

# List of Publications of Valéry Christov Covachev

(last updating 6 January, 2015)

1. V. Chr. Covachev, *Construction of a parametrix for a hyperbolic system with characteristics of variable multiplicity*, Comptes rendus de l'Académie bulgare des Sciences, Tome **33** (1980), No. 10, 1313-1315. MR 82m:35148 IF=0.198
2. Valery H. Covačev, *Microlocal parametrix for the Cauchy problem for hyperbolic symmetric systems with symplectic multiple characteristics I*, Serdica Bulgariae mathematicae publicationes, Vol. **8** (1982), No. 1, 64-81. MR 84k:35090
3. Valery H. Kovačev, *Microlocal parametrix for the Cauchy problem for hyperbolic symmetric systems with symplectic multiple characteristics II*, Serdica Bulgariae mathematicae publicationes, Vol. **8** (1982), No. 2, 204-213. MR 85d:35073
4. Kovachev V. Kh., *Bilinear transformations of some differential equations with rational right-hand side*, Vestn. Belarus State Univ., Ser. 1, Phys., Math. and Mech. (1983), No. 2, 45-47 (in Russian). MR 84k:34018
5. Kovachev V. Kh., *On the birational transformations of differential equations with polynomial right-hand side*, in: Proc. 6<sup>th</sup> Conf. of Bulg. Postgrad. Students in USSR (1983), 603-607 (in Russian).
6. Kovachev V. Kh., *Reduction of certain differential equations with rational right-hand side to "triangular" form by means of a bilinear transformation*, Vestn. Belarus. State Univ., Ser. 1, Phys., Math. and Mech. (1984), No. 2, 61-62 (in Russian). MR 86c:34070
7. Kovachev V. Kh., *On the triangulation of differential systems by means of a fractional-linear transformation*, Ed. of J. "Izv. Vuzov. Math.", Kazan', 1984, 48 p. The manuscript was deposited at VINITI (in Russian).
8. Kovachev V. Kh., *Some bilinear invariants of two-dimensional autonomous systems of ordinary differential equations with rational right-hand side*, Differential Equations, Vol. **21** (1985), No. 2, 331-334, 366 (in Russian). MR 86e:34074 IF=0.416
9. Kovachev V. Kh., *Invariants of bilinear transformations of differential systems*, in: Differential Equations and Applications. Proceedings of the Third Conference, Roussé'85 (1987), 191-194 (in Russian). (MR 88j:00018 for the collection)
10. Valery Kovachev, *Smoothness of the billiard ball map for strictly convex domains near the boundary*, Proceedings of the American Mathematical Society, Vol. **103** (1988), No. 3, 856-860. MR 89m:58121 **cited 2 times** IF=0.627
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12. V. S. Georgiev, V. Ch. Kovachev, *A weighted estimate of the solution to the wave equation*, Comptes rendus de l'Académie bulgare des Sciences, Tome **42** (1989), No. 11, 17-20. MR 91i:35115 IF=0.198
13. V. Chr. Kovachev, G. St. Popov, *Invariant curves for the billiard ball map in the hyperbolic case*, in: Applications of Mathematics in Engineering. Proceedings of the XV National Summer School. Varna'89 (1989), 211-214.
14. Valery Kovachev and Georgi Popov, *Invariant tori for the billiard ball map*, Transactions of the American Mathematical Society, Vol. **317** (1990), No. 1, 45-81. MR 90e:58050 **cited 7 times** IF=1.095
15. V. Chr. Covachev, *Billiard flow and the billiard ball map*, in: First Colloquium on Differential Equations, Plovdiv, 1990, 7-10.

16. Kovachev Valeriy Khristov, Popov Georgiy Stefanov, *Invariant sets of the billiard ball map and applications*, in: Republican Scientific Readings on Ordinary Differential Equations, Minsk, 1990, 62-63 (in Russian).
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18. V. Chr. Covachev and V. S. Georgiev, *Weighted decay estimate for the wave equation*, Proceedings of the American Mathematical Society, Vol. **112** (1991), No. 2, 393-402. MR 91k:35143 **cited 1 time** IF=0.627
19. V. Chr. Covachev, V. S. Georgiev, *A counterpart of the Poincaré group for pseudodifferential operators*, Comptes rendus de l'Académie bulgare des Sciences, Tome **44** (1991), No. 2, 17-20. MR 92j:58107 IF=0.198
20. D. Bainov, V. Covachev, I. Stamova, *Estimates of the solutions of impulsive quasilinear functional differential equations*, Annales Faculté des Sciences de Toulouse, Vol. **XII**, No. 2 (1991), 149-161. MR 93j:34092 **cited 7 times**
21. Valery Covachev, *Global existence of small amplitude solutions of nonlinear hyperbolic equations via weighted estimates of Sobolev norms associated with a Lie group*, in: Differential Equations. The Second Colloquium. Plovdiv, Bulgaria, 19-24 August 1991. World Scientific, Singapore - New Jersey - London - Hong Kong - Bangalore, 1992, 71-84. MR 93h:35123 (93g:34002 for the collection)
22. V. Covachev and V. Georgiev, *A time-dependent Sobolev inequality related to a first-order pseudodifferential operator*, in: Applications of Mathematics in Engineering. Proceedings of the XVII National Summer School. Varna'91 (1992), 99-102.
23. Valéry Covachev, *Numerical-analytical method for finding periodic solutions of nonlinear impulsive singularly perturbed differential equations*, in: Proceedings of the First International Colloquium on Numerical Analysis. Plovdiv, Bulgaria, 13-17 August 1992. VSP. Utrecht, The Netherlands, 1993, 39-50. (MR 97m:65010 for the collection)
24. Valéry Covachev, *Initial value problem for a singularly perturbed nonlinear impulsive system in the critical case*, in: Proceedings of the Third International Colloquium on Differential Equations. Plovdiv, Bulgaria, 18-22 August 1992. VSP. Utrecht, The Netherlands, 1993, 31-44. (MR 98a:00007 for the collection)
25. V. Covachev, *Dirichlet problem for a second order quasilinear singularly perturbed impulsive differential equation*, in: Selected Invited Lectures and Short Communications Delivered at the First International Colloquium on Numerical Analysis and the Third International Colloquium on Differential Equations (Plovdiv, 1992), 31-37.
26. V. Covachev, *Almost periodic solutions of singularly perturbed linear systems of impulsive differential equations*, in: Applications of Mathematics in Engineering. Proceedings of the XVIII National Summer School. Varna'92 (1993), 94-97.
27. Valéry Covachev, *Periodic problem for singularly perturbed nonlinear impulsive systems and application to a model of metabolic system*, in: Mathematical Population Dynamics **3** (Pau, France, 1992).
28. D. Bainov and V. Covachev, *Impulsive Differential Equations with a Small Parameter*, Series on Advances in Mathematics for Applied Sciences - Vol. **24**, World Scientific Publishers, Singapore, New Jersey, London, Hong Kong, 1994, 268 p. MR 97i:34001 **cited 75 times**
29. D. D. Bainov, V. Chr. Covachev, I. M. Stamova, *Stability under persistent disturbances of impulsive differential-difference equations of*

- neutral type, *Journal of Mathematical Analysis and Applications*, Vol. **187** (1994), No. 3, 790-808. MR 95j:34108 **cited 21 times** IF=1.119
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