

The list of main publications of V.V.Chepyzhov

I. On Partial Differential Equations.

Monographs:

- M1. Non-autonomous Dynamical Systems and there Attractors. In: M.I.Vishik. Asymptotic Behavior of Solutions of Evolutionary Equations, Cambridge University Press, 1992, 155 p. (With M.I.Vishik)
- M2. Attractors for Equations of Mathematical Physics. AMS Colloquium Publications. American Mathematical Society, Providence, RI, 2002, 363 p. (With M.I. Vishik)

Articles:

1. The unbounded attractor of a quasilinear parabolic equation. (Russian). Vestnik Moskov. Univ. Ser. I, Mat. Mekh., Vol.87, 1986, N.6, pp.52–54.
2. Unbounded invariant sets and attractors of some quasilinear equations and of some systems of parabolic type. (Russian). Uspekhi Mat. Nauk, Vol.42, 1987, N.5(257), pp.219–220.
3. Unbounded attractors of some differential equations of parabolic type and estimates of their dimension. (Russian). Dokl. Akad. Nauk SSSR, Vol.301, 1988, N.1, pp.46–49; translation in Soviet Math. Dokl. Vol.38, 1989, N.1, pp.39–42.
4. Unbounded attractors of evolution equations. In: Properties of Global Attractors of Partial Differential Equations. In Series: Advances of Soviet Mathematics. New York, 1992, pp. 85–128. (With A.Yu.Goritsky)
5. Attractors of nonautonomous dynamical systems and an estimate for their dimension. (Russian). Mat. Zametki Vol.51, 1992, N.6, pp.141-143; translation in Mathematical Notes, Vol.51, 1992, N.5–6, pp.622-624. (With M.I.Vishik)
6. Non-autonomous evolution equations with almost periodic symbols. Rend. Sem. Mat. Fis. Milano Vol.62, 1992, pp.185–213. (With M.I.Vishik)
7. Dimension estimates for attractors and for kernel sections of nonautonomous evolution equations. C. R. Acad. Sci. Paris, Sér. I, Math. Vol.317, 1993, N.4, pp.365–370. (With M.I.Vishik)
8. Families of semiprocesses and their attractors. C. R. Acad. Sci. Paris, Sér. I, Math. Vol.316, 1993, N.5, pp.441–445. (With M.I.Vishik)
9. Attractors for nonautonomous evolution equations with almost periodic symbols. C. R. Acad. Sci. Paris, Sér. I, Math. Vol.316, 1993, N.4, pp.357–361. (With M.I.Vishik)
10. Non-autonomous evolution equations and there attractors. Russian Journal of Mathematical Physics, Vol.1, N2, 1993, pp.165–190. (With M.I.Vishik)
11. A Hausdorff dimension estimate for kernel sections of non-autonomous evolution equations. Indiana University Mathematical Journal, V.42, N 3, 1993, pp.1058–1076. (With M.I.Vishik)
12. Attractors of non-autonomous partial differential equations and their dimension. Equadiff 8 (Bratislava, 1993). Tatra Mt. Math. Publ. Vol.4, 1994, pp.221–234. (With M.I.Vishik)

13. Attractors of non-autonomous dynamical systems and their dimension. *Journal de Mathématiques Pures et Appliquées*, V.73, N3, 1994, pp.279–333. (With M.I.Vishik)
14. Periodic processes and non-autonomous evolution equations with time-periodic terms. *Topological Methods in Nonlinear Analysis*, *Journal of the Juliusz Schauder Center*, V.4, 1994, pp.1–17. (With M.I.Vishik)
15. Attractors of non-autonomous evolution equations with translation-compact symbols. *Operator Theory: Advances and Applications*, Vol.78, 1995, Birkhäuser Verlag Basel, Switzerland, pp.49–60. (With M.I.Vishik)
16. Non-autonomous evolutionary equations with translation-compact symbols and their attractors. *C. R. Acad. Sci. Paris*, Vol.321, Série I (1995), p.153–158. (With M.I.Vishik)
17. Trajectory attractors for evolution equations. *C. R. Acad.Sci. Paris*, Vol.321, Série I (1995), p.1309–1314. (With M.I.Vishik)
18. Attractors of periodic processes and estimates for their dimension. *Mathematical Notes*, Vol.57, 1995, N.1–2, pp.127–140. (With M.I.Vishik)
19. Trajectory attractors for 2D Navier-Stokes systems and some generalizations. *Topological Methods in Nonlinear Analysis*, *Journal of the Juliusz Schauder Center*. Vol.8, 1996, pp.217–243. (With M.I.Vishik)
20. Trajectory attractors of evolution equations without unique solvability of the Cauchy problem. (Russian). *Vestnik Moskov. Univ., Ser. I, Mat. Mekh.*, Vol.110, 1996, N.6, pp.27–30; translation in *Moscow Univ. Math. Bull.* Vol.51, 1996, N.6, pp.16–18. (With M.I.Vishik)
21. Trajectory Attractors for reaction-diffusion systems. *Topological Methods in Nonlinear Analysis*, *Journal of the Juliusz Schauder Center*. Vol.7, N1, 1996, pp.49–76. (With M.I.Vishik)
22. Evolution equations and their trajectory attractors. *Journal de Mathématiques Pures et Appliquées*, Vol.76, 1997, pp. 913–964. (With M.I.Vishik)
23. Global integral manifolds with exponential tracking for nonautonomous equations. *Russian Journal of Mathematical Physics*. Vol.5, N.1, 1997, pp.9–28. (With A.Yu.Goritsky)
24. Kolmogorov epsilon-entropy of attractors for reaction-diffusion systems. *Sbornik Mathematics*. Vol.189, N2, 1998, pp.235–263. (With M.I.Vishik)
25. Explicit construction of integral manifolds with exponential tracking. *Applicable Analysis*. Vol.7(1-4), 1999, pp.237–252. (With A.Yu.Goritsky)
26. Perturbation of trajectory attractors for dissipative hyperbolic equations. *Operator Theory: Advances and Applications*. Vol.110, 1999, pp.33–54. (With M.I.Vishik)
27. Kolmogorov epsilon-entropy of attractors of non-autonomous evolution equations. In the book: *International Conference on Differential Equations*. V.1. Edited by B.Fiedler, K.Groger, and J.Sprekels. World Scientific. 2000, pp.659–664.
28. Hausdorff dimension estimation for attractors of nonautonomous dynamical systems in unbounded domains: an example. *Comm. Pure Appl. Math.* Vol.53, 2000, N.5, pp.647–665. (With M.A.Efendiev)

29. Averaging of trajectory attractors of evolution equations with rapidly oscillating terms. (Russian) *Mat.Sbornik*. Vol.192, N1, 2001, pp.13–50; translation in *Sbornik Mathematics*. Vol.192, 2001, N. 1-2, pp.11–47. (With M.I.Vishik)
30. Averaging of trajectory attractors of evolution equations with rapidly oscillating coefficients. *Funct. Differ. Equ.* Vol.8, 2001, N.1–2, pp.123–140. (With M.I.Vishik)
31. Global attractor and its perturbations for a dissipative hyperbolic equation. *Russ. J. Math. Phys.* Vol.8, 2001, N.3, pp.251–266. (With M.I.Vishik)
32. A note on the fractal dimension of attractors of dissipative dynamical systems. *Nonlinear Anal.* Vol.44, 2001, N.6, Ser. A: Theory Methods, pp.811–819. (With A.A.Ilyin)
33. Non-autonomous 2D Navier-Stokes system with a simple global attractor and some averaging problems. A tribute to J. L. Lions. *ESAIM Control Optim. Calc. Var.* Vol.8, 2002, pp.467–487. (With M.I.Vishik)
34. Trajectory and global attractors of the three-dimensional Navier-Stokes system. (Russian) *Mat.Zametki* 71 (2002), N. 2, pp.194–213; translation in *Math. Notes* 71 (2002), N. 1–2, pp. 177–193. (With M.I.Vishik)
35. Kolmogorov epsilon-entropy in the problems on global attractors for evolution equations of mathematical physics. *Problems of Inf. Trans.*, Vol.39, 2003, N1, pp.4–23. (With M.I.Vishik)
36. Approximation of trajectories lying on the global attractor of a hyperbolic equation with rapidly oscillating in time external force. *Sbornik Mathematics*, Vol.194, 2003, N.9, pp.3–30. (With M.I.Vishik)
37. On the fractal dimension of invariant sets; applications to Navier-Stokes equations, *Discrete and Continuous Dynamical Systems*, Vol. 10, 2004, pp. 117–135. (With A.A.Ilyin)
38. On non-autonomous sine-Gordon type equations with a simple global attractor and some averaging. *Discrete and Continuous Dynamical Systems*, Vol. 12, 2005, N1, pp. 27–38. (With M.I.Vishik and W.L.Wendland)
39. Trajectory and global attractors of dissipative hyperbolic equations with memory. *Communications on Pure and Applied Analysis*, Vol. 4, 2005, N1, pp. 115–142. (With A.Miranville)
40. Trajectory attractor approximation of the 3D Navier–Stokes system by a Leray-alpha model. *Doklady Mathematics*, Vol. 71, 2005, N.1, pp.92–95. (With M.I.Vishik and E.S.Titi)
41. Integral manifolds and attractors with exponential rate for nonautonomous hyperbolic equations with dissipation, *Russ. J. Math. Phys.* Vol.12, 2005, N.1, pp.17–39. (With A.Yu.Goritsky and M.I.Vishik)
42. Dichotomy property for solutions of semilinear equations in the problems on inertial manifolds, *Sbornik Mathematics*, Vol.196, 2005, N.4, pp.485–511. (With A.Yu.Goritsky)
43. Trajectory attractor of non-autonomous Ginzburg–Landau equation, *Doklady Mathematics*, Vol. 71, 2005, N.3, pp. 353–356. (With M.I.Vishik)

44. Non-autonomous Ginzburg-Landau equation and its attractors, *Sbornik Mathematics*, Vol.196, 2005, N.6, pp.791-815. (With M.I.Vishik)
45. Global attractors for non-autonomous Ginzburg-Landau equation with singularly oscillating terms. *Rendiconti Accademia Nazionale delle Scienze detta dei XL, Memorie di Matematica e Applicazioni*, V.XXIX, 2005, fasc.1, pp.123-148. (With M.I.Vishik)
46. Integral manifolds for the sine-Gordon equation their averaging. "Multi Scale Problems and Asymptotic Analysis". *GAKUTO International Series, Math. Sci. Appl.*, Vol.24, 2005, pp.63-78. (With A.Yu.Goritsky)
47. Attractors of dissipative hyperbolic equations with singularly oscillating external forces. *Mathematical Notes*, Vol.79, 2006, N.3, pp.483-504. (With M.I.Vishik)
48. On trajectory and global attractors for semilinear heat equations with fading memory. *Indiana University Mathematics Journal*. Vol.55, 2006, N.1, pp.119-167.(With A.Miranville)
49. Some remarks on stability of semigroups arising from linear viscoelasticity. *Asymptotic Analysis*. V.46. 2006, P.251-273. (With V.Pata)
50. Trajectory and global attractors for evolution equations with memory. *Applied Mathematics Letters*. Vol.19, 2006, pp.87-96. (With S.Gatti, M.Grasselli, A.Miranville, V.Pata)
51. Stability of abstract linear semigroups arising from heat conduction with memory. *Asymptotic Analysis*. Vol.50, 2006, pp.269-291. (With E.Mainini, V.Pata)
52. On the convergence of solutions of the Leray-alpha model to the trajectory attractor of the 3D Navier-Stokes system. *Discrete and Continuous Dynamical Systems*. Vol.17, 2007, N.3, pp.481-500. (With M.I.Vishik and E.S.Titi)
53. The global attractor of the nonautonomous 2D Navier-Stokes system with singularly oscillating external force. *Doklady Mathematics*, Vol.75, 2007, N.2, pp. 236-239. (With M.I.Vishik)
54. Trajectory Attractor for the 2d Dissipative Euler Equations and Its Relation to the Navier-Stokes System with Vanishing Viscosity. *Doklady Mathematics*, Vol. 76, 2007, No. 3, pp. 856-860. (With M.I.Vishik)
55. Non-autonomous 2D Navier-Stokes system with singularly oscillating external force and its global attractor. *Journal of Dynamics and Differential Equations*. V.19. 2007. N.3. P.655-684. (With M.I.Vishik)
56. On convergence of trajectory attractors of the 3D Navier-Stokes- α model as α approaches 0. *Sbornik: Mathematics* V.198. 2007. N.12. P.1703-1736. (With M.I.Vishik and E.S.Titi)
57. Trajectory attractors for dissipative 2d Euler and Navier-Stokes equations. *Russian Journal of Mathematical Physics*. V.15. 2008. N.2. P.156-170. (With M.I.Vishik)
58. Attractors for nonautonomous Navier-Stokes system and other partial differential equations. In the book: *Instability in Models Connected with Fluid Flows, I*. (C.Bardos, A.Fursikov eds.), *International Mathematical Series*, V.6, Springer. 2008, P.135-265. (With M.I.Vishik)

59. Time Averaging of Global Attractors for Nonautonomous Wave Equations with Singularly Oscillating External Forces. *Doklady Mathematics*, 2008, Vol. 78, No. 2, pp. 689-692. (With M.I.Vishik and V.Pata)
60. Averaging of nonautonomous damped wave equations with singularly oscillating external forces. *Journal de Mathematiques Pures et Appliquees*. V.90. 2008. P.469-491. (With M.I.Vishik and V.Pata)
61. Trajectory attractor for reaction-diffusion system containing a small diffusion coefficient. *Doklady Mathematics*, Vol. 79, 2009, No. 2. P.443-446. (With M.I.Vishik)
62. Trajectory attractors of reaction-diffusion systems with small diffusion. *Sbornik: Mathematics*. V.200. 2009. N.4. P.471-497. (With M.I.Vishik)
63. Trajectory attractor for reaction-diffusion system with a series of zero diffusion coefficients. *Russian Journal of Mathematical Physics*. V.16. 2009. N.2 P.208-227. (With M.I.Vishik)
64. Averaging of 2D Navier-Stokes equations with singularly oscillating forces. *Nonlinearity*. V.22. 2009. No. 2. P.351-370. (With M.I.Vishik and V.Pata)
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66. Trajectory attractor for reaction-diffusion system with diffusion coefficient vanishing in time. *Discrete and Continuous Dynamical Systems A*, Vol.27, 2010, N.4, pp.1493-1509. (With M.I.Vishik)

II. On Information Theory

1. Study of decoding tail biting convolutional codes. Fourth Joint Swedish-Soviet International Workshop on informational Theory, August 27 – September 1, 1989, Gotland, Sweden, pp. 52–55. (With K.Sh. Zigangirov)
2. New lower bounds for minimal distance of quasi-cyclic and almost linear cyclic codes rate $1/n$. Fifth Joint Swedish-Soviet International Workshop on Informational Theory. Convolutional Codes; Multi-Users Communication. January 13–19, 1991, Moscow, USSR, pp. 42–45.
3. On the existence fixed convolutional codes rate $2/c$, $c \geq 3$ achieved the Costello bound. (with K.Sh Zigangirov). *Problems of Inf. Trans.*, vol. 27, N3, 1991, pp. 16–29.
4. New lower bounds for minimal distance of quasi-cyclic and almost linear cyclic codes. *Problems of Inf. Trans.*, vol. 28, 1992, N1, pp. 39–51.
5. The free distance of fixed convolutional rate $2/4$ codes meets the Costello bound. *Trans. IEEE on Inf.Theory*, V.IT-38, No4, 1992, pp.1360–1366. (With B.Smeets and K.Sh.Zigangirov)
6. On a fast correlation attack on certain stream ciphers. *Advances in Cryptology, EURO-CRYPT'91, Lectures Notes in Computer Sciences*, V.547, Springer-Verlag, 1991, pp.176–195. (With B.Smeets)

7. Performance of q -ary convolutional codes on jamming channels. Sixth Joint Swedish-Russian International Workshop on Information Theory, Proceedings, August 22–27, 1993, Molle, Sweden, pp.38–41. (With K.Sh.Zigangirov and S.A.Popov)
8. A Gilbert–Varshamov bound for quasi-twisted codes of rate $1/n$. Sixth Joint Swedish-Russian International Workshop on Information Theory, Proceedings, August 22–27, 1993, Molle, Sweden, pp.214–218.
9. Nonbinary convolutional coding in channels with jamming. (with K.Sh.Zigangirov and S.A.Popov). Problems of Inf. Trans., Vol.31, No2, 1995, pp.169–183.
10. Implementation and some applications of the algebraic-sequential decoder. Seventh Joint Swedish-Russian International Workshop on Information Theory, Proceedings, June 17–22, 1995, St.-Petersburg, pp.60–66. (With D.K.Zigangirov and S.A.Popov)
11. Performance of sequential decoding in the systems with CDMA. Problems of Inf. Trans., Vol.34,N 1, 1998, pp.30–45. (With. S.A.Popov and D.K.Zigangirov).
12. A simple algorithm for fast correlation attacks on stream ciphers. Fast software encryption. 7th international workshop, FSE 2000, New York, NY, USA, April 10–12, 2000. Proceedings. Berlin: Springer. Lect. Notes Comput. Sci. 1978, 181–195 (2001). (With T.Johansson and B.Smeets)