Program of the Conference

8 – 10 october 2024
50, Svetlanskaya Street, Vladivostok

8 october 2024

9.00 - 10.00	Registration of conference participants

10.00 - 10.15 Opening of the International Conference on Ocean Study 2024. Dolgikh Grigorii, academician of RAS

10.15 - 10.45 Plenary report Konoplin Alexandr, director of Academician M. D. Ageev Institute of Marine Technology Problems Far Eastern Branch of RAS (IMTP FEB RAS)

10.45 - 11.15 Plenary report Rodionov Alexandr, scientific director of the hydroacoustic communications and navigations laboratory of IMTP FEB RAS

11.15 - 11.30 Video about the World Ocean exploration

Break until 14-00

Section **Deep Ocean Research, Oceanography and Marine Environment**
(Section Chairman Dr. Alexander Rodionov)

14-00 - 14.15 Olga Trusenkova *, Elena Kustova *The summer reversal of the East Kamchatka Current from satellite altimetry data* (V.I. Il'ichev Pacific Oceanological Institute FEB RAS)

14.15 - 14.30 Zhanna Tskhay*, Viktor Filatov *Spatial and temporal variations in thermal conditions during the saury fishery in the NorthWest Pacific based on satellite data* (Sakhalin branch of "VNIRO")

14.30 - 14.45 Sergey Kasatkin*, Nadezhda Zlobina *Application of Secondary Spectral Analysis for Hydroacoustic Signal Processing* (IMTP FEB RAS)

14.45 - 15.00 Filipp Belchenko*, Ivan Ermolov, Georgij Nagajcev, Artem Sukhanov, Pavel Ostrikov *Comparison of UAVs' Trajectories for Sea Surface Survey within Fish Search* (IPMech RAS)

15.00 - 15.15 Dmitry Gryazin*, Olga Belova *Metrological support of wave meters based on hydrodynamic pressure sensors* (Concern CSRI Elektropribor, JSC ITMO University)

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* - speaker of the report

Coffee break

Section Complex Mathematical Problems of Ocean Monitoring and Modeling
(Section Chairman Dr. Alexander Inzartsev)

16.00 - 16.15	Sergey Dyakov*, Marina Aleksanina, Anton Karnatskiy *Calculation of Drift Velocities and Compression/Rarefaction Zones of the Sea Ice Cover on Satellite Images of the KMSS/Meteor-M Device* (IACP FEB RAS)
16.15 - 16.30	Sergey Dyakov*, Marina Aleksanina, Anton Karnatskiy *Calculation of Compositional Maps of Sea Surface Temperature from IR Measurements of US Satellites* (IACP FEB RAS)
16.30 - 16.45	Alexey Ermoshkin*, Nikolay Bogatov, Ivan Kapustin, Aleksandr Molkov *A Physical Based Method for Retrieval Ocean Currents and Significant Wave Height Using Doppler Marine Radar* (A.V. Gaponov-Grekhov Institute of Applied Physics of the RAS)
16.45 - 17.00	Iman Valizadeh*, Jaime Lloret_Mauri *Multi-hop Communication for Underwater Wireless Sensor Networks* (Valencia Polytechnic University)

9 october 2024

09.30 - 10.00	Registration of conference participants

Section Unmanned Marine Vehicles and Systems
(Section Chairman PhD Alexander Konoplin)

10.00 - 10.15	Valeriy Knyazhev *Fuel Cells for AUV Power Supply* (IMTP FEB RAS)
10.15 - 10.30	Mikhail Belousov*, Dmitry Yukhimets, Anton Gubankov *Development of Information-Control System for Unmanned Underwater Vehicle by Means of ROS2 (*IMPP FEB RAS, IACP FEB RAS, Sevastopol State University, Admiral G.I. Nevelskoy Maritime State University)
10.30 - 10.45	Anastasia Shupikova*, Valeriy Bobkov, Alexander Inzartsev *A Method for Underwater Pipeline Tracking from Stereo Images* (IMTP FEB RAS, IACP FEB RAS)
10.45 - 11.00	Valeriy Knyazhev*, Vladimir Loshchenkov *Storage of Reagents for Fuel Cells in the AUV* (IMTP FEB RAS)
11.00 - 11.15	Nikita Krasavin*, Alexander Konoplin *The Underwater Manipulator Position Correction Method for Performing Contact Operations* (IMTP FEB RAS)

Coffee break

Section Navigation and Motion Control
(Section Chairman PhD Fedor Dubrovin)

12.00 - 12.15	Fedor Dubrovin *On Determining the Spatial Orientation of a Marine Navigation Platform Based on Spatial Orientation Measurements of a Pair of Non-Collinear Measurement Bases* (IMTP FEB RAS)
12.15 - 12.30	Sergey Fadyushin*, Alexander Lentarev, Elena Vereschaginan, Yana Pafnuteva, Alexander Tretyak, Sergey Pashin *Conceptual Fundamentals of the Symbiotic Partnership in the Course of Controlling ManMachine Systems of the Navigator-Ship Type* (FEFU)
12.30 - 12.45	Dmitry Yukhimets *The AUV Control System for Trajectory Movement Taking into Account the Limitations of its Thruster System* (IACP FEB RAS)
12.45 - 13.00	Igor Gornostaev*, Anton Gubankov *Development of Method of Generating a Reference Movement Speed of a Group of UAVs* (IACP FEB RAS, IMTP FEB RAS)
13.00 - 13.15	Alexey Pavlov *An approach to debugging control algorithms for an autonomous underwater vehicle during highprecision navigation to port using data from deepsea television cameras* (Concern CSRI Elektropribor)

Break until 14-00

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Section **Underwater Robotics and Systems**

(Section Chairman PhD Eduard Mursalimov)

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14.00 - 14.15	Vladimir Gerasimov*, Alexey Filozhenko, Anton Komlev *Energy Supply Of The Hybrid UUV And Information Exchange With The Onshore Control Post During The Service Of Underwater Mining Complexes* (IMTP FEB RAS)
14.15 - 14.30	Vladimir Kostenko*, Nikolai Naidenko, Roman Vasilenko Approach to the Development of a Steering Thruster Mathematical Model for the Dynamic Positioning Mode of an AUV Equipped with Manipulator (IMTP FEB RAS)
14.30 - 14.45	Grigorii Eliseenko *Information Flows Management in Heterogeneous Communication Channels Between AUV and Operator* (IMTP FEB RAS)
14.45 - 15.00	Alexander Yurmanov*, Roman Vasilenko, Maxim Panchuk *Algorithm of Underwater Objects Identification Considering Defects* (IMTP FEB RAS)

Coffee break

15.30 - 15.45	Sergey Kasatkin*, Nadezhda Zlobina *Assessment of Own Noise of Uderwater Glider Equipped with Combined Receivers* (IMTP FEB RAS)
15.45 - 16.00	Artemii Mametev*, Alexander Pavin Color Image Segmentation Algorithm for Autonomous Underwater Vehicles (IMTP FEB RAS)
16.00 - 16.15	Anna Bykanova*, Jurii Matvienko, Oleg Lvov Development of a Command AUV for Controlling a Group of Hybrid AUVs for Operational Noise Field Monitoring *Station* (IMTP FEB RAS)
16.15 - 16.30	Maxim Ivanov*, Oleg Stepanov, Valerii Zolotarevich, Andreii Motorin *Recursive and Nonrecursive Passive Target Localization Algorithms with Bearing-Only Measurements* (ITMO University, Concern CSRI Elektropribor, JSC)
16.30 - 16.45	Iman Valizadeh*, Jaime Lloret_Mauri *Localization Techniques in Underwater Wireless Sensor Networks* (Valencia Polytechnic University)

10 october 2024

13-30 - 14.00	Registration of conference participants

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Section **Underwater Robotics and Systems**

(Section Chairman PhD Alexander Pavin)

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14.00 - 14.15	Vladimir Kostenko *Calculation and Experimental Methodology for Assessing the Autonomy Parameters of the AUV* (IMTP FEB RAS)
14.15 - 14.30	Vladislav Mikhailov*, Vladimir Gerasimov *Development of a Cable Communication System for an Underwater Vehicle with a Bottom Station* (IMTP FEB RAS)
14.30 - 14.45	Konstanin Shilin*, Alexander Pavin *Light Neural Network for Pipeline Segmentation on a Side-Scan Sonar Images* (IMTP FEB RAS)
14.45 - 15.00	Alexander Protsenko*, Aleksey Kabanov, Alexander Zuev, Alexey Zhirabok The Optimal Astatic Observer for the Identification of Disturbances in Nonlinear Robotic Systems (IACP FEB RAS)
15.00 - 15.15	Alexander Torzhkov*, Grigorii Eliseenko, Alexander Pavin *Using Python to Create Control Systems for Unmanned Underwater Vehicles* (IMTP FEB RAS)
15.15 - 15.30	Andrei Medvedev*, Vladimir Kostenko, Irina Mokeeva *Modeling the Movement of a ROV Taking into Account the Influence of a Communication Cable* (IMTP FEB RAS)
15.30 - 15.45	Mikhail Panin*, Valery Bobkov, Mikhail Morozov, Alexander Inzartsev *AUV Inspection of Subsea Pipelines Using Information from an Onboard Stereo Camera* (IMTP FEB RAS, IACP FEB RAS)
16.00 - 16.15	Closing of the International Conference on Ocean Studies 2024 Final speech Rodionov Alexander
16.15 – 19.00	Final lanch