



July 16, AM

08:30-09:30

Registration

09:30-10:10

Opening ceremony

10:10-10:40

Plenary 1, *Red Hall*

10:10-10:40 The United Nations Decade of Ocean
Science for Sustainable Development (2021-
2030): steps toward implementation phase

Sergey Shapovalov, IO RAS,
Russia

10:40-11:10

Coffee break, group photo

11:10-12:30

Plenary 2, *Red Hall*

11:10-11:50 Global impact of the Sato-Umi concept:
Mankind in harmony with the Ocean Biome

Michael P. Crosby, Mote
Marine Laboratory, USA

11:50-12:30 Ocean waves as a missing link between
atmosphere and ocean

Alexander Babanin,
University of Melbourne,
Australia

12:30-14:00

Lunch

July 16, PM

T01: Ocean dynamics and climate

14:00-15:50 **T01-1: Changing climate and ENSO complexity and modulation**

Chairs - Rong-Hua Zhang, China, and Sergey K. Konovalov, Russia

14:00-14:30 Oxygen regime shifts in the Black Sea: climate and/or human effects (*invited*)

Sergey K. Konovalov, Marine Hydrophysical Institute RAS, Russia

14:30-14:50 Multidecadal climate oscillation and changes in global climate regime at the turn of 20-21 century

Vladimir Ponomarev, POI FEB RAS, Russia

14:50-15:10 Compensated effects on ENSO due to freshwater flux and ocean chlorophyll in the tropical Pacific bio-climate system

Rong-Hua Zhang, Institute of Oceanology, Chinese Academy of Sciences, China

15:10-15:30 Influence of South Pacific Subtropical Dipole on ENSO

Faming Wang, Institute of Oceanology, Chinese Academy of Sciences, China

15:30-15:50 Interannual Variability and Trends of Sea Surface Temperature, Sea Surface Wind, and Sea Level Anomaly in the South China Sea

Chunli Liu, Marine college, Shandong University, Weihai, China

T02: Marine geology and geological resources

14:00-15:50 **T02-1: Gas hydrates in the Pacific Ocean**

Chairs - Anatoly Obzhirov, Russia, Renat Shakirov, Russia

14:00-14:30 Gas geochemical investigation in Japan and Okhotsk Seas (*invited*)

Obzhirov, A.I., POI FEB RAS, Russia

14:30-14:50 Compositions of authigenic minerals around the sulphate-methane transition in the sediments at cold-seep of the northern South China Sea: Inorganic geochemical evidence

Tiantian Sun, Ocean College of Zhejiang University

14:50-15:10 Thermal-gaseous divergence of marine waters in the Seas of Okhotsk and Japan

Mishukov Vasily, POI FEB RAS, Russia

15:10-15:30 The morphology and spatial distribution of chimney formation in the Shenhu area, northern South China Sea

Boda Zhang, Sun Yat-sen University, China

15:30-15:50 Complex Study of the Gas hydrates in the Asian Seas (CoSGAS): multinational project endorsement

Renat Shakirov, POI FEB RAS, Russia

T03: Ocean environment and ecosystem

<i>14:00-15:50</i>	T03-1: Marine pollution	Chairs -Seiya Nagao, Japan, and Yana Blinovskaya, Russia
	Temporal variation of radiocesium concentration in surface marine sediments at coastal area off Fukushima Prefecture, Japan <i>(invited)</i>	Seiya Nagao, Kanazawa University, Japan
<i>14:00-14:30</i>	Identification of dissolved and particulate carbonyl compounds produced by marine harmful algal bloom species	Lixia Shang, Institute of Oceanology, Chinese Academy of Sciences, China
<i>14:30-14:50</i>	Space-Time Characterization and Risk Assessment of Nutrient Pollutant Concentrations in China's Near Seas	Qutu Jiang, Zhejiang University, China
<i>14:50-15:10</i>	Photocatalysis for degradation of organic pollutants in seawater	Wu Di, Ocean College, Zhejiang University, China
<i>15:10-15:30</i>	Marine litter and its influence on marine ecosystem	Blinovskaya Yana, FEFU, Russia

T05: Polar ocean research and explorations

<i>14:00-15:50</i>	T05-1: Carbon cycle in the Arctic land - shelf system	Chairs - Igor Semiletov, Russia, and Leopold Lobkovsky, Russia
	Thawing permafrost-related methane and carbon dioxide emissions from the East Siberian Arctic Shelf (ESAS) <i>(invited)</i>	Igor Semiletov, POI FEB RAS, Russia
<i>14:00-14:30</i>	Last millenniums ice conditions in the East Siberian and Chukchi Seas: reconstruction on sedimentary proxies	Anatolii Astakhov, POI FEB RAS, Russia
<i>14:30-14:50</i>	Matched-field localization in the typical Arctic environment	Chonglei Liu, Institute of Acoustics, Chinese Academy of Science, China
<i>14:50-15:10</i>	Methane potential of the East Siberian Arctic Shelf as a factor of Global significance	Natalia Shakhova, National Research Tomsk Polytechnic University, Russia
<i>15:10-15:30</i>	Discussion	

Session ends

T07: Undersea vehicles, robotics, acoustics

14:00-15:40	T07-1: Undersea vehicles and robotics	Chairs - Aleksandr Shcherbatyuk, Russia, and Alexander Inzartsev, Russia
14:00-14:20	Tansuo-100: Portable Autonomous Underwater Vehicle	Shuo Li, Shenyang Institute of Automation, Chinese Academy of Science, China
14:20-14:40	AUV control algorithms for automatic searching for polynyas and surfacing	Andrei Bagnitckii, IMTP FEB RAS, Russia
14:40-15:00	Application of USV for environmental monitoring of the Sevastopol Bay	Aleksandr Grekov, Institute of Natural and Technical Systems, Russia
15:00-15:20	Motion models of autonomous underwater robot propulsion systems for trajectory survey near the seabed	Andrei Medvedev, IMTP FEB RAS, Russia
15:20-15:40	Production management of marine robotic systems and devices	Artyom Drenin, FEFU, Russia

T10: Ocean observations

14:00-15:50	T10-1: Ocean data management and citizen science	Vyacheslav Lobanov, Russia, and Pavel Salyuk, Russia
14:00-14:30	Concept of monitoring and observation network in Peter the Great Bay (<i>Invited</i>)	Pavel Salyuk, POI FEB RAS, Russia
14:30-14:50	Federation of “small science” metadata	Igor Shevchenko, The Pacific branch of VNIRO (TINRO), Russia
14:50-15:10	Study on Ocean Big Data Analysis and Forecasting Technology-Establishment of Ocean Big Data Quality Assessment and Data Resource Pool	Xin Bing, NMDIS, China
15:10-15:30	Development and testing of technologies for sea wave, currents and sea level fluctuations registration based on surface and underwater remote video surveillance systems	Petr Zimin, POI FEB RAS, Russia
15:30-15:50	New approach to radioecological monitoring of sea waters using composite materials based on Zn – K ferrocyanide	Eduard Tokar’, IC FEB RAS/FEFU, Russia

Session ends

T11: Sustainable economy, ocean policy making and education

14:00-15:50	T11-1: Ecotourism, ecoprojects, marine education	Chair - Michael P. Crosby, USA
14:00-14:20	Development of marine ecotourism in Chumphon Province, Thailand, for sustainable uses of coral reef and underwater pinnacle ecosystems	Makamas Sutthacheep, Ramkhamhaeng University, Thailand
14:20-14:40	Seabird monitoring in a frame of shelf projects: theory and actuality	Aleksandr Shavykin, Murmansk Marine Biological Institute KSC RAS, Russia
14:40-15:00	Restoration of the sea area	Cao Jing, Dalian Ocean University, China
15:00-15:20	Study on surge control function of the artificial fishing reef in the irregular waves	Akito Nakamura, Kanagawa University, Japan
15:20-15:40	Features of the competence approach in the training of seafarers, development of the autonomous navigation	Ivan Druz, FEFU, Russia
15:40-15:50	Discussion	

Session ends

15:50-16:10

Coffee break

T01: Ocean dynamics and climate

16:10-17:50	T01-1: Changing climate and ENSO complexity and modulation (<i>continued</i>)	Chairs - Rong-Hua Zhang, China, and Sergey K. Kononov, Russia
16:10-16:30	A positive feedback onto ENSO due to tropical instability wave (TIW)-induced chlorophyll effects in the Pacific	Rong-Hua Zhang, Institute of Oceanology, Chinese Academy of Sciences, China
16:30-16:50	Do CMIP5 models reproduce El Niño diversity?	Tao Lian, Second Institute of Oceanography, Ministry of Natural Resources, China
16:50-17:10	The relationship among probabilistic, deterministic and potential skills in predicting the ENSO for the past 161 years	Zhang Xiangming, Second Institute of Oceanography, MNR, China
17:10-17:30	The role of eastern Pacific meridional winds on the 2015/16 extreme El Niño	Wenxiu Zhong, Sun Yat-sen University, China

17:30-17:50	Modulation of the impacts of the Indian Ocean basin mode on tropical cyclones over the Northwest Pacific during the boreal summer by La Niña Modoki	Jingliang Huangfu, Institute of Atmospheric Physics, Chinese Academy of Sciences, China
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Session ends

T02: Marine geology and geological resources

16:10-17:30	T02-1: Gas hydrates in the Pacific Ocean <i>(continued)</i>	Chairs - Anatoly Obzhirov, Russia, Renat Shakirov, Russia
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16:10-16:30	Gas-geochemical features of hydrocarbon gases of the bottom sediments in the Tatar Strait, Sea of Japan, Russia	Andrey Yatsuk, POI FEB RAS, Russia
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16:30-16:50	DISTRIBUTION OF HELIUM AND HYDROGEN IN BOTTOM SEDIMENTS AND WATER AROUND SHALLOW GAS HYDRATES IN TATAR STRAIT	Nadezhda Syrbu, POI FEB RAS, Russia
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16:50-17:10	Methane Fluxes on the Water-Atmosphere interface in the north-west of the Sea of Japan during spring – summer – autumn (2010-2018)	Mishukova Olga, POI FEB RAS, Russia
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17:10-17:30	Discussion	
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Session ends

T03: Ocean environment and ecosystem

16:10-17:50	T03-1: Marine pollution <i>(continued)</i>	Chairs -Seiya Nagao, Japan, and Yana Blinovskaya, Russia
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16:10-16:40	Trends of the marine litter distribution on the southern coastal zone of the Primorsky region	Okhotkina Viktoria, Ecostart LLC, Russia
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16:40-17:00	Ice cover influence on pollutant transfer process in wastewater disposal through marine outfalls	Sergey Bezborodov, Far Eastern Federal University, Russia
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17:00-17:20	Synthesis of magnetically controlled sorbents based on iron-cobalt spinel to extract uranyl ions from aqueous media	Arthur Drankov, LDFU, Russia
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17:20-17:40	Selenium in the food chain waters of the Peter the Great Bay, Sea of Japan	Natalia Ivanenko, VSUES, Russia
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17:40-17:50	Discussion	
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Session ends

T05: Polar ocean research and explorations

<i>16:10-17:50</i>	T05-2: Polar ocean research and explorations	Alexander Charkin, Russia
<i>16:10-16:40</i>	Assessing the response of the atmosphere–sea ice–ocean system to severe weather events during freezeup in the Chukchi Sea	Mikhail K Pichugin, POI FEB RAS, Russia
<i>16:40-17:00</i>	Distribution of heavy metals in the bottom sediments of the Buor-Khaya Gulf (Laptev Sea)	Aleksey Ruban, National Research Tomsk Polytechnic University, Russia
<i>17:00-17:20</i>	Development of underwater gamma ray spectrometer for Environmental Research of the Arctic shelf	Ruziya Kelsingazina, National Research Tomsk Polytechnic University, Russia
<i>17:20-17:40</i>	Phytoplankton studies in the Polar Front region in April 2018	Veronika Vodopyanova, MMBI KSC RAS, Russia
<i>17:40-17:50</i>	CONDITIONS OF FORMATION OF PYRRHOTITE AND GREIGITE IN SEDIMENTS OF BAKCHAR DEPOSIT, WESTERN SIBERIA	Aleksey Mazurov, National Research Tomsk Polytechnic University, Russia

Session ends

T07: Undersea vehicles, robotics, acoustics

<i>16:10-17:30</i>	T07-1: Undersea vehicles and robotics (continued)	Chairs - Aleksandr Shcherbatyuk, Russia, and Alexander Inzartsev, Russia
<i>16:10-16:30</i>	Investigation of underwater pipeline inspection method for AUV based on laser line recognition	Mikhail Panin, IMTP FEB RAS, Russia
<i>16:30-16:50</i>	Development of PLM systems for designing marine robotized devices and underwater vehicles	Mikhail V. Omelianenko, FEFU, Russia
<i>16:50-17:10</i>	Strain-stress analysis of layers joints glass-metal composite pressure hulls of deep sea underwater vehicles	Alexandr Ratnikov, FEFU, Russia
<i>17:10-17:30</i>	Application of the cylindrical glass-metal composite shells manufactured by spin casting method for pressure hulls	Anna Bocharova, FEFU, Russia
<i>17:30-17:50</i>	Discussion	

Session ends

T11: Sustainable economy, ocean policy making and education

16:10-17:30	T11-2: Marine policy and integrated ocean management	Chairs - Victor Larin, Russia, and Vasiliy Zharikov, Russia
16:10-16:30	Japan's Ocean Policy: New Approach to the Development of Marine Resources	Elena Goriacheva, IHAE FEB RAS, Russia
16:30-16:50	Legal problems of coastal tourism development	Zhukovina Maria, FEFU, Russia
16:50-17:10	Conceptual Frameworks for development of the Integrated Ecosystem-Based Marine Management in the Russian Far East	Amrtatjuti V. Sereda, POI FEB RAS, Russia
17:10-17:30	The cruise tourists impression: the challenges and opportunities of tourism potential of Vladivostok	Ovcharenko Natalia, FEFU, Russia
17:30-17:50	Analysis of the cruise traffic determinants in Primorsky Krai	Elena Galenko, FEFU, Russia
	Session ends	
16:10-17:50	MC Robot: Lecture. Underwater robotics educational kits	Sergey Moun, Vladivostok Robotics Center, Russia

18:00-20:00 *Reception*

July 17, AM

08:30-09:00 *Registration*

09:00-11:00 **Plenary 3, Red Hall**

09:00-9:40	Baleen whale localization using a single-hydrophone: method, results, and perspectives	Julien Bonell, Woods Hole Oceanographic Institution, USA
09:40-10:20	Progress and challenge of ocean science in Indonesia for sustainable development in the Western Pacific Region	Zainal Arifin, Indonesian Institute of Sciences, Indonesia
10:20-11:00	Deep sea ecosystems in the northwestern Pacific	Andrey Adrianov, NSCMB FEB RAS, Russia

11:00-11:20 *Coffee break*

T01: Ocean dynamics and climate

<i>11:20-12:50</i>	T01-2: Observation and modeling of ocean processes	Chairs - Yuli Chashechkin, Russia, and Alexander Babanin, Australia
<i>11:20-11:50</i>	Lagrangian analysis of quasi-stationary Kamchatka trench eddies (<i>invited</i>)	Sergey Prants, Pacific Oceanological Institute of the Russian Academy of Sciences, Russia
<i>11:50-12:10</i>	Oceanographic conditions in recent years during the saury, sardine and mackerels feeding migrations east of the Kuril Islands	Elena I. Ustinova, Russian Research Institute of Fisheries and Oceanography, Pacific Branch (TINRO), Russia
<i>12:10-12:30</i>	Numerical simulations of the mesoscale circulation on the eastern Sakhalin shelf under sea-ice	Dmitry Stepanov, V.I.Ilichev Pacific Oceanological Institute, Russia
<i>12:30-12:50</i>	Variability of thermohaline characteristics at the continental slope off the Russian coast in the northwestern Japan Sea	Olga Trusenkova, POI FEB RAS, Russia

T02: Marine geology and geological resources

<i>11:20-12:40</i>	T02-2: Marine geology and geological resources	Chair -Ying Ye, China
<i>11:20-11:40</i>	Assessment of saltwater intrusion vulnerability in the coastal aquifers of Ninh Thuan province in the context of climate change	Pham Quy Nhan, Hanoi University of Natural Resources and Environment, Vietnam
<i>11:40-12:00</i>	Evidences of submarine environment in formation the Miocene basaltic andesite ignimbrites at Eastern volcanic belt, Kamchatka	Bergal-Kuvikas Olga, Institute of volcanology and seismology, Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry, Russia
<i>12:00-12:20</i>	Distribution of heavy metals in the bottom sediments of the Buor-Khaya Gulf (Laptev Sea)	Aleksey Ruban, National Research Tomsk Polytechnic University, Russia
<i>12:20-12:40</i>	Pyrolusite deposits from the deep-water basin of the Sea of Japan	Astakhova Nadezhda, POI FEB RAS, Russia

T03: Ocean environment and ecosystem

- 11:20-12:50* **T03-2: Ocean environment and ecosystem** **Chair - Yury Zuenko, Russia**
- 11:20-11:50* Investigating resilient coral reefs to climate change and anthropogenic disturbances in the Gulf of Thailand (*invited*) Dr.Thamasak Yeemin, Ramkhamhaeng University, Thailand
- 11:50-12:10* Recent changes in the upper epipelagic nekton community in the Western North Pacific Ocean off the Kuril Islands in relating to abundant migrations of chub mackerel and Japanese sardine in summer Alexey Khoruzhiy, Pacific Research Fisheries Center, Russia
- 12:10-12:30* Dynamics of the hydrological regime of the Sivash lagoon (Sea of Azov) in the context of water use system changes in the region Eremina Ekaterina, Marine Hydrophysical Institute RAS, Russia
- 12:30-12:50* A Study on Coral Habitat Evaluation and Impact Prediction of Ocean Thermal Energy Conversion Shigeru Tabeta, The University of Tokyo, Japan

T06: Ocean engineering, marine constructions and renewable energy

- 11:20-12:50* **T06-1: Marine engineering** **Chair - Yasuhiro Aida, Japan**
- 11:20-11:40* Effects of Arrangement of Mooring Tethers on Response Characteristics of a Floating Structure in Deep Sea with Steep Bathymetry Tomoki Ikoma, Nihon University, Japan
- 11:40-12:00* The justification of the hull shape and the characteristics of the rudder propeller unit of the cargo-passenger ferry class Ars5 Julia Bondarenko, G. I. Nevelskoy Maritime State University, Russia
- 12:00-12:20* Energy-resource saving materials based on nanodispersed polytetrafluoroethylene Aleksandr Tsvetnikov, IC FEB RAS, Russia
- 12:20-12:40* The necessity of a system approach to the composition of the Far fishing fleet Yana Domashevskaya, FEFU, Russia
- 12:40-12:50* Discussion

Session ends

T07: Undersea vehicles, robotics, acoustics

- 11:20-12:50* **T07-2: Underwater acoustics: measurements, simulation, applications** **Chair - Jeffrey Simmen, USA**
- 11:20-11:50* Acoustical Limnology: theory and applications Andrey Lunkov, GPI RAS, Russia

11:50-12:10	Time reversal signal processing for diagnostics of intense underwater gas leaks	Alexey Maksimov, POI FEB RAS, Russia
12:10-12:30	Applicability of the single-scattering approximation for impulse sounding of the ocean	Igor V. Prokhorov, Institute of Applied Mathematics FEB RAS
12:30-12:50	Reconstruction of a diffuse reflecting surface in the fluctuating ocean	Vladimir Kan, FEFU, Russia

T08: Ocean hazards

11:20-12:50	T08-1: Ocean hazards	Chair - DanLing Tang, China
11:20-11:50	Some dynamical Characteristics of Damrey Storm and their Impact on Marine Environment and coral Reefs on Northern Region of Khanh Hoa Province (Central Vietnam) (<i>invited</i>)	Bùi Hồng Long, Institute of Oceanography, Vietnam
11:50-12:10	The influence of climate change on tsunami-like solitary wave inundation over fringing reefs	Ning Yue, Zhejiang University, China
12:10-12:20	Research of resonant oscillations in marginal sea	Sergey Smirnov, IACP FEB RAS, Russia
12:20-12:50	Discussion	

Session ends

T10: Ocean observations

11:20-12:40	T10-2: Ocean remote sensing	Stefano Vignudelli, Italy, and Leonid Mitnik, Russia
11:20-11:40	Microwave sensing of the ocean and atmosphere from Meteor-M No. 2 and GCOM-W1 satellites	Leonid Mitnik, POI FEB RAS, Russia
11:40-12:00	The problem of distinguish phytoplankton and colored dissolved organic matter contribution into sea surface remote sensed reflectance spectra	Pavel Salyuk, POI FEB RAS, Russia
12:00-12:20	Estimation of wind drift component of sea surface currents velocities retrieved on satellite imagery	Marina Aleksanina, IACP FEB RAS, Russia
12:20-12:40	Improved CFOSAT wind vector retrievals with the use of collocated near-nadir and moderate angle measurements	Alexey Mironov, Russian State Hydrometeorological University, Russia

12:50-14:20	Lunch	
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July 17, PM

T01: Ocean dynamics and climate

14:20-15:50	T01-2: Observation and modeling of ocean processes (<i>continued</i>)	Chairs - Andrey Zatsepin, Russia, and Alexander Babanin, Australia
14:20-14:50	Sea fog and clouds in the coastal sea generated by cold front drawing jet stream downward and internal gravity waves in the coastal steep mountains (<i>invited</i>)	Hyo Choi, Atmospheric and Oceanic Disaster Research Institute, Korea
14:50-15:10	Hydrodynamics of a drop impact and splash: immiscible fluids	Yuli D. Chashechkin, IPMech RAS, Russia
15:10-15:30	Detection of breaking waves in single wave gauge records of surface elevation fluctuations	Dan Liberzon, The Technion - Israel Institute of Technology, Israel
15:30-15:50	Simulation of seasonal circulation in the Sevastopol Bay	Alexander Kubryakov, Marine Hydrophysical Institute, Russia

T02: Marine geology and geological resources

14:20-15:20	T02-2: Marine geology and geological resources (<i>continued</i>)	Chair - Ying Ye, China
14:20-14:40	Biological leaching of non-ferrous metals under the seabed	Yury Elkin, Pacific Institute of Bioorganic chemistry, Russia
14:40-15:00	Soils in coastal-marine ecosystems of the Japanese sea coast	Brikmans Anastasia V., FEFU, Russia
15:00-15:20	Discussion	

Session ends

T04: Ocean and sustainability of human life

14:20-15:40	T04-1: Ocean and sustainability of human life	Chair - Hideki Kohno, Japan
14:20-14:40	An Evaluation of Electro spray between the Charge Density and various Electrode Distances from Water/Biodiesel Emulsion	Chienhua Fu, Nihon University, Japan
14:40-15:00	Changes in oxidative stress markers based on electro chemical method reflect the condition supporting by antioxidants	Hitoshi Saito, BMD Inc., Japan

15:00-15:20	Studies on The Mechanism of Alzheimer's Disease in Early Diagnosis and Targeting Immuno Therapy	Hideki Kohno, Hoshi University, Japan
15:20-15:40	Conformational change of salt-tolerant glutaminase from marine bacterium	Kazuaki Yoshimune, Nihon University, Japan

T06: Ocean engineering, marine constructions and renewable energy

14:20-16:10	T06-2: Ocean renewable energy	Chair - Tomoki Ikoma, Japan
14:20-14:40	Effects of the Scale and Airchamber Volume of OWC Type WECs on Air pressure and Flow Rate	Shota Hirai, Nihon University, Japan
14:40-15:00	Behaviours of OWC Devices Installed on a Large Floating Structure and PTO Performance	Shoichiro Furuya, Nihon University, Japan
15:00-15:20	Effects of Projecting-Wall Thickness on Primary Conversion Performance of PW-OWC Type WECs	Kaori Sugo, Nihon University, Japan
15:20-15:40	Effects of Moon pools on Motion Responses of Barge-Based Floating Structures	Satsuya Moritsu, Nihon University, Japan
15:40-16:00	Applicability of the MPS Method to Performance Analysis of the OWC-WEC	Mitsuhiro Masuda, Tokyo University of Marine Science and Technology, Japan
16:00-16:10	Discussion	

Session ends

T07: Undersea vehicles, robotics, acoustics

14:20-16:00	T07-2: Underwater acoustics: measurements, simulation, applications (continued)	Chair - Julien Bonnel, USA
14:20-14:40	Methods for Improved Sea Bottom Image Quality	Evgeny Kovalenko, FEFU, Russia
14:40-15:00	An attempt of hydroacoustic localization of open-circuit scuba diver using low-frequency respiratory associated noises emitted into water	Vladimir Korenbaum, POI FEB RAS, Russia
15:00-15:20	On the sound attenuation in the sea with strong near-surface bubble layer	Vladimir A. Bulanov, POI FEB RAS, Russia
15:20-15:40	Perturbation of normal modes caused by bottom inhomogenities	Pavel Petrov, POI FEB RAS, Russia

15:40-16:00 Wide-angle mode parabolic equation with transparent boundary conditions and its applications in shallow water acoustics
Andrey Tyshchenko, FEFU, Russia

T09: Fisheries and aquaculture

14:20-16:10 **T09-1: Fisheries Stock Enhancement** **Chair - Ken Leber, USA**
14:20-14:40 The functional structure of the habitat area of the Greenland halibut
Olga Maznikova, VNIRO, Russia

14:40-15:00 Post-Release Survival of Hatchery-Reared Juvenile Snook *Centropomus Undecimalis*: The Influence of Habitat Quality
Ken Leber, MOTE Marine Laboratory, USA

15:00-15:20 Study on Symbiotic System of Sea Urchin (*Strongylocentrotus nudus*) and Kombu (*Saccharina japonica*) in the Great East Japan Earthquake area
Yusuke Bessho, Kagawa University, Japan

15:20-15:40 Maintaining level of fish packages of Pacific salmon in the Kakhalin – Kuril region
Anna Litvinenko, Sakhalin State University, Russia

15:40-16:00 Conceptual designs of coastal fishing vessels
Ekaterina Soloveva, FESTFU 'Dalrybtuz', Russia

16:00-16:10 Discussion

Session ends

T10: Ocean observations

14:20-15:40 **T10-2: Ocean remote sensing (continued)** **Stefano Vignudelli, Italy, and Leonid Mitnik, Russia**
14:20-14:40 Sea water density estimation on surface internal wave footprints
Anatoly Alexanin, IACP FEB RAS, Russia

14:40-15:00 Shoreline evolution in an embayed beach adjacent to tidal inlet: The impact of anthropogenic activities
Rui Zhang, SunYat-sen University, China

15:00-15:20 Surface Current Retrieval from Sentinel-2 Multispectral Imagery
Maria Yurovskaya, Marine Hydrophysical Institute, Russia, Russian State Hydrometeorological Institute, Russia

15:20-15:40 Discussion

Session ends

16:10-16:30 *Coffee break*

T01: Ocean dynamics and climate

16:30-17:50	T01-3: Extreme metocean conditions and tsunami	Chairs -Alexander Babanin, Australia, and Takuji Waseda, Japan
16:30-17:00	Waves in the refreezing eastern Chukchi Sea during 2018 Mirai Cruise (<i>invited</i>)	Takuji Waseda, The University of Tokyo, Japan
17:00-17:20	Directional wave spectrum characteristics near the typhoon path	Taerim Kim, KSU, Korea
17:20-17:40	Potential Impact of the Pacific Decadal Oscillation and Sea Surface Temperature in the Tropical Indian Ocean–Western Pacific on the Variability of Typhoon Landfall on the China Coast	Sheng Chen, South China Sea Institute of Oceanology, Chinese Academy of Sciences, China
17:40-17:50	Discussion	

Session ends

T02: Marine geology and geological resources

16:30-16:50	T02-3: Sedimentology and paleoceanography of the Pacific Ocean	Chairs - Xuefa Shi, China, and Sergey Gorbarenko, Russia
16:30-16:50	Mid-late Holocene rainfall variation in Taiwan: A high-resolution multi-proxy record unravels the dual influence of the Asian monsoon and ENSO	Chen Jinxia, First Institute of Oceanography, MNR, Qingdao, China
16:50-17:10	Recent geochemical records of sediment organic matter along the Asia coastal seas under the natural climate forcing and anthropogenic impacts	Limin Hu, First Institute of Oceanography, Ministry of Natural Resources, China
17:10-17:30	Magnetic stratigraphy of the last 1.9 Ma from Alaska Gulf: constraint for a drastic increase of erosion rate at mid-Pleistocene	Shulan Ge, First Institute of Oceanography, Ministry of Natural Resources, China
17:30-17:50	Mechanism for Late Pleistocene paleomagnetic variations in subarctic North Pacific sediments: Dipole vs non-dipole fields	Yi Zhong, Southern University of Science and Technology, China

T04: Ocean and sustainability of human life

16:10-17:30	T04-1: Ocean and sustainability of human life (<i>continued</i>)	Chair - Hideki Kohno, Japan
16:30-16:50	Human factor of maritime navigation	Sergey Fadushin, FEFU, Russia

16:50-17:10 Interpretation of the Principle of Human Common Inheritance of Property in International Law Jia Li, Dalian Ocean University, China

17:10-17:30 A Study of Residence Space Corresponding to Environmental Transformation Seen in TONLE SAP Lake in Cambodia Ryo Sugahara, Nihon University, Japan

T06: Ocean engineering, marine constructions and renewable energy

16:30-17:50 **T06-3: Ice field engineering** **Chair - Aleksandr Bekker, Russia**

16:30-16:50 Ekranoplan - a transformer for coastal waters Konstantin Gribov, FEFU, Russia

16:50-17:10 Seaworthy all-terrain vehicles on air-supported tracks for effective construction and functioning of bases in the Arctic A.I. Azovtsev, G.I. Nevelskoy Maritime State University, Russia

17:10-17:30 Improving the efficiency of ships in Russian ice conditions Nikolay Pets, FEFU, Russia

17:30-17:50 Features of the side framing navigation ships (INS) under the action of ice loads Ivan Druz, G.I. Nevelskoy Maritime State University, Russia

Session ends

T07: Undersea vehicles, robotics, acoustics

16:30-17:30 **T07-2: Underwater acoustics: measurements, simulation, applications (continued)** **Chair - Andrey Lunkov, Russia**

16:30-16:50 On the sound scattering by bubble clouds and plankton communities in the upper layer of the sea Andrey Storozhenko, POI FEB RAS, Russia

16:50-17:10 The Effective Medium Model of Periodic Structure Manipulating Underwater Acoustic Wave Yongdu Ruan, Zhejiang University, China

17:10-17:30 Modelling of sound propagation in complicated shallow Mikhail Sorokin, POI FEB RAS, Russia

T09: Fisheries and aquaculture

16:30-17:50 **T09-2: Sustainable aquaculture production systems and strategies** **Chair - Kevan Main, USA**

16:30-16:50 Principles and methodology for application of the Ecosystem Approach to Aquaculture in the Russian Far East Amrtatjuti V. Sereda, POI FEB RAS, Russia

16:50-17:10	Advances in Land-Based Marine Integrated Aquaculture Systems Nutritional efficiency of juvenile Far Eastern sea cucumber (<i>Apostichopus japonicus</i>) when grown under controlled conditions during the summer maximum temperatures	Kevan Main, Mote Marine Laboratory, USA
17:10-17:30	Prospect of using enzyme algae processing in the feed additives technology for mariculture	Tigran Gevorgyan, NSCMB, FEB RAS, Russia
17:30-17:50		Aleksandr Rogov, Pacific branch of VNIRO (TINRO), Russia

Session ends

T10: Ocean observations

16:30-16:50	T10-3: Ocean observations Strong tidal currents over the eastern Sea of Okhotsk shelf and shallow banks in the Western Subarctic Pacific	Vyacheslav Lobanov, Russia, and Olga Trusenkova, Russia
16:30-16:50		Konstantin Rogachev, POI FEB RAS, Russia
16:50-17:10	Wintertime Guangdong coastal currents successfully captured by cheap GPS drifters	Hongyang Lin, Xiamen University, China
17:10-17:30	Observations of the Luzon Cold Eddy in the northeastern South China Sea in May 2017	Zhida Huang, Xiamen University, China
17:30-17:50	Short-term variability of thermohaline characteristics in the northwestern Japan/East Sea from moored buoy data in 2013-2016.	Dmitriy D. Kaplunenko, POI FEB RAS

July 18, AM

08:30-09:00

Registration

09:00-11:00

Plenary 4, Red Hall

09:00-9:40	Compatible laboratory modelling and numerical simulation of structured oceanic processes	Yuli Chashechkin, IPMech RAS, Russia
09:40-10:20	Coastal sea level monitoring using satellite radar altimetry: a decade of progress and beyond	Stefano Vignudelli, Consiglio Nazionale delle Ricerche (CNR-IBF), Italy

10:20-11:00	Building on-the-ground capacity in scaling-up integrated coastal management: The role of higher education in implementing SDG 14 and other related goals	Johanna Diwa-Acallar, PEMSEA, Regional Headquarters, Philippines
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11:00-11:20 *Coffee break*

T01: Ocean dynamics and climate

11:20-12:50	T01-2: Observation and modeling of ocean processes (<i>continued</i>)	Chair - Andrey Zatsepin, Russia, and Dan Liberzon, Israel
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11:20-11:40	QNLN's High-Resolution Earth Prediction System: A Local Adaptive Strategy to Global Change - Present Status and Future Plan	Shaoqing Zhang, Ocean University of China, China
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11:40-12:00	CMIP6 Simulations with a coupled model--CAS FGOALS3	Yongqiang Yu, LASG, Institute of Atmospheric Physics, China
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12:00-12:20	Discerning the world ocean wave fields from long-term spectral wave data	Jesus Portilla, Escuela Politecnica Nacional, Ecuador
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12:20-12:40	Mesoscale and submesoscale features of the circulation in the Peter the Great Bay (Japan/East Sea)	Fayman Pavel, V.I. Il'ichev Pacific Oceanological Institute FEB RAS, Russia
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12:40-12:50 Discussion

Session ends

T02: Marine geology and geological resources

11:20-12:40	T02-3: Sedimentology and paleoceanography of the Pacific Ocean (<i>continued</i>)	Chairs - Xuefa Shi, China, and Sergey Gorbarenko, Russia
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11:20-11:40	Evolution of the sedimentary environment and its driving mechanism in the Sea of Japan since the last glaciation	Xuefa Shi, First Institute of Oceanography, MNR, China
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11:40-12:00	Millennial scale Cycles in the Bering Sea during Penultimate and Last Glacials; Similarities and Differences	Gorbarenko Sergey, POI FEB RAS, Russia
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12:00-12:20	Millennial-scale variations in intermediate water ventilation of the western subtropic North Pacific	Jianjun Zou, First Institute of Oceanography, MNR, China
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12:20-12:40	High resolution colour stratigraphy of the Japan Sea sediments	Bosin Aleksandr, POI FEB RAS, Russia
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T03: Ocean environment and ecosystem

- 11:20-12:40 **T03-2: Ocean environment and ecosystem Chair - Yury Zuenko, Russia**
(continued)
- 11:20-11:40 Some results of four deep-sea Russian-German expeditions 2010-2016 in the NW Pacific
Marina Malyutina, NSCMB FEB RAS, Russia
- 11:40-12:00 Hypoxia of bottom waters at seawater wedge of the Razdolnaya River estuary (Amurskiy Bay, Sea of Japan)
Pavel Semkin, POI FEB RAS, Russia
- 12:00-12:20 Presumption of Distribution and Behavior of *Sebastes Thompsoni* Using Stable Isotope Ratio
Shinsuke Tosha, The Japanese Institute of Fisheries Infrastructure and Communities, Japan
- 12:20-12:40 Mapping of Underwater Landscapes in Coastal Shallow Waters in the Peter the Great Gulf Using Remote Sensing
Kirill Bazarov, PGI FEB RAS, Russia

T04: Ocean and sustainability of human life

- 11:20-12:40 **T04-1: Ocean and sustainability of human life Chair - Hideki Kohno, Japan**
(continued)
- 11:20-11:40 “Kombu” a traditional edible seaweed in Japan, its processed foods and health functions
Toshiaki Kamitani, Fujicco. Co. Ltd., Japan
- 11:40-12:00 Commercial resources brown algae in coastal zone Sakhalin and Kuril Islands and their use
Dmitrii Galanin, Russian Research Institute of Fish Industry and Oceanography (Sakhalin branch), Russia
- 12:00-12:20 Discovery of new marine natural products by cross-talk of hydrothermal vent fungal-bacterial community
Bin Wu, Zhejiang University, China
- 12:20-12:40 The Application and New Development of the Principle of Inheritance of Human Common Property in the International Seabed Area Legal System
Wang Yan, Dalian Ocean University, China

T06: Ocean engineering, marine constructions and renewable energy

<i>11:20-12:20</i>	T06-4: Port and harbor engineering	Chair - Mitsuhiro Masuda, Japan
<i>11:20-11:40</i>	Fundamental Study on the Characteristics of the Movement of Ships and the Characteristics of Mooring cable tension in non-berth mooring	Hiroaki Kihara, Nihon University, Japan
<i>11:40-12:00</i>	THE DEVELOPMENT E-LOGISTICS SYSTEM WEIGHT OF THE SEA CONTAINERS IN PORTS	Ivan Druz, G.I. Nevelskoy Maritime State University, Russia
<i>12:00-12:20</i>	The stability problem of dry dock	Maksim Kitaev, FEFU, Russia

Session ends

<i>12:20-13:00</i>	T06-5: Marine constructions for oil and gas exploration and technology	Chair - Mitsuhiro Masuda, Japan
<i>12:20-12:40</i>	An Experimental Study on Motion Behaviours of a Crane Ship and a Suspended Pile in Installing an Offshore Wind Turbine System	Atsuki Sano, Nihon University, Japan
<i>12:40-13:00</i>	A simplified model for umbilical cable by using Carrera unified formulation	Deng Yu, Ocean College of Zhejiang University, China

Session ends

T07: Undersea vehicles, robotics, acoustics

<i>11:20-12:40</i>	T07-2: Underwater acoustics: measurements, simulation, applications (continued)	Chairs - Pavel Petrov, Russia, and Aleksei Kiryanov, Russia
<i>11:20-11:40</i>	Approach for designing an underwater acoustic networks for Arctic and North-Western Pacific regional seas	Aleksandr Rodionov, FEFU, Russia
<i>11:40-12:00</i>	Delay Tolerant and Concurrent Transmission MAC Protocol for Underwater Acoustic Sensor Networks	Fengzhong Qu, Zhejiang University, China
<i>12:00-12:20</i>	Some results of the studies of Beluga whales acoustic signals	Sergey Gorovoy, FEFU, Russia
<i>12:20-12:40</i>	The Effective Medium Model of Periodic Structure Manipulating Underwater Acoustic Wave	Liang Xu, Zhejiang University, China
<i>12:40-12:50</i>	Discussion	

Session ends

T10: Ocean observations

11:20-12:40	T10-3: Ocean observations (continued)	Vyacheslav Lobanov, Russia, and Olga Trusenkova, Russia
11:20-11:40	Wind wave and swell in the Japan/East Sea during the passage of typhoon Kong-rey	Vyacheslav A. Dubina, POI FEB RAS, Russia
11:40-12:00	Internal wave-turbulence interactions in the shelf near-bottom layers	Vadim Navrotsky, POI FEB RAS, Russia
12:00-12:20	Features of background internal waves and sound field variations on the Sea of Japan shelf	Alexandra Kosheleva, POI FEB RAS, Russia
12:20-12:40	Application of coastal seismic stations for estimation of sea wave characteristics in adjacent areas	Anna Goncharova, POI FEB RAS, Russia
12:50-14:20	Lunch	

July 18, PM

T02: Marine geology and geological resources

14:20-16:00	T02-3: Sedimentology and paleoceanography of the Pacific Ocean (continued)	Chairs - Xuefa Shi, China, and Sergey Gorbarenko, Russia
14:20-14:40	Microdolomite grains in Japan Sea Gas Hydrate: What do they tell us about present and past hydrate growth?	Glen Snyder, Meiji University, Japan
14:40-15:00	Paleoceanography changes in the Detroit Seamount (Pacific Ocean) during Pleistocene and Holocene according to diatoms	Artemova Antonina, POI FEB RAS, Russia
15:00-15:20	Morpholithodynamic processes, structure and development of the coasts of the contact zone of the subarctic sea and ocean (on the example of Iturup Island)	Viktor Afanasiev, Institute of Marine Geology and Geophysics, FEB RAS, Russia
15:20-15:40	Local oxygenation in the midst of widespread regional anoxia during the last glacial maximum in the Japan Sea — the case of Tatar Trough	Yoshitaka Kakuwa, Meiji University, Japan
15:40-16:00	Sea-level and climate signature recorded in the orbital-forced continental margin deposits over the last 1 Ma: New perspectives from the Bohai Sea	Zhengquan Yao, First Institute of Oceanography, MNR, China

Session ends

T03: Ocean environment and ecosystem

- 14:20-16:00 **T03-2: Ocean environment and ecosystem Chair - Yury Zuenko, Russia**
(*continued*)
- 14:20-14:40 Studies of bacterioplankton and chlorophyll a in the polar frontal zone region Tatiana Shirokolobova, NSCMB FEB RAS, Russia
- 14:40-15:00 Phytoplankton primary production of northeastern shelf of Sakhalin Island during summer 2016 Petr Tishchenko, POI FEB RAS, Russia
- 15:00-15:20 Seasonal, inter diurnal and diurnal variability of thermohaline conditions and chlorophyll “a” studied by WQM Wet Labs in the coastal area in Sea of Japan Vladimir Shulkin, PGI FEB RAS, Russia
- 15:20-15:40 Mapping the distribution of *Karenia mikimotoi* cyst along the coast of China Yingzhong Tang, Institute of Oceanology, Chinese Academy of Sciences, China
- 15:40-16:00 Remote Sensing based Algorithms of Net Community Production in the Atlantic Ocean Polina Lobanova, Saint Petersburg State University, Russia

Session ends

T04: Ocean and sustainability of human life

- 14:20-16:00 **T04-1: Ocean and sustainability of human life Chair - Hideki Kohno, Japan**
(*continued*)
- 14:20-14:40 Beneficial effects of seaweeds and seaweed compounds on human health -Toward popularization and establishment of habit of eating seaweeds in Western countries (invited) Juro Hiromi, Nihon University, Japan
- 14:40-15:00 Addition Effects on *Marinobacter* sp. and *Alcaligenes* sp. to Give to Ocean Sludge Decomposition using Circulation-type Purification System Tomoe Komoriya, Nihon University, Japan
- 15:00-15:20 Copper complex for the removal of Biofilm Urara Ishizaki, Lion Hygiene Co.,Ltd., Japan
- 15:20-15:40 Perspective of Russian seaweeds as new and sustainable bioresource; An outline of the Russia-Japan collaborative research project. Yasuyoshi Torii, Nihon University, Japan
- 15:40-16:00 Discussion

Session ends

T06: Ocean engineering, marine constructions and renewable energy

<i>14:20-16:00</i>	T06-6: Tsunami engineering	Chair - Koichi Masuda, Japan
<i>14:20-14:40</i>	A Fundamental Study on Elastic Response Analysis at a Tsunami Drifting Object Collide with a Structure Applying Elastic Model of MPS Method	Yasuhiro Aida, Nihon University, Japan
<i>14:40-15:00</i>	Development and Verification of the New Higher Performance Anchor Against Tsunami and Storm	Yosuke Oikawa, Tokyo University of Marine Science and Technology, Japan
<i>15:00-15:20</i>	Verification of the Tsunami Protection Measures for the vessels moored at Wharves Against the Backwash Phenomenon	Wataru Takahata, Tokyo University of marine Science and Technology, Japan
<i>15:20-15:40</i>	Study on surge control function of the artificial fishing reef in the irregular waves	Akito Nakamura, Kagawa University, Japan
<i>15:40-16:00</i>	A Fundamental Study on Development of Port Tsunami Hazard Map for Business Continuity After Tsunami Disaster Occurrence	Yuta Fukunaga, Nihon University, Japan

Session ends

T10: Ocean observations

<i>14:20-15:40</i>	T10-3: Ocean observations (continued)	Vyacheslav Lobanov, Russia, and Olga Trusenkova, Russia
<i>14:20-14:40</i>	Development of an In-field Nutrient Analysis System and its Application in Coral Communities of Hong Kong	Sitong Qin, City University of Hong Kong, China
<i>14:40-15:00</i>	Ultrasound laser-induced breakdown spectroscopy for the analysis of elements and impurities in liquids	Alexey Bulanov, POI FEB RAS, Russia
<i>15:00-15:20</i>	Design and Ocean Implementation of Adaptive Noise Canceler Based on Recursive Least Squares Algorithm	Xiangguang Zhang, Institute of Oceanology, Chinese Academy of Sciences, China
<i>15:20-15:40</i>	Discussion	

Session ends

RTP: Round Table for Press (Red Hall)

14:20-16:00 RTP: Toward the UN Decade of Ocean Science for Sustainable Development: current challenges in the Pacific

16:00-16:20 *Coffee break*

16:20-18:00 **Poster session**

July 19, AM

08:30-09:00 *Registration*

09:00-10:20 **Plenary 5, Red Hall**

09:00-9:40 Coastal observational site for permanent oceanographic research and testing of new measuring techniques: case of the Black Sea
Andrey Zatsepin, IO RAS, Russia

09:40-10:20 Acoustics of shallow water areas with gas saturated sediments
Andrey Lunkov, GPI RAS, Russia

10:20-10:40 *Coffee break*

10:40-12:00 **Plenary 6, Red Hall**

10:40-11:20 Oceanic applications of ALOS PALSAR imagery
Leonid Mitnik, POI FEB RAS, Russia

11:20-12:00 Recent changes in the Okhotsk Sea ecosystem
Yury Zuenko, Pacific Branch of VNIRO (TINRO), Russia

12:00-13:00 *Lunch*

13:00-15:00 Summary discussion/Closing session

Posters

T01: Ocean dynamics and climate

T01-1: Changing climate and ENSO complexity and modulation

1

The 21st-Century El Niño: Why is it so different?

Jin-Yi Yu, University of California, USA

2	Contrasting the Skills and Biases of Deterministic Predictions for the Two Types of El Nino	Fei Zheng, Institute of Atmospheric Physics, CAS, China
3	Effects of westerly wind bursts on ENSO based on CESM	Youmin Tang, University of Northern British Columbia, Canada
4	Uncertainty in the change of ENSO's amplitude under global warming: Role of the response of atmospheric circulation to SST anomalies	Jun Ying, Second Institute of Oceanography, Ministry of Natural Resources, China
 T01-2: Observation and modeling of ocean processes		
1	Patterns of the Deep convection in the Greenland Sea	Aleksandr M. Fedorov, Saint-Petersburg State University, Nansen environmental and remote sensing center, Saint-Petersburg, Russia
2	Vortex-Vortex interactions in the Lofoten Basin of the Norwegian Sea	Aleksandr M. Fedorov, Saint-Petersburg State University, Nansen environmental and remote sensing center, Saint-Petersburg, Russia
3	Clustering floating particles in velocity field with stochastic component and regular component of the Japan/East Sea circulation	Dmitry Stepanov, V.I.Ilichev Pacific Oceanological Institute, Russia
4	Wave Attractors in Laboratory and Environment	Evgeny Ermanyuk, Lavrentyev Institute of Hydrodynamics SB RAS, Russia
5	Recent decades Sea Surface Salinity Variability and its Relationship with Fresh Water Flux in the Northern Pacific	Hai Zhi, College of Atmospheric Sciences, Nanjing University of Information Science and Technology, Nanjing, China
6	Long-term changes in waters of the Kamchatka Current eddies	Konstantin Rogachev, V.I. Ilichev Pacific Oceanological Institute, Russia
7	Salt, heat and mass fluxes through the Lofoten Basin	Lev Naumov, Saint Petersburg State University (SPBU), Russia
8	Eddy-induced intrusion of saline Kuroshio water into the northern South China Sea	Lili Zeng, South China Sea Institute of Oceanology, China

9	Variability peculiarities in the of atmosphere force centers above the Far East during 1980-2017 summer periods and statistics processing of timer data parameters to identify these centers	Tatyana Shatilina , TINRO-center, Russia
10	Features of winter thermohaline characteristics according to reanalysis ARMOR 3D in the Labrador sea	Vladimir Travkin, SPBU, Russia
11	Study of seasonal variability of amount and thermohaline features of mesoscale eddies in the Lofoten Basin	Vladimir Travkin, SPBU, Russia
12	Regularities of formation and distribution of continental runoff under the influence of seasonal variability of forcing: the Black Sea North-Western shelf case study	Tsyganova Marina, Marine Hydrophysical Institute of RAS, Russia
13	Heat and Salt Transports by Mesoscale Eddies in the Lofoten Basin of the Norwegian Sea	Vadim Zinchenko, Saint Petersburg State University, Russia
14	Statistical analysis of mesoscale eddy activity in the Lofoten Basin of the Norwegian Sea	Vadim Zinchenko, Saint Petersburg State University, Russia
15	ON THE ROLE OF VARIOUS FACTORS IN THE FORMATION OF THE SEA LEVEL TREND	Valeriy Nikolayevich Malinin, Russian State Hydrometeorological University, Russia
16	Tilt of mean sea level along the coast of mainland China	Wenqiang Lin, Xiamen University, China
17	A modified vertical mixing scheme and its improved simulations in the tropical Pacific	ZHU YUCHAO, Institute of Oceanology Chinese Academy of Sciences, China
18	Characteristics of the variability of the parameters of the marine environment and meteorological fields in the coastal zone of the Black Sea	Simonova Yuliya Viktorovna, Federal State Budget Scientific Institution «Black Sea Hydrophysical Proving Ground of RAS», Russia

T01-3: Extreme metocean conditions and tsunami

1	Momentum fluxes in the wind-wave boundary layer during Tropical Cyclones Olwyn and Veronica	Joey Jeff Voermans, University of Melbourne, Australia
2	Variation of pCO ₂ concentrations induced by tropical cyclones in the middle-latitude surface oceans: a comparative study	Haijun Ye, South China Sea Institute of Oceanology, Chinese Academy of Sciences, China

3 A study of the winter subtropical cyclone in the North-Western Pacific ocean using the method of Hart. Nadezhda Kotovich, FEFU/FERHRI, Russia

T02: Marine geology and geological resources

T02-1: Gas hydrates in the Pacific Ocean

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| 1 | Deep-sea piston-gravity pressure coring technology | Chen Jiawang, Ocean College, Zhejiang University, China |
| 2 | Bacterial abundance and microbiological oxidation of methane in bottom sediments of the Sea of Japan | Ponomareva A.L., POI FEB RAS, Russia |
| 3 | Age of the accumulation of gas hydrates, development of a low-salinity water cap, and the occurrence of gigantic submarine slides in Tatar Trough and Tatar Strait | Ryo Matsumoto, Gas Hydrate Research Laboratory Meiji University, Japan |
| 4 | Environmental monitoring and evaluation of China's first offshore natural gas hydrate production test in the South China Sea, 2017 | DONG Yifei, Zhejiang University, China |

T02-2: Marine geology and geological resources

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| 1 | Pyrolysis–gas chromatography–mass spectrometry of insoluble organic matter of the Cape Muostach sediments (Bykovsky Peninsula, Laptev sea coast) | Grinko Andrey, National Research Tomsk Polytechnic University, Russia |
| 2 | Signs of vortex geodynamics in the western Pacific morphostructure | Lee Natalia Sergeevna, POI FEB RAS, Russia |
| 3 | Potentially diamondiferous vortex structure of the Sea of Japan | Lee Nataliy Sergeevna, POI FEB RAS, Russia |
| 4 | Comparative transcriptomic analysis of two neighbouring Alvinocaridid shrimps in hydrothermal vent for micro-environmental adaptation | Li-Sheng He, the Institute of Deep-sea Science and Engineering, Chinese academy of Sciences, China |
| 5 | Relation between formation of ooidal ironstones and Cretaceous-Eocene warming events on example Bakchar deposit, south-east Western Siberia | Maxim Rudmin, Tomsk Polytechnic University, Russia |
| 6 | INDUSTRIAL PROCESSING OF COASTAL-MARINE PLACERS OF TITANOMAGNETITE | Molchanov Vladimir, Far-Eastern Geological Institute FEB RAS, Russia |

- 7 Fluid permeable fracture zones of the Northwest Pacific, linear gashydrate ranges in the Sea of Okhotsk Area and prospects for hydrocarbon resource potential Vadim Khomich , Far East Geological Institute FEB RAS, Russia
- 8 A rapidly circulated tidal-influenced hydrothermal system temporarily cooled by a tropical storm XueGang Chen, Zhejiang University
- 9 Research on the Liability and Compensation System of Sponsoring States Parties in the Area Development Yan Tianmei, Dalian Ocean University
- 10 The role of tectonics on evolution of the Red River delta, North Vietnam Phung Van Phach, IMG VAST, Vietnam
- 11 SPATIAL CORRELATION OF SIMUSHIR EARTHQUAKES WITH THE BLOCK STRUCTURE OF TECTONIC DESTRUCTION ZONE IN THE FRONTAL SLOPE OF CENTRAL KURIL REGION Maxim Valitov, POI FEB RAS, Russia

T02-3: Sedimentology and paleoceanography of the Pacific Ocean

- 1 The protection of cold seas shores Afanasiev Viktor Viktorovich, Institute of Marine Geology and Geophysics, FEB RAS, Russia
- 2 Alkenone reconstructions of the subarctic Northwestern Pacific surface hydrography and upper ocean stratification since the last glacial Min-Te Chen, National Taiwan Ocean University, Taiwan
- 3 Initial paleoceanographic data of foraminifera and diatom fossils from the Tatar Trough in the northern part of the Japan Sea Takeshi Oi, Meiji University, Japan
- 4 Sedimentation history and environment changes in the Oga Bay (Novaya Zemlya, Kara Sea) for the last millennium Valeriy Rusakov, Vernadsky Institute of Geochemistry and Analytical Chemistry RAS, Russia
- 5 Reconstruction of the formation conditions of the sedimentary cover of the island slope of the Kuril-Kamchatka Trench (based on radiolarian analysis) Vasilenko Lidiya, POI FEB RAS, Russia

6	Orbital-scale changes of IRD fluxes and sea ice conditions of the Sea of Okhotsk during the Last Glaciation and the Holocene (MIS 4–MIS 1)	Vasilenko Yuriy Pavlovich, POI FEB RAS, Russia
7	Radiolarians as indicator paleo-environmental conditions of the Sea of Okhotsk in the Late Pleistocene and Holocene	Yanchenko Elena Aleksandrovna, POI FEB RAS, Russia

T03: Ocean environment and ecosystem

T03-1: Marine pollution

1	The mollusk <i>Glycymeris yessoensis</i> as an indicator of sea pollution	Tatiana Mizgina, FEFU, Russia
2	Impact of copper nanoparticles on protein oxidation in <i>Mytilus trossulus</i>	Avianna Zhukovskaya, POI FEB RAS, Russia
3	Sorption of Radium and Thorium isotopes from seawater by MnO ₂ impregnated fiber	Illarion Dovhyi, Marine Hydrophysical Institute RAS, Russia
4	THRESHOLD CONCENTRATION OF HEAVY METALS IN ORGANISMS AND BIOACCUMULATION FACTOR	Elena Chernova, PGI FEB RAS, Russia
5	Wind stress water recirculation in the Peter the Great Bay	Talgat Kilmatov, FEFU, Russia
6	Chemical contamination of coastal areas off Vladivostok: more than 35 years history and effects on benthic population	Alexandr V. Moshchenko, FERHRI, Russia
7	Purification of high salt-bearing solutions from heavy metal and radionuclide contaminants by the method of nanofiltration	Viktor Kaptakov, IPCE RAS, Russia
8	Decontamination of Sea Water from ¹³⁷ Cs and ⁹⁰ Sr by Sorption Methods	Petr Zelenin, IPCE RAS, Russia
9	Distribution of ¹³⁷ Cs in the Surface Mixed Layer of the Black Sea in summer 2017	Vitaly Milyutin, IPCE RAS, Russia

T03-2: Ocean environment and ecosystem

1	Genotoxic monitoring of the coastal waters of Peter the Great Bay	Valentina Slobodskova, POI FEB RAS, Russia
2	The Okhotsk Sea de-oxygenizing influence on deep-water fishes	Nadezhda Aseeva, Pacific branch of VNIRO (TINRO), Russia

3	Vertical Change of the Deep-sea Sedimentary Microbial Community Composition in West Philippine Basin	Genmei Lin, Sun Yat-Sen University, China
4	Features of the pebble beaches formation of the Southern Coast of Crimea	Kazakov S.I., FSBSI Black Sea Hydrophysical Proving Ground of RAS, Russia
5	Genomic insights into metabolic diversification of methanotrophic archaea in cold seep sediments in the South China Sea	Yong Wang, Institute of Deep-Sea Science and Engineering, CAS, China
6	Distribution of Polychaeta in the western and northern Barents Sea	Dikaeva Dinara, Murmansk Marine Biological Institute of the KSC RAS, Russia
7	Assessment of the phytoplankton state and ecosystem bio-productivity by the methods of mathematical modelling using satellite data	Pak Svetlana, IACP FEB RAS, Russia
8	Molecular cloning of cold shock domain-containing protein (CSP), heat shock protein 60 (Hsp60) and 10 (Hsp10) genes from the cosmopolitan and harmful dinoflagellate <i>Scrippsiella trochoidea</i> and their differential transcriptions responding to temperature st	Yunyan Deng, Institute of Oceanology, Chinese Academy of Sciences, China
9	Temperature variability and the response in fish communities during 1950-2018 in the Bering and Okhotsk Seas.	Gennady Khen, Pacific branch of VNIRO (TINRO), Russia
10	POC Export Regulated by Plankton Community Structure in a Subtropical Marginal Sea	Bangqin Huang, Xiamen University, China
11	Preliminary remote sensing observation of sea surface temperature increase during <i>Ulva prolifera</i> blooms	Sufen Wang, South China Sea Institute of Oceanology, Chinese Academy of Sciences, China
12	Mesozooplankton prey preference and the dynamics of a plankton population model	Evgeniya Giricheva, IACP FEB RAS, Russia

T04: Ocean and sustainability of human life

1	Social Vulnerability Assessment in the Coastal Zone of China	Lin Lin, Zhejiang University, China
2	Research on the Mechanism of Profit Distribution of the Common Inherited Property of Mankind	Xuchang, Dalian Ocean University, China

3	An Assessment of the Marine Eco-civilization Performance in Oujiang River Estuary Area, Zhejiang, China	Lin Ying, Zhejiang University, China
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T05: Polar ocean research and explorations

T05-1: Carbon cycle in the Arctic land - shelf system

1	Submarine ground-water discharge in the coastal waters of the Arctic seas	Alexander N. Charkin, POI FEB RAS, Russia
2	Mineralogical surface sediment properties and their influence on TerrOC distribution across the East Siberian Arctic Shelf	Elena Gershelis, Tomsk Polytechnic University, Russia
3	Marine CO ₂ system patterns in the Gulf of Anadyr during fall season	Irina Pipko, POI FEB RAS, Russia
4	The experience of using automatic degassing device for seawater to determine methane concentrations	Kosmach Denis Alekseevich, POI FEB RAS, Russia
5	Spatio-temporal changes in the chemical composition of the Ob River (Western Siberia)	Moiseeva Juliya, Tomsk Polytechnic University, Russia
6	Export of Suspended Particulate Matter to the East Siberian Shelf: Mesoscale of Interannual Variability	Oleg Dudarev, POI FEB RAS, Russia
7	Patterns of Terrestrial Organic Carbon Distribution in the Modern Sediments of East Siberian Shelf	Oleg Dudarev, POI FEB RAS, Russia
8	The shipboard observations of atmospheric methane concentration in the East Siberian Arctic seas during 2006-2018 years	Salyuk Anatoly, POI FEB RAS, Russia
9	A study of radon and thoron activity in the Siberian Arctic seas	Sergey Plastun, Tomsk Polytechnic University, Russia
10	Dissolved organic matter and its optical characteristics on the ESAS	Svetlana Pugach, POI FEB RAS, Russia

T05-2: Polar ocean research and explorations

1	Synoptic spreading and mixing dynamics of the Lena plume	Eduard Spivak, POI FEB RAS, Russia
2	Lithological features and organic matter of sediments in the south-eastern Laptev sea (Muostakh cape)	Tatyana Perevertaylo, Tomsk Polytechnic University, Russia

3	Geochemistry of rare earth elements in bottom sediments of the Arctic seas	Sattarova Valentina, POI FEB RAS, Russia
4	Dynamic of single seep: From bubbles stream to seepage area	Denis Chernykh, POI FEB RAS, Russia
5	Nonferrous, Noble, and Rare Metal Grains in the Chukchi Sea Bottom Sediments	Olga Kolesnik, POI FEB RAS, Russia
6	Bubbles in ice	Yuri Polovinka, POI FEB RAS, Russia

T06: Ocean engineering, marine constructions and renewable energy

1	Distant parametric reception of source fields and phenomena in the atmosphere, ocean and Earth crust by technologies of the non linear sonic hydroacoustics in marine environment	Korotchentsev Vladimir, FEFU, Russia
2	The numerical modelling of hydrodynamic characteristics of the propeller-rudder complex and turning capacity of the fishing vessel	Yana Domashevskaya, FEFU, Russia
3	Radio-hydroacoustic sound probing system for remote sensing of the atmosphere, ocean and Earth crust, monitoring their fields of different physical nature	Korotchentsev Vladimir, FEFU, Russia
4	The necessity of a system approach to the composition of the Far fishing fleet	Chekhranova Lydia Igorevna, FEFU, Russia
5	Influence of coating on corrosion of ship shell plates and structural elements of underwater parts of stationary floating structures	Druz Ivan, G. I. Nevelskoy Maritime State University, Russia
6	Finding of optimal characteristics at the initial steps of designing of multifunctional icebreaker	Azovtsev A.I., G. I. Nevelskoy Maritime State University, Russia
7	Online biomonitoring and immediate bioindication technology: Two years testing in the coastal area of the Barents Sea	Komarova Ekaterina, Southern Federal University, Russia

T07: Undersea vehicles, robotics, acoustics

T07-1: Undersea vehicles and robotics

1	Mechanical and physical–chemical properties of the composite glass layer	Alexandr Ratnikov, FEFU, Russia
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2	Creation of an underwater remotely operated vehicle for the implementation of laser induced breakdown spectroscopy in underwater measurements of the elemental composition of sea water and bottom sediments in real time conditions	Sergey Golik, FEFU, Russia
3	Development of methods for underwater units hulls fabrication	Alexandr Ratnikov, FEFU, Russia
4	The Research of Probability of Extended Ground Objects Inspection by the Use of Tethered Underwater Vehicle in the Mode of Movement Conjointly with Delivery Vessel	Sebto Alexandra, IMTP FEB RAS, Russia
5	Thermal stability of the cation exchanger KU-2*8	Belova Elena, IPCE RAS, Russia
6	The Future of Robotics in Deep Water Marine Mining	John Charles Wiltshire, University of Hawaii, USA
7	Development of fault detection and identification system for navigation sensors and thrusters of autonomous underwater vehicles	Aleksandr Zuev, IMTP FEB RAS, Russia
8	Development of algorithm for coordinating of navigation systems of the AUV group during their move in a desired formation	Eduard Mursalimov, IMTP FEB RAS, Russia
T07-2: Underwater acoustics: measurements, simulation, applications		
1	About the method of calculating acoustic anisotropy in minerals with a crystal structure	Vladimir Kim, FEFU, Russia
2	Shape estimate of a streamer of hydrophones towed by an Unmanned Surface Vessel	Wu YuQuan, Institute of Acoustics, Chinese Academy of Sciences, China
3	Qualification of the bubbles in the liquid by using the passive acoustic method	Zhen Cai, Zhejiang University, China
4	Selected research results of the ship noise studies in Peter the Great Bay, Sea of Japan	Sergey Gorovoy, FEFU, Russia
5	Acoustic sounding of large-scale ocean heterogeneities by a moving source	Natalia Diuldina, POI FEB RAS, Russia
6	The software package for modeling of the acoustic pulses propagation in 3D geo-acoustic waveguides by the mode parabolic equation method	Sergey Kozitskiy, POI FEB RAS, Russia

T08: Ocean hazards

1	Method for increasing probability of tsunami prediction using "gravitational" waves	Evgeniy Lisunov, FEFU, Russia
2	Numerical simulation of storm surges in the inland seas under different types of synoptic situations forcing	Lemeshko Egor Evgenievich, Marine Hydrophysical Institute RAS, Russia
3	Research on Legal Issues of Marine Disaster Emergency Response in China	Xincong Zhang , Dalian Ocean University, China
4	Exothermic processes in solutions of monoethanolamine in nitric acid	Ivan Skvortsov, IPCE RAS, Russia
5	The comparison of tsunami sedimentation zones with observed run-ups in the eastern and the southern Primorye	Ilya Lebedev, PGI FEB RAS, Russia

T10: Ocean observations

T10-2: Ocean remote sensing

1	Surface currents measured by SUCE drifters in the Daya Bay and along the eastern Guangdong coast, China	Jianyu Hu, Xiamen University, China
2	Quality assessment of altimetry data product DT18 in the North Atlantic	Lev Naumov, Saint Petersburg State University, Russia
3	Ka-band Sea Surface Backscatter at Gale Force Winds	Yury Yurovsky, Marine Hydrophysical Institute RAS, Russia

T10-3: Ocean observations

1	Surface currents measured by SUCE drifters in the Daya Bay and along the eastern Guangdong coast, China	Jianyu Hu, Xiamen University, China
2	Development of technology of monitoring the functional state and health of marine mammals	Egor Smolenskii, FEFU, Russia
3	Registration of wave and sea level fluctuations in the World Ocean coastal zones with the use of the live video on the Internet	Vitaly Fishchenko, POI FEB RAS, Russia
4	NEAR-GOOS: Developing sustained ocean observations for enhanced services in the northeastern Asian marginal seas	Vyacheslav Lobanov, IOC/WESTPAC Coordinating Committee for NEAR-GOOS, Russia
5	Water circulation under the ice cover of the Amurskii Bay	Alexander Lazaryuk, POI FEB RAS, Russia

6	Building the observation sub-network for the eco-monitoring purposes within the area of the Peter the Great Bay	Dmitriy D Kaplunenko, POI FEB RAS, Russia
7	Detemination of the microalgae species composition with fluorescence temperature curves of chlorohyll-a	Evgeniy Gamayunov, IACP FEB RAS, Russia
8	Observations of the enhanced diurnal tidal currents over the Bering Sea northern shelf and Aleutian Straits	Konstantin Rogachev, POI FEB RAS, Russia
9	Fluorescence temperature curves of marine microalgae chlorophyll-a	Aleksandr Popik, IACP FEB RAS, Russia
10	Doped Polyaniline coated Ag nano-Ag electrodes for rapid in-situ detection of bromide in seawater	QiujinWang, Zhejiang University, China
11	Multipurpose autonomous optical module for network underwater measurements of sea water fluorescence	Vladimir Krikun, POI FEB RAS, Russia
12	A Chemical Sensor with Ir/Ir(OH) _x pH Electrode and its Application in Aqueous Environments	Yifan Zhou, Zhejiang University, China

T11: Sustainable economy, ocean policy making and education

T11-1: Ecotourism, ecoprojects, marine education

1	Foundation of the Cosmic-Ecosystem Based Management: outlining a direction for the future	Amrtatjuti V. Sereda, POI FEB RAS, Russia
2	Research on marine information product quality certification and safety assessment technical specification	Gao Tong, National Marine Data and Information Service (NMDIS), China
3	Education as the basis of national security	Komashinskaia T.S., FEFU, Russia
4	Increasing abundance of Jellyfish in the shorelines of Bangladesh: Analyzing the policy framework for facing the challenges	Md Mizanur Rahman, Bangladesh Public Administration Training Centre, Bangladesh

T11-2: Marine policy and integrated ocean management

1	Maritime Economy in Russia's Pacific Maritime Policy	Volynchuk Andrey Borisovich, IHAE FEB RAS, Russia
2	Trends of Modern Geostrategic Dynamics: Maritime Regions	Sergei K. Pestsov, IHAE FEB RAS, Russia

3	Study on the Construction of Northeast Asia Maritime Silk Road Economic Belt	Peng Xumei, Dalian Ocean University, China
4	Determinants of maritime commercial power: an AHP-Entropy method	YI Xiao, Chung-Ang University, China
5	New Requirements for Legal Guarantee of Marine Eco-environment in Liaoning Province	Yang Siting, Dalian Ocean University, China
6	Research on the Marketization Allocation of China's Sea Area Utilization Right and Policy Proposals	Lijing Yang, South China Sea Institute of Planning and Environmental Research, China
7	Method of vulnerability mapping of sea-coastal zones to based on metric values	Karnatov, Murmansk Marine Biological Institute KSC RAS, Russia