

Recent publications from VNIIFTRI in the area of acoustics, underwater acoustics
and ultrasound

Underwater Acoustics

- Title** An international key comparison of free-field hydrophone calibrations in the frequency range 1 to 500 kHz
Printed in *JASA, 2006, Vol. 120, No. 3, pp. 1366-1373*
Authors S. P. Robinson, A.M. Enyakov, A.E. Isaev, et al.
- Title** Results of VNIIFTRI participation in the first international key comparisons of standards in the field of underwater acoustic measurements
Printed in *Measurement techniques, 2006, No. 3, pp. 65-70.*
Authors A. E. Isaev., S.V. Silvestrov
- Title** Effective frequency band at free-field measurements in laboratory water tank
Printed in *Measurement techniques, 2006, No. 11, pp. 46-51*
Authors A.E. Isaev
- Title** Hydroacoustic module directivity characteristics and effective size at sound pressure RMS value measurements in frequency bands
Printed in *Proceedings of "The 6th All-Russian Scientific and Engineering Conference "Metrological Provision in the Field of Defense and Safety in the Russian Federation". Mytishchi city. Metrologists and Instrument Makers Union, 2006, pp. 97-99 (in Russian)*
Authors A.E. Isaev
- Title** A method to estimate an effective area of the underwater acoustic measuring module under calibration in 1/n-octave frequency band
Printed in *Proc. of 2nd Intern. Conf. and Exhib. «Underwater Acoustic Measurements: Technologies & Results»/Heraklion, F.O.R.S., 2007, pp. 437-444*
Authors A.E. Isaev
- Title** Optimization of underwater constructions used during free-field hydrophone calibration
Printed in *Measurement techniques, 2007, No. 1, pp. 66-64*
Authors A.E. Isaev
- Title** Method of hydroacoustic measuring module effective size estimation during calibration in 1/n-octave frequency bands
Printed in *Legislative and applied metrology, 2007, No. 3, pp. 85-89.*
Authors A.E. Isaev
- Title** Acoustic holography methods use during hydroacoustic measuring module investigation in laboratory water tank
Printed in *Legislative and applied metrology, 2007, No. 5, pp. 53-57.*
Authors A.E. Isaev
- Title** Hydroacoustic measuring module calibration in water tank
Printed in *Legislative and applied metrology, 2007, No. 6, pp. 46-52*
Authors A. E. Isaev., A.M. Polykarpov
- Title** Improvement of free-field reproduction and transmission methods for sound pressure unit in water
Printed in *Measurement techniques, 2007, No. 8, pp. 59-62*
Authors A.E. Isaev
- Title** Modified procedure of free-field calibration by reciprocity method
Printed in *Measurement techniques, 2007, No. 12, pp. 48-52*
Authors A.E. Isaev
- Title** The hydrophone free-field calibration in the non-anechoic water tank using continuous radiation mode
Printed in *Proc. of 9th Europ. Conf. on Underwater Acoustic, Paris, 2008, pp. 133-135*

- Authors** A. E. Isaev., A.N. Matveev
- Title** Hydrophone Calibration in the Presence of Reflecting Elements with the Use of Matched Spatial Filtering
- Printed in** *Acoustical Physics*, 2008, Vol. 54, No. 3, pp. 363–370
- Authors** A.E. Isaev
- Title** Two approaches to hydrophone free-field calibration at continuous radiation in non-anechoic water tank
- Printed in** *Measurement techniques*, 2008, No. 12, pp. 47 - 51
- Authors** A. E. Isaev., A.N. Matveev
- Title** Precise free-field calibration of receivers of sound pressure in water.
- Printed in** *Monograph ISBN 978-5-903232-10-9, VNIIFTRI*, 369 p. (in Russian).
- Authors** A.E. Isaev
- Title** Water medium parameters influence on uncertainty of measurements in laboratory water tank
- Printed in** *Measurements in hydroacoustics and acoustics. VNIIFTRI Proceedings, Mendeleevo, FSUE "VNIIFTRI", 2009, Issue 57 (149), pp. 49-64 (in Russian)*
- Authors** A.E. Isaev
- Title** Reduction of uncertainty stipulated by hydrophone time instability// Measurements in hydroacoustics and acoustics
- Printed in** *VNIIFTRI Proceedings, Mendeleevo, FSUE "VNIIFTRI", 2009, Issue 57 (149), pp. 94-101 (in Russian)*
- Authors** A.E. Isaev
- Title** Measurement accuracy increase problems related to hydrophone properties
- Printed in** *VNIIFTRI Proceedings, Mendeleevo, FSUE "VNIIFTRI", 2009., Issue 57 (149), pp. 30-34 (in Russian)*
- Authors** A.E. Isaev
- Title** Receiving underwater acoustic system with non-equispaced hydrophone chain
- Printed in** *VNIIFTRI Proceedings, Mendeleevo, FSUE "VNIIFTRI", 2009., Issue 57 (149), pp. 21-30 (in Russian)*
- Authors** V.N. Nekrasov, et al.
- Title** Influence of receiver enclosure on inner structure of acoustic field
- Printed in** *VNIIFTRI Proceedings, Mendeleevo, FSUE "VNIIFTRI", 2009., Issue 57 (149), pp. 38-49 (in Russian)*
- Authors** V.K. Maslov, et al.
- Title** On longitudinal own frequencies of closed extensive chamber
- Printed in** *VNIIFTRI Proceedings, Mendeleevo, FSUE "VNIIFTRI", 2009., Issue 57 (149), pp. 85-91 (in Russian)*
- Authors** Y.M. Savostin
- Title** Calibration of Hydrophones in a Field with Continuous Radiation in a Reverberating Pool
- Printed in** *Acoustical Physics*, 2009, V 55, No. 6, pp. 762 – 770
- Authors** A. E. Isaev., A.N. Matveev
- Title** Hydrophone
- Printed in** *Patent for useful model No. 88235 of the RF, Published in Inventions Bulletin No. 30: 27.10.2009*
- Authors** A.M. Enyakov, et al.
- Title** Hydrophone
- Printed in** *Patent for useful model No. 88236 of the RF, Published in Inventions Bulletin No. 30: 27.10.2009*
- Authors** A.M. Enyakov, et al.
- Title** Combined underwater acoustic receiver

- Printed in** *Patent for useful model No. 88237 of the RF, Published in Inventions Bulletin No. 30: 27.10.2009*
- Authors** A.M. Enyakov, et al.
- Title** Hydrophone
- Printed in** *Patent for Invention No. 2393643 of the RF, Published in Inventions Bulletin No. 18: 27.06.2010*
- Authors** A.M. Enyakov, et al.
- Title** Hydrophone
- Printed in** *Patent for Invention No. 2392767 of the RF, Published in Inventions Bulletin No. 17: 20.06.2010*
- Authors** A.M. Enyakov, et al.
- Title** Hydrophone free-field calibration lower frequency under tone signal radiation in non-anechoic water tank
- Printed in** *Measurement techniques, 2010, No. 1, pp. 20 – 24*
- Authors** A.E. Isaev
- Title** Increasing the Frequency Resolution in the Processing of Acoustic Signals by Sliding Complex Weighted Averaging
- Printed in** *Acoustical Physics, 2010, Vol. 56, No. 2, pp. 246–252*
- Authors** A. E. Isaev., A.N. Matveev
- Title** Reduction of transient process influence during hydrophone low frequency free-field calibration using quadrature-added tone signals
- Printed in** *Measurement techniques, 2010, No. 4, pp. 20-24*
- Authors** A.E. Isaev
- Title** Use of a Complex Moving Weighted Averaging Method for Receiver Nonuniform Frequency Response Restoration
- Printed in** *Acoustical Physics, 2010, Vol. 56, No. 5, pp. 693–696*
- Authors** A. E. Isaev., A.N. Matveev
- Title** Free-field hydrophone calibration method at continuous signal radiation in reverberant water tank
- Printed in** *Patent for Invention No. 2390968 of the RF, Published in Inventions Bulletin No. 15: 27.05.2010*
- Authors** A. E. Isaev., A.N. Matveev, S.V. Silvestrov

Ultrasound

- Title** Metrological assurance of medical ultrasonic equipment
- Printed in** *Monograph, ISBN 5-903232-02-07, VNIIFTRI, 2006, 159 p. (in Russian)*
- Authors** A.M. Enyakov
- Title** Ultrasonic Power Meter
- Printed in** *Patent for Invention No. 2297603 of the RF, Published in Inventions Bulletin No. 11: 24.04.2007*
- Authors** A.M. Enyakov, L.S. Rudnichenko
- Title** Metrological assurance problems of underwater acoustic measurements on MHz frequencies
- Printed in** *Precise measurements for high technologies, ISBN 978-5-903232-07-09, VNIIFTRI, 2008, p.119-250 (in Russian)*
- Authors** A.M. Enyakov
- Title** Underwater acoustic measurements on MHz frequencies
- Printed in** *Proc. of conf. "Systems-2008: Metrology, standartization, sertification", Lviv, 2008, p.155-159 (in Russian)*
- Authors** A.M. Enyakov