



**INTERNATIONAL CONFERENCE  
FLUXES AND STRUCTURES IN FLUIDS  
VLADIVOSTOK, RUSSIA  
AUGUST 8-10, 2018**

**PROGRAM**

**August 8, Wednesday**

8:45 – 9:30. Registration.

9:30 – 9:40. Opening.

9:40 – 11:10. MORNING SESSION 1. *Chair V.B. Lobanov.*

9:40 – 10:10. *Invited talk.* Yu.D. Chashechkin. NEW MATHEMATICAL CLASSIFICATION OF OCEANIC FLOWS COMPONENTS.

10:10 – 11:30. V.A. Bulanov. ON THE NONLINEAR ACOUSTIC CHARACTERISTICS OF THE SUBSURFACE LAYER OF THE SEA.

10:30 – 10:50. O.S. Rozanova. MULTI-LAYER MODEL OF ROTATING STRATIFIED GAS.

10:50 – 11:10. S.V. Prants, M.V. Budyansky, M.Yu. Uleysky. LAGRANGIAN ORIGIN MAPS AS A NEW TOOL TO STUDY TRANSPORT AND MIXING IN THE OCEAN.

11:10 – 11:30. Break, group photo.

11:30 – 13:00. MORNING SESSION 2. *Chair Yu.D. Chashechkin.*

11:30 – 12:00. *Invited talk.* P. Fraunie. INVESTIGATION OF THE 3D MARINE SURFACE LAYER IN TRANSIENT WIND CONDITIONS FROM HF RADAR REMOTE SENSING AND HIGH RESOLUTION PROFILERS.

12:00 – 12:20. G. Pillet, E.V. Ermanyuk, L.R.M. Maas, I.N. Sibgatullin, T. Dauxois. INTERNAL WAVE ATTRACTORS IN 3D GEOMETRY: TRAPPING DUE TO REFLECTION AT OBLIQUE BOTTOM.

12:20 – 12:40. A.V. Dmitrenko. THE ESTIMATION OF THE CORRELATION DIMENSION OF THE ATTRACTOR IN THE BOUNDARY LAYER OF EARTH'S ATMOSPHERE.

12:40 – 13:00. M.S. Permyakov, V.I. Semykin, N.P. Malikova. EFFECT OF THE PLANETARY BOUNDARY LAYER HORIZONTAL INHOMOGENEITY IN THE TWO-DIMENSIONAL FLUID MOTION MODEL.

13:00 – 14:30. Lunch.

14:30 – 16:30. AFTERNOON SESSION 1. *Chair H. Ueno.*

14:30 – 14:50. Yakush, S.E. WAVE STRUCTURE OF SUPERHEATED LIQUID EXPANSION INTO THE ATMOSPHERE.

14:50 – 15:10. V.V. Navrotsky, V.A. Dubina, E.P. Pavlova, F.F. Khrapchenkov. DYNAMIC INTERACTIONS BETWEEN SHELF AND OPEN SEA WATERS AND THEIR BIOLOGICAL EFFECTS.

15:10 – 15:30. S.A. Arsenyev. DIPOLE TSUNAMI ON THE OCEAN SHELF.

15:30 – 15:50. O.A. Dymova, N.V. Markova. DEEP-WATER MESOSCALE COUNTERCURRENTS IN THE BLACK SEA CIRCULATION STRUCTURE.

15:50 – 16:10. D.V. Makarov. MODELLING OF SOUND SCATTERING ON SYNOPTIC EDDIES USING RANDOM MATRIX THEORY.

16:10 – 16:30. S.B. Kozitskiy. SPATIO-TEMPORAL CHAOS IN THE DOUBLE-DIFFUSIVE SYSTEM.

16:30 – 17:00. Break.

17:00 – 19:30. Poster Session & ice-breaking party.

#### **August 9, Thursday**

8:45 – 9:30. Registration.

9:30 – 11:20. Morning session 1. *Chair P. Fraunie.*

9:30 – 10:00. *Invited talk.* H. Ishiyama, H. Ueno, M. Inatsu, S. Itoh. GLOBAL DISTRIBUTION OF MERGERS AND SPLITS OF OCEANIC MESOSCALE EDDIES.

10:00 – 10:20. A.G. Ostrovskii. MESOSCALE ANTICYCLONIC EDDIES OF THE NORTHWESTERN BOUNDARY CURRENT SYSTEM IN THE JAPAN/EAST SEA.

10:20 – 10:40. O.O. Trusenkova, A.Yu. Lazaryuk, A.G. Ostrovskii, V.B. Lobanov. HIGH-FREQUENCY FLUCTUATIONS OF STRATIFICATION, TEMPERATURE, AND KINETIC ENERGY IN THE PRIMORYE CURRENT ZONE, THE JAPAN SEA.

10:40 – 11:00. H. Choi, M.S. Lee, D.S. Choi, S.M. Choi. REINFORCEMENT AND DECAY OF TROPICAL STORM LINFA BY MULTIPLE INTERACTIONS AMONG TYPHOON CHAN-HOM AND NAGKA WITH A MID-LATITUDE CLOUD TROUGH IN THE WEST PACIFIC OCEAN, 2015.

11:00 – 11:20. A.V. Kazansky, M.G. Aleksanina. FORMATION OF ATMOSPHERIC VORTEX STREETS ON SATELLITE IMAGERY.

11:20 – 11:40. Break.

11:40 – 13:10. Morning session 2. *Chair O.O. Trusenkova.*

11:40 – 12:10. *Invited talk.* V.B. Lobanov, A.S. Sergeev. DYNAMIC PROCESSES AT THE CONTINENTAL SLOPE OF PRIMORYE, THE JAPAN SEA, BASED ON OBSERVATIONS.

12:10 – 12:30. D.V. Stepanov, V.V. Fomin. INSTABILITY OF THE EAST-SAKHALIN CURRENT AND THE MESOSCALE EDDIES ON THE EASTERN SAKHALIN SHELF OF THE SEA OF OKHOTSK.

12:30 – 12:50. D. Gladskikh, D. Sergeev, G. Baydakov, I. Soustova, Yu. Troitskaya. ON THE THERMAL REGIME OF INLAND WATER OBJECTS: FIELD INVESTIGATIONS AND NUMERICAL SIMULATION.

12:50 – 13:10. V.I. Ponomarev, P.A. Fayman, V.A. Dubina, S.P.Shkorba. MULTIPLE SCALE VARIABILITY OF CURRENT SYSTEM AND EDDIES IN THE TATAR STRAIT AND ADJACENT SEA AREAS.

13:10 – 14:30. Lunch

14:30 – 16:10. AFTERNOON SESSION 1. *Chair O.S. Rozanova.*

14:30 – 14:50. A.G. Kulikovskiy, A.P. Chugainova. NONLINEAR WAVES IN ANISOTROPIC CYLINDERS.

14:50 – 15:10. V.G. Kozlov, D.A. Polezhaev. VAPOR DIFFUSION IN AN AIR COLUMN OSCILLATING IN CHANNEL OF VARIABLE SECTION.

15:10 – 15:30. O.A. Vlasova, N.V. Kozlov. CYLINDRICAL BODY DYNAMICS AND FLOWS STRUCTURE IN HORIZONTAL CYLINDRICAL CAVITY AT UNIFORM AND MODULATED ROTATION.

15:30 – 15:50. S.E. Yakush, D. Grishchenko, P. Kudinov. FEATURES OF MELT-WATER THERMAL INTERACTION IN STRATIFIED CONFIGURATION.

15:50 – 16:10. A.D. Nizamova, V.N. Kireev, S.F. Urmancheev. ON THE CHANGE OF THE CRITICAL REYNOLDS NUMBER AS A FUNCTION OF THE PROPERTIES OF A THERMOVISCOUS LIQUID.

16:10 – 16:30. Break.

16:30 – 18:10. AFTERNOON SESSION 2. *Chair S.E. Yakush.*

16:30 – 16:50. N.F. Dimitrieva. NON-STATIONARY FLOW NEAR A HORIZONTAL WEDGE IN CONTINUOUSLY STRATIFIED FLUID.

16:50 – 17:10. A.R. Avetisyan, G.A. Filippov. EULERIAN MODELS FOR TWO-PHASE TURBULENT FLOWS WITH PHASE TRANSITIONS AND DISPERSED PHASE DEPOSITION PREDICTING.

17:10 – 17:30. S.V. Subbotin, V.G. Kozlov, R.R. Sabirov. MEAN FLOW IN ELASTIC CAVITY PERFORMING ROTATIONAL OSCILLATIONS BETWEEN TWO MOVING BOUNDARIES.

17:30 – 17:50. A.Yu. Ilinykh. LIGAMENTS FORMATION AT THE DROPLET SPLASH.

17:50 – 18:10. K.V. Koshel, E.A. Ryzhov, J. Reinaud G. Riccardi. ON A VORTEX PAIR INTERACTING WITH A FIXED POINT VORTEX IN A BAROTROPIC FLOW.

19:00 – 20:30. Reception (downtown).

## August 10, Friday

8:45 – 9:30. Registration.

9:30 – 11:00. MORNING SESSION 1. . *Chair H. Choi.*

9:30 – 10:00. *Invited talk.* Y. Fukumoto, T.T. Le, L. Jin. FRICTIONAL EFFECT ON KELVIN-HELMHOLTZ PROBLEM OF A SHALLOW-WATER FLOW.

10:00 – 10:20. V.V. Navrotsky. INTERNAL WAVES AND THEIR TRANSFORMATIONS IN THE NEAR-BOTTOM LAYERS IN THE SHELF ZONE OF SEA.

10:20 – 10:40. A.A. Chesnokov, S.L. Gavriluk, V.Yu. Liapidevskii. INTERNAL WAVES IN A TWO LAYER STRATIFIED LIQUID WITH MIXING.

10:40 – 11:00. V.G. Baydulov. ON THE PROBLEM OF DETERMINING THE LOCATION OF THE SOURCE BY THE FIELD OF THE ATTACHED INTERNAL WAVES.

11:00 – 11:20. Break.

11:20 – 12:20. MORNING SESSION 2. *Chair Y. Fukumoto.*

11:20 – 11:40. L.V. Zotov. HOW OCEAN AFFECTS EARTH ROTATION.

11:40 – 12:00. S.A. Arsenyev. BEGINNING OF EARTHQUAKES IN THE OCEAN ZONE OF SUBDUCTION.

12:00 – 12:20. V.V. Pak. MULTI-RINGED STRUCTURES IN AXISYMMETRIC TWO-LAYER CREEPING FLOW WITH VARIABLE LAYER THICKNESSES.

12:20 – 13:00. Discussion.

13:00 – 14:30. Lunch.

14:30 – 17:30. City tour (bilingual, if necessary).

## POSTERS

1. A.V. Babanin. OCEAN WAVES AS A LINK BETWEEN ATMOSPHERE AND OCEAN.
2. R.N. Bardakov. THE VORTEX FLOW PATTERN NEAR THE EDGE OF A ROTATING DISC IN A HOMOGENEOUS FLUID.
3. T.V. Belonenko. THE LOFOTEN VORTEX VS TOPOGRAPHIC ROSSBY WAVES IN THE NORWEGIAN SEA.
4. V.A. Bulanov, A.V. Storozhenko. THE SCATTERING OF SOUND IN THE UPPER LAYER OF THE SEA AND THE POSSIBILITY OF ACOUSTIC SPECTROSCOPY OF BUBBLE CLOUDS AND PLANKTON COMMUNITIES.
5. V.A. Bulanov, I.V. Korskov. FEATURES OF THE ANGULAR SPECTRUM OF THE SCATTERING OF ACOUSTIC BEAMS IN SUSPENSION.
6. V.V. Bulatov, Yu.V. Vladimirov. NONSTATIONARY GENERATION REGIMES OF SURFACE AND INTERNAL GRAVITY WAVES.
7. A.V. Burenin, A.A. Golov, Yu.N. Morgunov, D.S. Strobykin. AN EXPERIMENTAL STUDY OF SCALAR-VECTOR FIELD SPATIAL STRUCTURES.
8. I.Y. Bychkova, A.V. Bychkov, L.A. Slavutskii. MULTIRAY ACOUSTIC CONTROL OF MEDIUM STRATIFICATION USING DIGITAL MODULATION OF THE SIGNALS.
9. S. Chen, F. Qiao, C. Huang. WIND STRESS OVER COASTAL OCEAN IN LOW WIND CONDITIONS.
10. D.S. Denisenko, N.I. Makarenko. STEADY SUPERCRITICAL FLOW OF STRATIFIED FLUID OVER COMBINED OBSTACLE.
11. Dorozhko, V.M. NUMERICAL SIMULATION OF HYDROACOUSTIC FLOW NOISES OF THE DIVER'S FIN UNDER NON-STATIONARY MOVEMENT.
12. M.V. Kazachek, T.V. Gordeychuk. TIME-CORRELATED ANALYSIS OF SONOLUMINESCENCE FROM BUBBLE STRUCTURES IN LIQUID.
13. A.I. Korshunov. THE CHALLENGES POSED BY THE PROBLEM OF COLLISION OF A DROP WITH LIQUID SURFACE.
14. A.V. Kosheleva, I.O. Yaroshchuk, A.N. Shvyrev, V.V. Novotryasov, O.E. Gulin, A.A. Pivovarov, A.N. Samchenko, R.A. Korotchenko. EXPERIMENTAL STUDIES OF INTERNAL WAVES IN THE COASTAL ZONE OF THE PETER THE GREAT BAY OF THE SEA OF JAPAN.
15. M. A. Kotov, L.B. Ruleva, S. I. Solodovnikov, S. T. Surzhikov. LABORATORY SIMULATION OF SUPERSONIC AIR FLOW PATTERNS.
16. Yu.G. Krat, I.I. Potapov. EFFECT OF BED WAVE GEOMETRY ON BED-LOAD MOVEMENT.
17. A.I. Prostomolotov, N.A. Verezub, A.I. Voronin, N.Yu. Tabachkova. HEAT TRANSFER AND FORMATION OF VORTICES IN THE PROCESS OF "CASSETTE" CRYSTALLIZATION.
18. M. Safronova. A STUDY OF NONLINEAR EFFECTS IN THE NOISE OF HUMAN FORCED EXHALATION.

19. Sergeev, A.F., Karnaukh V.N., Lobanov V.B., et al. BACKGROUND WATER STRUCTURE IN THE AREA OF A GAS FLARE DETECTED IN THE EASTERN PART IN THE SEA OF OKHOTSK (TINRO DEPRESSION).
20. E.A. Shtraikhert, S.P. Zakharkov. INFLUENCE OF SEASONAL HYDROMETEOROLOGICAL PROCESSES ON DISTRIBUTION OF THE PHYTOPLANKTON, ORGANIC AND SUSPENDED MATTER CONTENTS INDICATORS IN AMUR BAY AND ADJACENT AREA (JAPAN/EAST SEA) ACCORDING TO MODIS-AQUA DATA OF 2013.
21. S.V. Smirnov. ON NUMERICAL STUDY OF RESONANCE OSCILLATIONS IN THE SEA OF JAPAN.
22. K.S. Snigur, I.I. Potapov. APPLICATION OF DONG BOUNDARY CONDITIONS FOR SOLVING THE HYDRODYNAMIC PROBLEM IN TRUNCATED COMPUTATIONAL DOMAIN.
23. K.S. Snigur, G.I. Tsoy. MODELING OF TURBULENT FLOW BY THE SYSTEM OF QUASIHYDRODYNAMIC EQUATIONS.
24. V.M. Somsikov. SOLAR RADIATION FLUX AND NONEQUILIBRIUM EFFECTS IN ATMOSPHERE.
25. I.V. Stetsiuk. LABORATORY MODELING OF TEMPERATURE STRATIFICATION OF THE WATER ENVIRONMENT.
26. O.A. Vlasova, A.A. Ivanova, V.G. Kozlov. AVERAGE FLOWS IN THE CHANNEL OF VARIABLE SECTION CAUSED BY LIQUIDS OSCILLATIONS.
27. Ia.V. Zagumenny, N.F. Dimitrieva. CLASSIFICATION OF FLOW COMPONENTS AND REGIMES AROUND OBSTACLES IN A STRATIFIED FLUID.
28. A.V. Zatserkovnyy. FLUID FLOW ESTIMATION BASED ON OPTICAL FLOW TRACKING OF NATURAL MARKERS IN MARINE WATER.
29. I.A. Zhabin, N.B. Luk'yanova, V.A. Dubina. WATER STRUCTURE AND DYNAMICS IN THE SHANTAR ISLANDS NATIONAL PARK AQUATORY (THE SEA OF OKHOTSK).
30. A.G. Zatsepin, A.A. Kubryakov, E.G. Arashkevich, S.G. Stanichny. IMPACT OF STRONG WIND FORCING ON THE CHLOROPHYLL "A" CONCENTRATION IN THE BLACK SEA DURING WARM SEASONS.
31. P.V. Zhuravlev, M.S. Permyakov, N.P. Malikova, V.I. Semykin. EFFECT OF THE BOUNDARY LAYER HORIZONTAL INHOMOGENEITY ON THE INTERACTION OF VORTEX PAIR.