

LIST
of selected articles of prof. Yu.A. Chirkunov in 2009 – 2014 years

2009

1. **Chirkunov Yu. A.** Linear Autonomy Conditions for the Basic Lie Algebra of a System of Linear Differential Equations. **Doklady Mathematics**. 2009. Vol. 79. No. 3. P. 415–417.
2. **Chirkunov Yu. A.** Systems of Linear Differential Equations Symmetric with Respect to Transformations Nonlinear in a Function. **Siberian Mathematical Journal**. 2009. Vol. 50. No. 3. P. 541-546.
3. **Chirkunov Yu. A.** The Conservation Laws and Group Properties of the Equations of Gas Dynamics with Zero Velocity of Sound. **Journal of Applied Mathematics and Mechanics**. 2009. Vol. 73. No. 4. P. 421 – 425.
4. **Chirkunov Yu. A.** Method of A-operators and Conservation Laws for the Equations of Gas Dynamics. **Journal of Applied Mechanics and Technical Physics**. 2009. Vol. 50. No. 2. P. 213 -219.
5. **Chirkunov Yu. A.** On Group Properties and Conservation Laws for Second-Order Quasi-Linear Differential Equations. **Journal of Applied Mechanics and Technical Physics**. 2009. Vol. 50. No. 3. P. 413-418.
6. **Chirkunov Yu. A.** Group Foliation of the Lamé Equations of the Classical Dynamical Theory of Elasticity. **Mechanics of Solids**. 2009. Vol. 44. No. 3. P. 372-379.

2010

7. **Chirkunov Yu. A.** Conservation Laws and Group Properties of Equations of isentropic Gas Motion. **Journal of Applied Mechanics and Technical Physics**. 2010. Vol. 51. No. 1. P. 1-3.
8. **Chirkunov Yu. A.** On the Symmetry Classification and Conservation Laws for Quasilinear Differential Equations of Second Order. **Mathematical Notes**. 2010. Vol. 87. No.1. P. 122 -129.
9. **Chirkunov Yu. A.** Steady-State Oscillations in Continuously Inhomogeneous Medium Described by a Generalized Darboux Equation. **Journal of Applied and Industrial Mathematics**. 2010. Vol. 4. No. 4. P. 19-28.
10. **Chirkunov Yu. A.** Friedrichs Systems for Systems of Wave Equations and Shear Waves in a Three-dimensional Elastic Medium. **Journal of Applied Mechanics and Technical Physics**. 2010. Vol. 51. No. 6. P. 877-886.
11. **Chirkunov Yu. A.** On the Nonlinear Operators with Jacoby Matrix Commuting with a Ring of the Constant Matrixes. **Vestnik of Novosibirsk State University, Series Math., Mech. and Inform.** 2010. V.10, No. 1. P. 108-118. In Russian.

2011

12. **Chirkunov Yu. A.** A Criterion for the Existence of a Nonlinear Mapping whose Jacobian Matrix Commutes with a Matrix Ring. **Siberian Advances in Mathematics**. 2011. Vol. 21. No. 4. P. 250–258.
13. **Chirkunov Yu. A.** New Conservation Laws for the Equations of Gas Dynamics. International Conference "Modern Problems of Applied Mathematics and Mechanics: Theory, Experiment and Applications", devoted to the 90th anniversary of professor Nikolai N. Yanenko. Novosibirsk. **No Gos. Registr 0321101160**. <http://conf.nsc.ru/niknik-90/reportview/37486>. P. 1-6. In Russian.
14. **Chirkunov Yu. A.** Steady-State Oscillations in Continuously Inhomogeneous Medium Described by the Ovsyannikov Equation. **Journal of Applied and Industrial Mathematics**. 2011. Vol. 5. No. 3. P. 1-10.
15. **Chirkunov Yu. A.** Conformal Invariance in the Theory of elasticity **Vestnik of Nijnyi Novgorod State University. Mechanics of Solids**. 2011. No. 4 (4). P. 1853-1854. In Russian.
16. **Chirkunov Yu. A.** The Symmetries of Invariant 3 Rank Submodels of Gas Dynamics Equations. **Doklady Academyi Nauk Visshei Shcoly**. 2011. No 1 (16). P. 54-63. In Russian.

2012

17. **Chirkunov Yu.A.** Nonlocal Conservation Laws for the Equations of Stationary Irrotational Isentropic Plane Movement of Gas. **Journal of Applied Mathematics and Mechanics**. 2012. Vol. 76. No. 2. P. 199–204.
18. **Chirkunov Yu.A.** Generalized Equivalence Transformations and Group Classification of Systems of Differential Equations. **Journal of Applied Mechanics and Technical Physics**. 2012. Vol. 53. No. 2. P. 147–155.
19. **Chirkunov Yu.A.** Systems of Linear Differential Equations with Non-x-Autonomous Basic Lie Algebra. **Journal of Applied and Industrial Mathematics**. 2012, Vol. 6. No. 1. P. 31–41.
20. **Chirkunov Yu.A.** Friedrichs Systems Equivalent to the Systems of Wave Equations. **Journal of Applied and Industrial Mathematics**. 2012, Vol. 6. No. 2. P. 150–159.
21. **Chirkunov Yu.A.** Nonlinear Mappings whose Jacobi Matrix Commutes with Constant Matrices of a Ring. **Journal of Mathematical Sciences**. 2012. Vol. 186, No. 3. P. 379–386.
22. Belmetsev N.F., **Chirkunov Yu.A.** Group Properties of Two Dimensional Asymmetrical Pseudoelasticity. **Doklady Akademii Nauk Vyshego Shkoly**. 2012. № 2 (19). P. 16–26. In Russian.
23. B.D. Annin, **Yu.A. Chirkunov**, N.F. Belmetzev. Group Foliation of the Equations of Transverse Isotropic Elasticity. **Vestnik of Siberian State Aerocosmic University, Series Math., Mech. and Inform.** 2012. № 3 (43). P. 4–6. In Russian.

2013

24. Romanov V.G., **Chirkunov Yu. A.** Nonscattering Acoustic Objects in an Anisotropic Medium of Special Kind. **Doklady Mathematics**. 2013. Vol. 87. No. 1. P. 73–75.
25. Belmetsev N.F., **Chirkunov Yu.A.** Exact Solutions to the Equations of a Dynamic Asymmetric Elasticity Model. **Journal of Applied and Industrial Mathematics**. 2013, Vol. 7. No. 1. P. 1–15.
26. **Chirkunov Yu.A.** and Medvedev S.B. Conservation laws for plane steady potential barotropic flow. **European Journal of Applied Mathematics**. 2013. vol. 24, issue 06, pp. 789- 801. **Cambridge University Press** 2013. Doi:10.1017/S095679251300017X

2014

27. **Chirkunov Yu.A., Pikhullina E. O.** Symmetry Properties and Solutions of Shallow Water Equations. **Universal Journal of Applied Mathematics. HRPUB (USA)**. 2014. Vol. 2, No 1, pp. 10 – 23. DOI: 10.13189/ujam.2014.020103.
28. **V.N. Grebenev, S.V. Nazarenko, S.B. Medvedev, I.V. Schwab and Yu.A. Chirkunov.** Self-similar solution in Leith model of turbulence: anomalous power law and asymptotic analysis. **Journal of Physics A: Mathematical and Theoretical**. 2014. Vol. 47, No 2. 025501–518. Doi: 10.1088/1751-8113/47/2/025501.

MONOGRAF

29. **Chirkunov Yu. A., Khabirov S. V.** The Elements of Symmetry Analysis of Differential Equations of Continuous Medium Mechanics. Novosibirsk. NSTU. 2012. 659 p. In Russian.