

KOTLYAROV VOLODYMYR

LIST OF PUBLICATIONS (85)

1. Propagation of electric field generated by periodic pumping in a stable medium of two-level atoms of the Maxwell-Bloch model // *Journal of Mathematical Physics* **61** (2020), 12350*, 40 pp. (with Filipkovska M.S.)
2. Dispersive shock wave, generalized Laguerre polynomials, and asymptotic solitons of the focusing nonlinear Schroedinger equation // *Journal of Mathematical Physics* **60** (2019), 123501 (with Minakov A.A.)
3. A matrix Baker-Akhiezer function associated with the Maxwell-Bloch equations and their finite-gap solutions // *SIGMA* **14** (2018), 082, 27 pages.
4. A Baker-Akhiezer function and finite-gap solutions of the Maxwell-Bloch equations// VI International Conference “ANALYSIS AND MATHEMATICAL PHYSICS”: Book of abstracts, Kharkiv: B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, 2018
5. Maxwell-Bloch Equations without Spectral Broadening: Gauge Equivalence, Transformation Operators and Matrix Riemann-Hilbert Problems // *Journal of Mathematical Physics, Analysis, Geometry* 2017, vol. 13, No. 2, pp. 119-153 (with M.S. Filipkovska and E.A.Melamedova (Moskovchenko))
6. A Matrix Baker-Akhiezer function associated with the Maxwell-Bloch equations// V International Conference “ANALYSIS AND MATHEMATICAL PHYSICS”: Book of abstracts, Kharkiv: B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, 2017
7. Planar unimodular Baker-Akhiezer function for the nonlinear Schroedinger equation// *Annals of Mathematical Sciences and Applications*// Volume 2, Number 2, 343–384, 2017 (with D. Shepelsky)
8. Reconstruction of the Hermitian matrix by its spectrum and spectra of some number of its perturbations // *Doklady Mathematics* 94 (2), 2016, 529-531 (with VA Marchenko and VV Slavin)
9. Planar unimodular Baker-Akhiezer function// IV International Conference “ANALYSIS AND MATHEMATICAL PHYSICS”: Book of abstracts, Kharkiv: B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, 2016 (with D.G.Shepelsky)
10. Modulated elliptic wave and asymptotic solitons in a shock problem to the modified Korteweg-de Vries equation // *J. Phys. A: Math. Theor.* **48** (2015) 305201 (with O.Minakov.)
11. Reconstruction of the Hermitian matrix by its spectrum and spectra of some number of its perturbations// II International Conference “ANALYSIS AND MATHEMATICAL PHYSICS”: Book of abstracts, Kharkiv: B.Verkin Institute for Low Temperature Physics

and Engineering of the National Academy of Sciences of Ukraine, 2014 (with V.A.Marchenko and V.V.Slavin)

12. A model Riemann–Hilbert problem for unimodular Baker– Akhiezer function// II International Conference “ANALYSIS AND MATHEMATICAL PHYSICS”: Book of abstracts, Kharkiv: B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, 2014
13. Matrix Riemann-Hilbert problems and Maxwell-Bloch equations without spectral broadening// Journal of Mathematical Physics, Analysis, Geometry 2014, vol. 10, No. 3, pp. 328-349 (Співавтор – Е.А.Moskovchenko)
14. Matrix Riemann-Hilbert problems in the theory of nonlinear integrable equations// International Conference “ANALYSIS AND MATHEMATICAL PHYSICS”: Book of abstracts, Kharkiv: B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, 2013
15. Complete linearization of a mixed problem to the Maxwell-Bloch equations by matrix Riemann-Hilbert problem// J. Phys. A: Math. Theor. 46 (2013) 285206 (24pp)
16. Long-Time Asymptotics for the Korteweg-de Vries Equation with Steplike Initial Data//Nonlinearity **26**, (2013), 1839—1864 (coauthors: Iryna Egorova, Zoya Gladka, Gerald Teschl)
17. A mixed problem to the Maxwell-Bloch equations and the matrix Riemann-Hilbert problem// International Conference in honor of Vladimir A. Marchenko's 90th birthday. Book of abstracts, Kharkiv: B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine 2012
18. Введение к статье «К 90-летию со дня рождения академика Владимира Александровича Марченко» // Вісник Національного Технічного Університету «ХПІ», 27, 2012, с.3-4.
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20. Владимир Александрович Марченко / НАН Украины. — К.:М25 Академперіодика, 2012. — 56 с., 7 с. ил. — (Биобиблиограф. ученых Украины) ISBN 978-966-360-199-1 (Отв.редактор В.П.Котляров)
21. Riemann–Hilbert problems and the mKdV equation with step initial data: short-time behavior of solutions and the nonlinear Gibbs-type phenomenon// J. Phys. A: Math. Theor. 45 (2012) 325201 (17pp) (with A. Minakov)
22. Step-Initial Function to the MKdV Equation: Hyper-Elliptic Long-Time Asymptotics of the Solution// Journal of Mathematical Physics, Analysis, Geometry 2012, vol. 8, No. 1, pp. 38–62 (with A. Minakov)
23. Focusing NLS equation: Long-time Dynamics of the Step-like Initial Data// International Mathematics Research Notices, Vol. 2011 (2011), no.7, 1613–1653. (with A. Boutet de Monvel, and D. Shepelsky)
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25. Initial boundary value problems for integrable systems: towards the long time asymptotics, "Nonlinearity", 2010, Том 23, Выпуск 8, Страницы 2483-2499 (with A. Boutet de Monvel, D. Shepelsky and C. Zheng)
26. Periodic Boundary Data for Integrable Model of the Stimulated Raman Scattering: Long-time Asymptotic Behavior // Journal of Physics A: Mathematical and Theoretical **43** (2010) 5, 055205 (with Moskovchenko E.A.)
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29. Long-time asymptotics for the focusing NLS equation with time-periodic boundary condition on the half-line // CMP 290/2 (2009), 479 -522 (with A. Boutet de Monvel and A.R. Its)
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37. Generation of Asymptotic Solitons of the Nonlinear Schrodinger Equation by Boundary Data. Integrability, topological solitons and beyond // J. Math. Phys. 44 (2003), no. 8, 3185--3215. (with A. Boutet de Monvel)
38. Soliton asymptotics of rear part of non-localized solutions of the Kadomtsev-Petviashvili equation // J. Nonlinear Math. Phys. 2002 v.9, No. 1 pp.58-76 (with A. Boutet de Monvel and E. Ya. Khruslov)

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