

Monday, 18 Feb. 2013

Mombetsu Arts & Culture Center

Place: 1F Garinko

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| 9:00                | <b>【OPENING ADDRESS】</b> Chair, Satoshi Ono (Chair, Symposium Committee)<br>Yoshikazu Miyakawa (Mayor, City of Mombetsu) and<br><b>【K: SPECIAL LECTURES】</b>  |
| 9:10                | <b>K-1</b> Preliminary attempt for multilateral research cruise in the Amur River<br>Takayuki Shiraiwa (Hokkaido Univ.)   |
| 9:50                | BREAK   |
| 10:00               | <b>【W: WORKSHOP: AIR-ICE-SEA INTERACTION IN THE SEA OF OKHOTSK AND THE ARCTIC REGION】</b><br>Chair, Humio Mitsudera (Hokkaido Univ.)<br><b>Introduction</b><br><b>W-1</b> On the North Pacific shallow overturn<br>Humio Mitsudera (Hokkaido Univ.)   |
| 10:25               | <b>W-2</b> Coherent sea level variability in and around the Sea of Okhotsk<br>◇Takuya Nakanowatari and Kay I. Ohshima (Hokkaido Univ.)  |
| 10:50               | <b>W-3</b> Decada-scale co-variability in sea-ice extent between summer Arctic Ocean and winter Okhotsk Sea<br>◇Bunmei Taguchi and Masayo Ogi (JAMSTEC)   |
| 11:15               | <b>W-4</b> A factor controlling the summer sea-ice cover in the Arctic<br>Noriaki Kimura (Univ. Tokyo)  |
| 11:40               | <b>W-5</b> Impact of Arctic summer wind on ocean heat budget in sea ice reduction zone<br>◇Eiji Watanabe and Masayo Ogi (JAMSTEC)   |
| 12:05               | LUNCH   |
| 13:00               | <b>【SYMPOSIUM ON LIFE AND CULTURE OF THE PEOPLE RELATED TO SEA ICE】</b><br><i>(in Japanese language only)</i><br>Chair, Muneyuki Kotsugai (City of Mombetsu)<br>Theme: Let's Learn Together, Let's Play Together<br><b>Lecture 1:</b> Kuma-okuri (bear-worship feast) performed in Mombetsu, 60 years ago<br>Jirota Kitahara (Center for Ainu & Indigenous Studies, Hokkaido Univ.)<br><b>Lecture 2:</b> Sing songs, dance, and play with Ainu dialogue<br>MAREWREW |
| 16:00               | BREAK   |
| 16:10<br> <br>17:10 | <b>【K: SPECIAL LECTURES】</b> <i>(in Japanese language only)</i><br><b>K-2</b> The eve of a revolution, "Hypothesis of sea-floor spreading"<br>-A story of the Emperor Seamount Chain -<br>Takao Nakajin (Former, Tokai Univ.)   |
| 18:30               | WHITE CONCERT < OKHOTSK SEA ICE MUSEUM >  |

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| 10:00 | <p><b>【WORKSHOP: OIL POLLUTION】</b> <span style="float: right;"><i>(in Japanese language only)</i></span></p> <p>· OIL POLLUTION PREVENTION ALONG THE COAST OF HOKKAIDO</p>  |
| 12:00 | LUNCH  |
| 13:00 | <p><b>【W: WORKSHOP: AIR-ICE-SEA INTERACTION IN THE SEA OF OKHOTSK AND THE ARCTIC REGION】</b><br/>Chair, Tomohiro Nakamura (Hokkaido Univ.)</p> <p><b>W-6</b> Ensemble simulations of the global coupled ocean–sea-ice system<br/>◇Nobumasa Komori, Bunmei Taguchi, Akira Yamazaki (JAMSTEC), Takeshi Enomoto (JAMSTEC/ Kyoto Univ.) and Takemasa Miyoshi (RIKEN/ JAMSTEC/ Univ. Maryland, USA)</p> |
| 13:20 | <p><b>W-7</b> Numerical experiments on a polar low developed over the Barents Sea in January 2011<br/>◇Taku Mitsui (Nagasaki Univ./ JAMSTEC), Jun Inoue (JAMSTEC/ NIPR) and Atsuyoshi Manda (Nagasaki Univ.)</p>   |
| 13:40 | <p><b>W-8</b> Impact of Arctic sea-ice retreat on the recent change in cloud-base height during autumn<br/>◇Kazutoshi Sato (Hirosaki Univ./ JAMSTEC), Jun Inoue (JAMSTEC/ NIPR) and Yasu-Masa Kodama (Hirosaki Univ.)</p>  |
| 14:00 | <p><b>W-9</b> Mapping of sea ice production in the Arctic Ocean using AMSR-E thin ice thickness algorithm<br/>◇Katsushi Iwamoto (NIPR/ Niigata Univ.), Kay I. Ohshima (Hokkaido Univ.) and Takeshi Tamura (NIPR)</p>   |
| 14:20 | BREAK  |
| 14:30 | <p style="text-align: right;">Chair, Noriaki Kimura (Univ. Tokyo)</p> <p><b>W-10</b> Characteristic of seasonal variability the mixed layer in the northwestern Japan Sea<br/>◇Maya Kobayashi, Jinro Ukita and Meiji Honda (Niigata Univ.)</p>   |
| 14:50 | <p><b>W-11</b> Numerical study on coastal currents associated with bottom boundary layer over a sloping shelf : reproduction of Soya Warm Current and cold water belt<br/>◇Miho Ashizaki, Humio Mitsudera (Hokkaido Univ.) and Toru Miyama (JAMSTEC)</p>   |
| 15:10 | <p><b>W-12</b> Sea ice production and reduction in the Sea of Okhotsk<br/>◇Yuya Nakano, Hajime Yamaguchi and Noriaki Kimura (Univ. Tokyo)</p>  |
| 15:30 | <p><b>W-13</b> A formation mechanism of ice band by the interaction between sea-ice and internal wave<br/>◇Ryu Saiki, Humio Mitsudera (Hokkaido Univ.), Ayumi Fujisaki (Univ. Michigan, USA) Jinro Ukita (Niigata Univ.) and Noriaki Kimura (Univ. Tokyo)</p>  |
| 15:50 | BREAK  |
| 16:00 | <p style="text-align: right;">Chair, Nobumasa Komori (JAMSTEC)</p> <p><b>W-14</b> Narrow and strong coastal current in the Sea of Okhotsk represented by high resolution ice coupled ocean circulation model<br/>◇Junji Matsuda (Hokkaido Univ.), Yuichiro Sasajima (Mitsubishi Res. Inst., Inc.) Humio Mitsudera, Tomohiro Nakamura (Hokkaido Univ.) and Hiroyasu Hasumi (Univ. Tokyo)</p>        |
| 16:20 | <p><b>W-15</b> Effects of temporal variation in tide-induced vertical mixing in the Kuril Straits on the thermohaline circulation in the Okhotsk Sea and the North Pacific<br/>◇Tomohiro Nakamura and Yuuki Takeuchi (Hokkaido Univ.)</p>  |
| 16:40 | <p><b>W-16</b> Numerical simulation of cold-frontal rainbands in wintertime maritime environment<br/>Masayuki Kawashima (Hokkaido Univ.)</p>   |
| 17:00 | <p><b>W-17</b> Pathway and variability of deep circulation current in the Northwest Pacific<br/>◇Kojiro Ando, Masaki Kawabe, Daigo Yanagimoto and Shinzou Fujio (Univ. Tokyo)</p>  |
| 18:30 | WHITE CONCERT < OKHOTSK SEA ICE MUSEUM>  |

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|       | <p><b>【A : MARINE ORGANISMS AND FISHERIES IN THE ICE-COVERED WATERS】</b><br/>                 Chair, Katsumi Yokouchi (Hokkaido Ntl. Fish. Res. Inst.)</p>  |
| 9:00  | <p><b>A-1</b> Sea ice and plankton: a case of Notoro-ko Lagoon, Hokkaido, Japan<br/>                 ◇Shihoko Ishiai, Yasuto Nishino, Yoshizumi Nakagawa and Akira Taniguchi (Tokyo Univ. Agriculture)</p>  |
| 9:20  | <p><b>A-2</b> Photoacclimation strategy of ice algal community in Saroma-Ko Lagoon, Hokkaido<br/>                 ◇Kayoko Takimoto, Tomoyo Katayama, Mitsuko Obata, Shozo Motokawa and Satoru Taguchi (Soka Univ.)</p>  |
| 9:40  | <p><b>A-3</b> Non-photochemical quenching to high light intensity in relation to xanthophyll pigments of ice algal community in Saroma-Ko Lagoon, Hokkaido<br/>                 ◇Tomoyo Katayama, Kayoko Takimoto, Shozo Motokawa, Mitsuko Obata and Satoru Taguchi (Soka Univ.)</p>  |
| 10:00 | <p><b>A-4</b> Time-series observations of environmental variables using surface drifters in the Antarctic Ocean in summer<br/>                 ◇Ryosuke Makabe, Sin-ichi Suganami, Fumihiko Akiha (Ishinomaki Senshu Univ.) Hiroshi Hattori (Tokai Univ.) and Hiroshi Sasaki (Ishinomaki Senshu Univ.)</p>  |
| 10:20 | BREAK   |
|       | <p>Chair, Satoru Taguchi (Soka Univ.)</p>   |
| 10:30 | <p><b>A-5</b> Effects of Southern Ocean acidification on the phytoplankton<br/>                 ◇Tsubasa Mishima, Hiroshi Hattori (Tokai Univ.), Hisashi Endo (Hokkaido Univ.), Shozo Motokawa (Soka Univ.), Takahiro Iida (NIPR), Haruko Kurihara (Ryukyu Univ.), Gen Hashida (NIPR), Koji Suzuki (Hokkaido Univ.), Satoru Taguchi (Soka Univ.) and Hiroshi Sasaki (Ishinomaki Senshu Univ.)</p> |
| 10:50 | <p><b>A-6</b> Seasonal and vertical change in the downward flux of planktonic foraminifera collected at 110°E, 60°S of the Antarctic Ocean in 2011<br/>                 ◇Atsushi Narita, Fumihiko Akiha (Ishinomaki Senshu Univ.), Gen Hashida (NIPR), Hiroshi Hattori (Tokai Univ.) and Hiroshi Sasaki (Ishinomaki Senshu Univ.)</p>   |
| 11:10 | <p><b>A-7</b> Investigation of trace element and resistant gene analyses in ice core samples from Antarctica and Kamchatka<br/>                 Rieko Ae, Torahiko Okubo, Yutaka Tamura, Katsuro Hagiwara (Rakuno Gakuen Univ.), Yoshinori Iizuka, Takayuki Shiraiwa, Tsutomu Uchida (Hokkaido Univ.), Koichiro Sera (Iwate Medical Univ.) and ◇Jun Noda (Rakuno Gakuen Univ.)</p>                |
| 11:30 | <p><b>A-8</b> Biodiversity study of marine eukaryotes by metagenome analysis<br/>                 Satoshi Nagai (Ntl. Res. Inst. Fish. Sci.), Kosuke Hida (AXIOHELIX Co. Ltd.)<br/>                 ◇Motoshige Yasuie, Atushi Fujiwara, Youji Nakamura (Ntl. Res. Inst. Fish. Sci.)<br/>                 Seiji Katakura and Soshi Hamaoka (City of Mombetsu)</p>                                  |
| 11:50 | <p><b>A-9</b> Carotenoids of nymph of sea ice, Clione<br/>                 ◇Takashi Maoka (Res. Inst. Production Develop.), Takashi Kuwahara (Okhotsk Sea Ice Museum of Hokkaido) and Masanao Narita (Abashiri Fish. Res. Inst.)</p>  |
| 12:10 | LUNCH   |
| 13:00 | <p><b>【A : MARINE ORGANISMS AND FISHERIES IN THE ICE-COVERED WATERS】</b><br/>                 ◆See the next page</p>  |
| 18:30 | DINNER PARTY FOR FRIENDSHIP BETWEEN SCIENTISTS & VOLUNTEERS <MOMBETSU CENTRAL HOTEL>  |

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| 9:00  | <p><b>[A : MARINE ORGANISMS AND FISHERIES IN THE ICE-COVERED WATERS]</b><br/>                 ◆See the previous page</p>   |
| 12:00 | LUNCH  |
| 13:00 | <p><b>[A : MARINE ORGANISMS AND FISHERIES IN THE ICE-COVERED WATERS]</b><br/>                 Chair, Hiroshi Sasaki (Ishinomaki Senshu Univ.)</p> <p><b>A-10</b> Relationships on annual variation of the sea-ice visit to oceanographic environments and scallop growth in the coastal Okhotsk Sea<br/>                 ◇Hiromi Kasai (Hokkaido Ntl. Fish. Res. Inst.), Ryuichi Nagata (Okhotsk Garinko and Tower Co., Ltd.), Seiji Katakura and Soshi Hamaoka (City of Mombetsu)</p> |
| 13:20 | <p><b>A-11</b> The occurrence pattern of Japanese scallop larvae <i>Mizuhopecten yessinsis</i> by using an immunostaining method in water around the Okhotsk Tower, Mombetsu, in 2011<br/>                 ◇Seiji Katakura, Soshi Hamaoka (City of Mombetsu), Kenichi Konashi (Abashiri-Seibu Fish. Technical Guidance Office), Katsuhiko Mizuno (Nemuro Fish. Technical Guidance Office) and Yohei Shimizu (Hokkaido Mariculture Fish. Res. Inst.)</p>                                |
| 13:40 | <p><b>A-12</b> Jellyfish distribution and feeding habits in the Oyashio region and adjacent waters in early summer of 2012<br/>                 Kseniya V. Radchenko (TINRO-Center, Russia)</p>  |
| 14:00 | <p><b>A-13</b> Outbreak of giant jellyfish <i>Nemopilema nomurai</i> and the introduction of countermeasure project in Japan<br/>                 Osamu Katoh (Japan Sea Ntl. Fish. Res. Inst.), Kenji Morinaga (Incorporated Administrative Agency)<br/>                 ◇Yasunori Watanabe (Seikai Ntl. Fish. Res. Inst.), Kaoru Nakata (Incorporated Administrative Agency), Hideki Akiyama (Hokkaido Ntl. Fish. Res. Inst.) and Shin-ichi Uye (Hiroshima Univ.)</p>                |
| 14:20 | <p><b>A-14</b> Seasonal formation of ichthyoplankton complexes in Aniva Bay (Southern Sakhalin)<br/>                 Olga N. Moukhametova (SakhNIRO, Russia)</p>   |
| 14:40 | BREAK  |
| 14:50 | <p>Chair, Hajime Matsubara (Tokyo Univ. Agriculture)</p> <p><b>A-21</b> The optimal pH, salinity and temperature for rearing Japanese smelt and Japanese surf eggs and embryos<br/>                 ◇Hajime Matsubara, Yuki Kubara, Ikuru Nitta, Takuma Kawasaki, Hiroka Yoshikawa Hisanori Iwamoto, Keito Kinoshita and Ken-ichi Watanabe (Tokyo Univ. Agriculture)</p>   |
| 15:10 | <p><b>A-15</b> Relationship between density index of juveniles and total catch of Japanese smelt (<i>Hypomesus nipponensis</i>) in Lake Abashiri, Hokkaido, Japan<br/>                 Shuichi Mano (Salmon &amp; Freshwater Fish. Res. Inst., Hokkaido Res. Organization)</p>   |
| 15:30 | <p><b>A-16</b> Effects of ocean conditions on returns of chum and pink salmon on the Okhotsk coast of eastern Hokkaido<br/>                 ◇Yasuyuki Miyakoshi, Makoto Fujiwara and Mitsuhiro Nagata (Salmon &amp; Freshwater Fish. Res. Inst., Hokkaido Res. Organization)</p>   |
| 15:50 | <p><b>A-17</b> Long-term trends of sea ice and fishery production in the Okhotsk Sea coast of Hokkaido<br/>                 Ikutaro Shimizu (Ntl. Res. Inst. Fish. Sci.)</p>   |
| 16:10 | <p><b>A-18</b> Movement patterns and diving behavior of Steller sea lions off the coasts of Hokkaido in early summer<br/>                 ◇Nao Takahashi (Hokkaido Univ.), Kaoru Hattori (Hokkaido Ntl. Fish. Res. Inst.) Yoko Goto (Wakkanai Fish. Res. Inst.), Keiichiro Ohshima, Kazushi Miyashita and Yoko Mitani (Hokkaido Univ.)</p>   |
| 16:30 | <p><b>A-19</b> Movements of rehabilitated spotted seal pups in the Sea of Okhotsk<br/>                 ◇Taisho Hakuman, Yoko Mitani, Nao Takahashi (Hokkaido Univ.), Masae Takaishi, Natsuki Miyazawa, Yoshitsugu Hirosaki (Okhotsk Tokkari Center), Seiji Katakura (City of Mombetsu) and Kazushi Miyashita (Hokkaido Univ.)</p>  |
| 16:50 | <p><b>A-20</b> Why marine mammals are abundant in the northern cold waters? Marine ecological basis of the sustainability of the northern Hunter-Gatherer<br/>                 ◇Akira Taniguchi (Tokyo Univ. Agriculture)</p>  |
| 17:10 | <b>Discussion</b>  |
| 18:30 | DINNER PARTY FOR FRIENDSHIP BETWEEN SCIENTISTS & VOLUNTEERS <MOMBETSU CENTRAL HOTEL>   |

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|       | <p><b>[W : WORKSHOP: POLAR ENGINEERING]</b><br/>                 Chair, Hiromitsu Kitagawa (Ocean Policy Res. Foundation)<br/>                 Kyungsik Choi (Korea Maritime Univ., Korea)</p>   |
| 9:00  | <p><b>W-18</b> A Survey on the sea ice properties in Antarctic Amundsen Sea<br/>                 ◇Jaeman Lee (Korea Inst. Ocean Sic. Tech., Korea), Kyungsik Choi (Korea Sci. Maritime Univ., Korea), Hyunsoo Kim (Inha Technical College, Korea) and Chunju Lee (Korea Inst. Ocean Sic. Tech., Korea)</p>   |
| 9:15  | <p><b>W-19</b> Effects of material properties of ice on ice-hull interactions<br/>                 In Sik Nho (Chungnam Ntl. Univ., Korea), Jae Man Lee (Korea Inst. Ocean Sci. Tech., Korea)<br/>                 ◇Yeong Min Yoon (Chungnam Ntl. Univ., Korea) and Sung Chan Kim (Inha Technical College, Korea)</p>  |
| 9:30  | <p><b>W-20</b> Estimation of ice thickness by analyzing breaking features of ice by an icebreaker<br/>                 ◇Jong-Ho Nam, Inha Park and Young-Kyo Seo (Korea Maritime Univ., Korea)</p>   |
| 9:45  | <p><b>W-21</b> Study on the estimation of ice resistance of ship with 'W shape' geometry using modified empirical formula<br/>                 ◇Hyun-Soo Kim (Inha Technical College, Korea), Chun-Ju Lee (Korea Inst. Ocean Sci. Tech., Korea) and Jae-Moon Lew (Chungnam Ntl. Univ., Korea)</p>  |
| 10:00 | <p><b>W-22</b> Numerical and experimental investigation of the resistance performance of an icebreaking cargo vessel according to variation of stem angle in pack ice conditions<br/>                 ◇Yong-Jin Shin, Moon-Chan Kim (Pusan Ntl. Univ., Korea), Jung-Yong Wang (Ntl. Res. Council, Canada) and Chun-Ju Lee (Korea Ocean Res. &amp; Develop. Inst., Korea)</p> |
| 10:15 | BREAK  |
| 10:25 | <p><b>W-23</b> Ice transit simulation program for cargo vessels in NSR/NWP<br/>                 ◇Kyungsik Choi, Jong-Ho Nam, Ho-Jin Lee and Jung-Seok Ha (Korea Maritime Univ., Korea)</p>   |
| 10:40 | <p><b>W-24</b> Numerical analysis on ballast water freeze-up of vessel intended for cold climate operation<br/>                 ◇Ki-pyoung Kim, Ho-keun Kang, Dae-heon Kim and Tae-bum Ha (Korean Register of Shipping, Korea)</p>   |
| 10:55 | <p><b>W-25</b> Analysis of the international regulations and test methods for winterization evaluation<br/>                 ◇Jun-woong Choi, Namhun Kim, Jehyoung Cho and Hyoungseock Seo (Res. Inst. of Medium &amp; Small Shipbuilding, Korea)</p>   |
| 11:10 | <p><b>W-26</b> A case study of performance test for marine equipment in the polar environment<br/>                 ◇Dong-hyun Kim, Il-sup Shin, Hyun-jun Cho and Ji-hyup Cha (Korea Mar. Equipment Res. Inst., Korea)</p>  |
| 11:25 | <p><b>W-27</b> Computational assessment of uniformity of ice freezing process in ice tank<br/>                 ◇Youngmin Kim, Sungsu Lee (Chungbuk Ntl. Univ., Korea) and Chunju Lee (Marine Transportation Res. Division, Korea)</p>  |
| 12:10 | LUNCH  |
| 13:00 | <p><b>[S : SPECIAL SESSION: PROGRESS OF RESEARCH ON THE ARCTIC SEA ROUTES]</b><br/>                 ◆See the next page</p>   |
| 18:30 | DINNER PARTY FOR FRIENDSHIP BETWEEN SCIENTISTS & VOLUNTEERS <MOMBETSU CENTRAL HOTEL>   |

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| 9:00  | <p><b>[W : WORKSHOP: POLAR ENGINEERING]</b><br/>                 ◆See the previous page</p>  |
| 12:10 | LUNCH  |
|       | <p><b>[S : SPECIAL SESSION: PROGRESS OF RESEARCH ON THE ARCTIC SEA ROUTES]</b><br/>                 Chair, Hajime Yamaguchi (Univ. Tokyo)</p>  |
| 13:00 | <p><b>S-1</b> Introduction<br/>                 Hajime Yamaguchi (Univ. Tokyo)</p>   |
| 13:05 | <p><b>S-2</b> Observation of sea-ice condition in the North West Passage and the Canada Basin - from JOIS2012 cruise -<br/>                 ◇Kazutaka Tateyama (Kitami Inst. Tech.), Jun Ono (NIPR/ Univ. Tokyo)<br/>                 Hajime Yamaguchi (Univ. Tokyo) and Hiroki Shibata (Kitami Inst. Tech.)</p>   |
| 13:20 | <p><b>S-4</b> Preliminary results of sea ice prediction in northern sea route using high-resolution ice ocean coupled model<br/>                 ◇Liyannarachchi Waruna Arampath De Silva, Hajime Yamaguchi (Univ. Tokyo) and Jun Ono (NIPR/Univ. Tokyo)</p>   |
| 13:40 | <p><b>S-5</b> Medium-range forecast of summer sea-ice extent in the Arctic<br/>                 ◇Noriaki Kimura, Yuya Nakano, Akira Nishimura and Hajime Yamaguchi (Univ. Tokyo)</p>   |
| 13:55 | BREAK  |
|       | <p>Chair, Toshihiro Ozeki (Hokkaido Univ. Education)</p>   |
| 14:05 | <p><b>S-6</b> Route-Search on ice sea using modified reinforcement learning<br/>                 ◇Toshiyuki Takagi (Kushiro Ntl. College Tech.), Kazutaka Tateyama (Kitami Inst. Tech.) and Toshihiko Ishiyama (Kushiro Ntl. College Tech.)</p>  |
| 14:20 | <p><b>S-7</b> Model-scale experiments of ship collision with a single ice floe<br/>                 ◇Daisuke Ishibashi, Shota Sano and Akihisa Konno (Kogakuin Univ.)</p>  |
| 14:30 | <p><b>S-8</b> Numerical simulation of ship collision with a single ice floe<br/>                 ◇Sho Asoh, Motoharu Sano and Akihisa Konno (Kogakuin Univ.)</p>   |
| 14:40 | <p><b>S-9</b> Effect of ship shape representation for numerical estimation of channel resistance<br/>                 ◇Satoshi Kanamori and Akihisa Konno (Kogakuin Univ.)</p>   |
| 14:50 | <p><b>S-10</b> Numerical investigation of effect of ship bow shape against channel resistance<br/>                 ◇Kazuki Sato and Akihisa Konno (Kogakuin Univ.)</p>   |
| 15:00 | <p><b>S-11</b> Level ice representation for physically-based simulation of ice-structure interaction<br/>                 ◇Ryuji Yamagishi and Akihisa Konno (Kogakuin Univ.)</p>  |
| 15:10 | <p><b>S-12</b> The effect of a random ice thickness on the ice force distribution for the ship maneuvering in level ice<br/>                 ◇Junji Sawamura (Osaka Univ.)</p>   |
| 15:25 | <p><b>S-13</b> Field observations of impinging seawater spray and spray icing on icebreaker Soya<br/>                 ◇Toshihiro Ozeki (Hokkaido Univ. Education) and Satoru Adachi (Snow and Ice Res. Center)</p>   |
| 15:40 | BREAK  |
|       | <p>Chair, Koh Izumiyama (North Japan Port Consultants)</p>   |
| 15:50 | <p><b>S-14</b> Study on feasibility of northern sea route shipping<br/>                 ◇Natsuhiko Otsuka, Koh Izumiyama (North Japan Port Consultants)<br/>                 Masahiko Furuichi (JICA), Wataru Kobayashi (Hokkaido Gov., Dept. of Construction)</p>   |
| 16:05 | <p><b>S-15</b> ClassNK's approach to assist in the designing of ships subject to FSCIR requirements which are intended for navigation in the ice-infested waters of the northern Baltic Sea or Canada<br/>                 - Development of the Finnish-Swedish Ice Class Rules 2010 Guidelines -<br/>                 Yukihito Fujinami (Nippon Kaiji Kyokai)</p> |
| 16:20 | <p><b>S-16</b> Seaborne trade in coming decades and a possible new port at Tomakomai<br/>                 Hiromitsu Kitagawa (Ocean Policy Res. Foundation)</p>  |
| 16:35 | <b>Discussion</b>  |
| 18:30 | DINNER PARTY FOR FRIENDSHIP BETWEEN SCIENTISTS & VOLUNTEERS <MOMBETSU CENTRAL HOTEL>   |

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|       | <b>【 B : OKHOTSK SEA; NATURE AND ECOSYSTEM】</b>  | Chair, Hiroyuki Enomoto (NIPR)                  |
| 9:00  | <b>B-1</b> Three-dimensional pattern formation and growth mode of frost flower<br>◇Toshihiko Ishiyama (Kushiro Ntl. College Tech.), Mitsuharu Chisaka (Hirosaki Univ.) and Toshiyuki Takagi (Kushiro Ntl. College Tech.)   |   |
| 9:20  | <b>B-2</b> On the validity of the sea ice rheology by Hibler for the Sea of Okhotsk ice<br>◇Takenobu Toyota (Hokkaido Univ.) and Noriaki Kimura (Univ. Tokyo)  |   |
| 9:40  | <b>B-3</b> Features of spatial and temporal variability of sea level in the Okhotsk Sea based on satellite altimetry data<br>Dmitriy Staritsyn, ◇Polina Lobanova and Valentina Koroleva (Saint-Petersburg State Univ., Russia)   |   |
| 10:00 | <b>B-4</b> Underwater ice-floe profiling using an AUV: Operation in Okhotsk Sea<br>◇Kangsoo Kim, Tamaki Ura, Kenji Nagahashi (Univ Tokyo), Takayuki Asanuma, Takatoshi Matsuzawa (Japan Oil, Gas and Metals Ntl. Corp.), Kenji Nakane, Tadamasu Obata, Hisashi Koyama (Mitsui Engineering & Shipbuilding Co., Ltd.), Yuji Oyabu (Dominant Plus One) and Ryuichi Nagata (Okhotsk Garinko & Tower Co., Ltd.) |   |
| 10:20 | <b>B-5</b> Hardware-software system of the water environment monitoring with use of microwave radiometry and spectroellipsometry means<br>◇Ferdinand A. Mkrtchyan, V. F. Krapivin, V. V. Klimov, and V. I. Kovalev (Inst. of Radioengineering & Electronics, Russia)   |   |
| 10:40 | BREAK  |   |
|       |  | Chair: Yutaka Nagata (Mar. Inform. Res. Center) |
| 10:50 | <b>B-6</b> Water mass modifications in the continental shelf off the Doto area, Japan in winter and spring<br>Akira Kusaka (Ntl. Fish. Res. Inst.)   |   |
| 11:10 | <b>B-7</b> Effect of multi-decadal variation in SST and Okhotsk High on fog frequency at Nemuro, Muroran, and Tomakomai<br>◇Shiori Sugimoto and Tomonori Sato (Hokkaido Univ.)   |   |
| 11:30 | <b>B-8</b> Formation mechanism and structure of snow bands developed from Hokkaido coast of the Sea of Okhotsk<br>◇Yasushi Fujiyoshi and Yukito Hayashi (Hokkaido Univ.)   |   |
| 11:50 | <b>B-9</b> Comparison of coupled global ocean-sea ice model simulations with different grid-resolutions<br>◇Cheol-Ho Kim, Minwoo Kim and Chan Joo Jang (Korea Inst. Ocean Sci. Tech., Korea)   |   |
| 12:10 | <b>【 CLOSING ADDRESS】</b>  |   |
| 12:20 | LUNCH  |   |
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## Poster Session

- P-1** A new information-modeling technology for monitoring environment in the Okhotsk Sea  
V. I. Kaevitser, V. F. Krapivin and V. Yu. Soldatov (Kotelnikov Inst. of Radioengineering & Electronics, Russia)
- P-2** Mathematical modeling of water circulation on eastern shelf of Sakhalin Island  
V. M. Pishchalnik (Sakhalin State Univ., Russia), V. S. Arkhipkin (Moscow State Univ. Russia)  
A. V. Leonov (Moscow Inst. Oceanology, Russia), I. G. Minervin and V. A. Melkiy (Sakhalin State Univ., Russia)
- P-3** Features of the geostrophical currents in summer in the western Kamchatka Region  
Igor A. Zhigalov (TINRO Centre, Russia)
- P-4** Ultralong-term surface water temperature forecast at the northwestern coast of the Japan Sea  
Boris S. Dyakov (TINRO-Centre, Russia)
- P-5** Okhotsk Sea ice cover zoning  
V. M. Pishchalnik (Sakhalin State Univ., Russia), V. S. Tambovsky (Environmental Co. of Sakhalin Ltd., Russia), P. A. Truskov (Sakhalin Energy Investment Co., Ltd., Russia),  
I. G. Minervin, V. A. Melkiy, V. A. Romanyuk and A. A. Galtsev (Sakhalin State Univ., Russia)
- P-6** Mathematical modeling and analysis of Tatar Strait ecosystem functioning  
Part 1. Abiotic environment factors  
V. M. Pishchalnik (Sakhalin State Univ., Russia), V. S. Arkhipkin (Moscow State Univ., Russia) and  
A. V. Leonov (Moscow Inst. Oceanology, Russia)
- P-7** Hydrochemical characteristics of the West Kamchatka Shelf  
Vladimir I. Matveev and Svetlana V. Radchenko (TINRO-Centre, Russia)
- P-8** The Sea of Okhotsk as the large marine ecosystem, Part 1: Methodology  
Andrey A. Bobkov and Kirill M. Petrov (Saint-Petersburg State Univ., Russia)
- P-9** On the reproductive biology of eelpout *Lycodes soldatovi* (Perciformes: Zoarcidae)  
Oleg Z. Badaev (TINRO-Centre, Russia)
- P-10** Marine ichthyoplankton off northern Sakhalin at after ice-thawing season  
Ilyas N. Moukhametov and Valeryi N. Chastikov (SakhNIRO, Russia)
- P-11** Variability of composition, biomass and catches of bottom fishes on the shelf of Russian economic zone in Bering Sea  
Gennady M. Gavrilov (TINRO-Centre, Russia)
- P-12** Oceanological conditions in the Juvenile pink salmon area in the Sea of Okhotsk  
Alexandr L. Figurkin (TINRO Centre, Russia)
- P-13** Observations on the *Clione* under starved conditions in the laboratory  
Yuka Nakamura and Hiroshi, Sasaki (Ishinomaki Senshu Univ.) and  
Takashi Kuwahara (Okhotsk Sea Ice Museum of Hokkaido)