0.1 Selected publications of Nikolai Maltsev

1. Determination of acoustics inhomogeneity of a medium by means of sound signals, (A. Voronovich), Soviet Physics-Acoustics, 1979, Nov-Dec, 25(6) 485-489

2. Calculation of sound fields in the ocean by the parabolic equation method (K. Avilov), Soviet Physics-Acoustics, 1981, May-June, 27(3) 185-18

3. Excitation of groups of modes in a layered ocean (V.N. Kulakov, S. D. Chuprov), Soviet Physics-Acoustics, 1982, Jan-Feb, 29(1) 41-44

4. Mode structure of a point source in a stratified ocean (V. N. Kulakov), Soviet Physics-Acoustics, 1983, July-August, 29(4) 299-300

5. Ray equations in barycentric coordinates, Soviet Physics-Acoustics, 1983, Sept-Oct, 29(5), 390-392

6. Calculation of the wave fronts created by a point source in a three dimensionally inhomogeneous ocean (A.N. Nekrasov), Soviet Physics-Acoustics, 1987, May-June, 33(3), 301-304

7. Acoustical and oceanographic experiment at the lens of Mediterranean waters in the Atlantic Ocean (K. D. Sabinin, A. V. Furduev) Soviet Physics-Acoustics, 1990, Jan-Feb, 36(1), 46-50

8. Modification of the WKB method (A. S. Aralkin), Soviet Physics-Acoustics, 1989, July-Aug, 35(4) 335-338

9. Fourier analysis of very long acoustic signals in the investigation of reverberation from the boundaries of ocean basin (A. N. Bogdanov, E. A. Rivelis), Soviet Physics-Acoustics, 1991, July-Aug, 37(4)

10. New family of asymptotic solutions of Helmholtz equation, Journal of Mathematical Physics, NY, 1994, 35, p.1387.

11. Application of Radon transform for fish monitoring in fishery farms pen, Proceedings of CIEEE, St. Johns, 1997

12. Enhanced ray theory, J. Comp. Acoustics, V9, No.1, (2001), 169-182

13. United States Patent 6,791,430

14. New family of asymptotic solutions of Helmholtz equation J. Math. Phys. *35*, 1387 (1994); http://dx.doi.org/10.1063/1.530596

15. Analog of the Fresnel reflection and refraction coefficients for smoothed boundary between two liquid medias ¡http://scitation.aip.org/content/asa/journal/jasa/109/5/

16. Asymptotic expansions for normal modes in transparent wedge J. Acoust. Soc. Am. *120*, 3183 (2006); http://dx.doi.org/10.1121/1.4787989

17. Reflection and refraction of sound on on smoothed boundaries J. Acoust. Soc. Am. *130*, 2348 (2011); http://dx.doi.org/10.1121/1.3654399

18. Exact parabolic equation for the sound field in inhomogeneous ocean J. Acoust. Soc. Am. *132*, 1972 (2012); http://dx.doi.org/10.1121/1.4755274

19. Computation of the field of coupled modes using split-step algorithm J. Acoust. Soc. Am. *134*, 4209 (2013); http://dx.doi.org/10.1121/1.4831452

20. Reflection and refraction of sound on smoothed boundaries. POMA *14*, 070007 (2012); http://dx.doi.org/10.1121/1.4726049

21. Computation of the field of coupled modes using split-step algorithm POMA *20*, 070002 (2015); http://dx.doi.org/10.1121/1.4864364

22. Maltsev, N.E. Numerical Implementation of Huygens Principle for Scattering from a Smooth Ideal Surface. Acoust. Phys. 65, 467–470 (2019). https://doi.org/10.1134/S1063771019050154

23. Maltsev N.E. Reflection and refraction of sound waves at a smooth boundary of two liquids, Proc. Mtgs. Acoust. 39, 022003 (2019); https://doi.org/10.1121/2.0001292

24. Maltsev N.E. Ray method for comlete system of acoustic equations with simple caustic corrections. https://doi.org/10.1121/2.0001556

25. Maltsev N.E., N-D Graphics,https://www.barnesandnoble.com/w/n-d-graphics-nikolai-maltsev/1142915927?ean=9798823173414