system with a periodic perturbation // Keldysh Institute Preprints. 2019. No. 57. 27 p. (R) Doi:10.20948/prepr-2019-57  
URL: <http://library.keldysh.ru/preprint.asp?id=2019-57>
- 406 Normalization of the periodic Hamiltonian system // Keldysh Institute Preprints. 2019. No. 64. 18 p. (R)  
Doi:10.20948/prepr-2019-64  
URL: <http://library.keldysh.ru/preprint.asp?id=2019-64>
- 407 The newest methods of celestial mechanics // Keldysh Institute Preprints. 2019. No. 79. 18 p. (R)  
Doi:10.20948/prepr-2019-79  
URL: <http://library.keldysh.ru/preprint.asp?id=2019-79>
- 408 Orbital stability of the periodic solution of a Hamiltonian system // Keldysh Institute Preprints. 2019. No. 120. 15 p. (R)  
Doi:10.20948/prepr-2019-120
- 409 On the parametrization of an algebraic curve // Mat. zametki. 2019, Vol. 106, No. 6, pp. 837-847 (R) = Mathematical Notes, 2019, Vol. 106, No. 6, pp. 885-893 (E).
- 410 Power-exponential transseries as solutions to ODE // Journal of Mathematical Sciences: Advances and Applications 2019, Vol. 59, pp. 33-60  
DOI: [http://dx.doi.org/10.18642/jmsaa\\_7100122093](http://dx.doi.org/10.18642/jmsaa_7100122093)
- 411 Normal form of a Hamiltonian system with a periodic perturbation // Zhurnal Vychislitelnoi Matematiki i Matematicheskoi Fiziki, 2020, V. 60:1, 39-56. (R)  
DOI: 10.31857/S004446692001007X = Computational Mathematics

- and Mathematical Physics, 2020, V. 60:1, 36-52.  
DOI: 10.1134/S0965542520010066 (E)
- 412 Normalization of the periodic Hamiltonian system // Programirovanie, 2020, V. 46, N.2, 6-13. DOI: 10.31857/S0132347420020053 (R) = Programming and Computer Software, 2020, V. 46:2, 76-83.  
DOI: 10.1134/S0361768820020048 (E)
- 413 On types of stability in Hamiltonian systems // Keldysh Institute Preprints. 2020. No. 21. 24 p. (R)  
DOI:10.20948/prepr-2020-21
- 414 Five new methods of celestial mechanics // AIMS Mathematics, 2020, 5(5): 5309-5319. DOI: 10.3934/math.2020340
- 415 Families of periodic solutions and invariant tori of Hamiltonian system without parameters // Keldysh Institute Preprints. 2020. No. 71. 15 p. (R) DOI:10.20948/prepr-2020-71
- 416 Introduction to nonlinear analysis of algebraic equations (with A.B.Batkhin) // Keldysh Institute Preprints. 2020. No. 87. 31 p. (R) DOI:10.20948/prepr-2020-87
- 417 The newest methods of Celestial Mechanics // International Conference Polynomial Computer Algebra. St.Petersburg, VVM Publishing 2020, ISBN 978-5-96511-1234-0. p. 32-36, 2020 (E).
- 418 Families of periodic solutions and invariant tori of Hamiltonian system // Keldysh Institute Preprints. 2020. No. 111. 20 p. (E)  
DOI:10.20948/prepr-2020-111-a
- 419 Modern methods of celestial mechanics // Izvestiya Rossiiskoi Akademii Nauk, Mekhanika Tverdogo Tela, 2021, No. 1, pp. 106-118 (R) = Mechanics of Solids, 2021, Vol. 56, No. 1, pp. 84-94.  
DOI: 10.3103/S0025654421010052
- 420 Algorithms and computer algebra software for solving polynomial equation in one or two variables (with A.B.Batkhin) // International Conference Polynomial Computer Algebra. St.Petersburg, VVM Publishing 2021, ISBN 978-5-96511-1234-0. p. ??-??, 2021 (E).
- 421 Level lines of a polynomial in the plane (with A.B.Batkhin) // Computer algebra: 4th International Conference Materials. Moscow, June 2829, 2021/ Ed. S.A. Abramov, L.A. Sevastyanov. Moscow : MAKS Press, 2021, pp. 11-14.
- 422 Algorithms for solving a polynomial equation in one or two variables (with A.B.Batkhin) // Computer algebra: 4th International Conference Materials. Moscow, June 2829, 2021/ Ed. S.A. Abramov, L.A. Sevastyanov. Moscow : MAKS Press, 2021, pp. 30-33.
- 423 Algorithms and software for solving a polynomial equation in one or two variables (with A.B.Batkhin) // Programirovanie, 2021, V. 47, N. 2, 22-43. DOI: 10.31857/S0132347421050046 (R) = Programming and Computer Software, 2021, Vol. 47:5, 353-373  
10.1134/S0361768821050042 (E)
- 424 Normal form of a binary polynomial in the critical point of the second order (with A.B.Batkhin) // Keldysh Institute Preprints. 2021. No. 65. 20 p. DOI:10.20948/prepr-2021-65
- 425 On the generalized normal form of ODE systems // Qual. Theory Dyn. Syst. 21, 1 (2022). <https://doi.org/10.1007/s12346-021-00531-4>



426 Survey of eight modern methods of Hamiltonian mechanics  
(with A.B.Batkhin) // Axioms, 2021, 10, 293.  
<https://doi.org/10.3390/axioms10040293>