

Joint International Symposium
Institute of Nature and Environmental Technology
Kanazawa University

Program

Date : March 2 - 4, 2018

Venue : Shiinoki Cultural Complex, Ishikawa Prefecture (Kanazawa, Ishikawa)

Foreword

The Institute of Nature and Environmental Technology (INET) at Kanazawa University was selected as one of Joint Usage/ Research Centers in Japan from April 2016 to March 2021. The name of the center is Center of International Study on Environmental Change Caused by Transboundary Pollutants. Our institute has been studied the long-term and short-term environmental changes and their effects on ecosystem and human health in East Asia, especially the Pan-Japan Sea region over the last 30 years. In the second year as the Joint Usage/ Research Center, we continue the monitoring research in the Pan-Japan Sea region including Noto Peninsula and move forward with international collaboration research. In 2016, the INET concluded agreement with Research Institute for Humanity and Nature, and with National Institute for Environmental Studies. In 2018, the INET also concluded agreement with College of Environmental Sciences and Engineering at Pekin University in China. We expand and strength national and international partnership with institutes and universities. The INET continues good partnership with Far Eastern Branch of Russian Academy of Science (FEBRAS) during 20 years and performs collaboration research in 2016-2017 under Bilateral Joint Research Project by Japan Society for the Promotion of Science (JSPS). Now we face to new step to the collaboration with the FEBRAS because Kanazawa University was accepted for Inter-University exchange project “Training Program for Russian-Japan Innovative Leaders of Tomorrow” from 2017 to 2021. Therefore, this symposium “Environmental Researches in Northern Japan Sea and Related Regions: Renewed Horizon of Japan-Russia Scientific Partnership” focus on partnership and collaboration studies between Russia and Japan. I believe this symposium will be fruitful and successful in the natural and social environmental studies based on international relationship. I would like to express my thanks to Kanazawa University and JSPS, Japanese Government.



A handwritten signature in black ink that reads "Seiya Nagao". The signature is written in a cursive style and is underlined with a single horizontal stroke.

Seiya Nagao
Director of the Institute of Nature and Environmental Technology

DAY 1: March 2, 2018

**Symposium to Promote Joint Usage / Research Center,
Institute of Nature and Environmental Technology**

“Expanding research collaborations: The role of K-INET”

9:30-9:55 Registration

9:55-10:00 Opening remarks by *Prof. Nagao, S. (Director of the Institute of Nature and Environmental Technology, Kanazawa University, Japan)*

Chair: Inomata, Y.

10:00-10:30 Project research on mechanisms of spawning migration of Japanese Pufferfish in the Nanao Bay by *Prof. Ueda, H. (Hokkaido University/Hokkaido Aquaculture Promotion Corporation, Japan)*

10:30-11:00 Effects of benzo(a)pyrene on gap junctional intercellular communication in Sertoli cells by *Prof. Wu, Q. (Fudan University, China)/Prof. Min, H. (Peking University, China)*

11:00-11:30 Submarine groundwater discharge in Tsukumo Bay, Japan by *Prof. Nagao, S. (Kanazawa University, Japan)/Dr. Charette, M. (Woods Hole Oceanographic Institute, U.S.A.)*

11:30-13:00 Lunch break

Chair: Ushio, N.

13:00-13:20 Substitution of Ca in hydroxyapatite (fish teeth/bone) by rare earth elements in seawater by *Ph.D. Candidate Kozaka, Y. (University of Toyama, Japan)*

13:20-13:40 Exploring factors determining the distribution of *Chiromantes dehaani* in Japanese streams by *Ph.D. Candidate Terashima, Y. (Kyoto University, Japan)*

13:40-14:00 Analysis of sulfate species and trace elements in aerosols collected at Noto peninsula by *Ph.D. Candidate Miyamoto, C. (Tokyo University, Japan)*

14:00-14:20 Annual observation of atmospheric polycyclic aromatic compounds in Suzu by *Ph.D. Candidate Kamiya, Y. (Kyoto University, Japan)/Assoc. Prof. Kameda, T. (Kyoto University, Japan)*

DAY 1: March 2, 2018

14:20-14:40 Energetic radiation associated with winter thunderstorm: Observation at the tip of Noto peninsula, Japan *by Assoc. Prof. Kamogawa, M. (Tokyo Gakugei University, Japan)*

14:40-15:00 Dynamic analysis of PM_{2.5} from continents and volcanoes *by Assoc. Prof. Tang, N. (Kanazawa University, Japan)/Prof. Yamauchi, M. (National Institute of Technology, Kagoshima College, Japan)*

15:00-15:20 Coffee break

Chair: Matsuki, A.

15:20-15:40 Seasonal variations of triple oxygen isotopes of atmospheric nitrate and sulfate at Noto Peninsula, Japan *by Assist Prof. Hattori, S. (Tokyo Institute of Technology, Japan)*

15:40-16:00 An attempt to estimate the source of atmospheric deposition from Sr isotope ratios in the bryophyte. *by Assist Prof. Ohta, T. (University of Toyama, Japan)*

16:00-16:20 Effects of increasing riverine nitrogen loading provoked by atmospheric nitrogen deposition on coastal ecosystem. *by Assoc. Prof. Sugimoto, R. (Fukui Prefectural University, Japan)*

16:20-16:40 Radiocesium in the swash zones off on the coast of the Japan Sea *by Dr. Takata, H. (Marine Ecology Research Institute, Japan)*

16:40-17:00 Long term behavior of radiocaesium in Japan Sea before and after the Fukushima Nuclear Power Plant accident *by Prof. Aoyama, M. (Fukushima University, Japan)*

17:00-17:20 Influence of fluoride on calcium metabolism in teleosts *by Prof. Tabuchi, Y. (University of Toyama, Japan)*

DAY 2: March 3, 2018

9:00-09:15 Registration

Chair: Suzuki, N.

09:15-09:20 Welcoming speech by *Prof. Otani, Y. (Vice President of Kanazawa University)*

09:20-09:40 Construction of a model for the prediction of residential time and water quality of the Kiba Lake by *Assoc. Prof. Onishi, T. (Gifu University, Japan)*

09:40-10:00 Antimicrobial substances associated with the fish body surface by *Assist Prof. Kitani, Y. (Kanazawa University, Japan)/Prof. Kiron, V. (Nord University, Norway)*

10:00-10:20 Distribution and chemical speciation of molybdenum in river and pond sediments affected by mining activity in Erdenet city, Mongolia by *Prof. Altansukh, O. (National University of Mongolia, Mongolia)*

10:20-10:40 Preliminary study on formation and operation of the research community in the environmental science. by *Assoc. Prof. Shimada, T. (Ibaraki University, Japan)*

10:40-11:00 Coffee break

DAY 2: March 3, 2018

**The 2nd International Thematic Symposium of Department of
Inter-institutional Collaboration on
“Rural Environment in the Modern Circum-Sea of Japan”**

Chair: Tsukawaki, S.

- 11:00-11:20 The 2nd International Thematic Symposium of Department of Inter-Institutional Collaboration “Rural Environment in the Modern Circum-Sea of Japan” by Prof. Tsukawaki, S. (Kanazawa University, Japan)
- 11:20-11:40 Rural environment in the modern Circum-Sea of Japan: Summary of presentations in the field of humanities by Assoc. Prof. Koizumi, T. (Kanazawa University, Japan)
- 11:40-12:00 Rural environment in the modern Circum-Sea of Japan: Summary of presentations in the field of health science by Assoc. Prof. Tang, N. (Kanazawa University, Japan)
- 12:00-12:05 Closing remarks by Prof. Nagao, S. (Director of the Institute of Nature and Environmental Technology, Kanazawa University, Japan)
- 12:05-13:30 Lunch Break

DAY 2: March 3, 2018

International Symposium

“Environmental researches in northern Japan Sea and related regions: Renewed horizon of Japan-Russia scientific partnership”

Chair: Hasebe, N.

13:30-13:35 Opening remarks by Prof. Nagao, S. (*Director of the Institute of Nature and Environmental Technology, Kanazawa University, Japan*)

13:35-14:05 Cascading at the Pater the Great Bay and ventilation of the Japan Sea interior by Dr. Lobanov, V. (*V.I.Ilichev Pacific Oceanological Institute, Far Eastern Branch, Russian Academy of Sciences, Russia*)

14:05-14:35 The study of PAHs distribution in the water basins of the northwestern Japan Sea by Dr. Chizhova, T. (*V.I.Ilichev Pacific Oceanological Institute, Far Eastern Branch, Russian Academy of Sciences, Russia*)

14:35-15:05 Deoxygenation and acidification of Japan Sea by Dr. Tishichenko, P. (*V.I.Ilichev Pacific Oceanological Institute, Far Eastern Branch, Russian Academy of Sciences, Russia*)

15:05-15:25 Coffee Break

Chair: Hasebe, N.

15:25-15:55 Effects nanomaterials to the marine organisms by Prof. Golokhvast, K.S. (*Far Eastern Federal University, Russia*)

15:55-16:25 Macro- and micro-nutrient cycles in the western north Pacific -Importance of marginal seas and North Pacific Intermediate Water- by Assoc. Prof. Nishioka, J. (*Hokkaido University, Japan*)

16:25-16:55 High-resolution modeling of material circulations in the western North Pacific. by Prof. Mitsudera, H. (*Hokkaido University, Japan*)

16:55-17:25 The impact of climate change on the hydrological regime of the Amur River. by Dr. Makhinov, A.N. (*Institute of Water and Environmental Problems, Far Eastern Branch, Russian Academy of Sciences, Russia*)

DAY 3: March 4, 2018

9:10-09:20 Registration

Chair: Fukushi, K.

09:20-09:50 Comparison of atmospheric nitropolycyclic aromatic hydrocarbons in Vladivostok and Kanazawa *by Assoc. Prof. Tang, N. (Kanazawa University, Japan)*

09:50-10:20 Chemical pollution and its biological effects in the Sea of Okhotsk and the Russian part of the Japan Sea *by Prof. Lukyanova, O. (Far Eastern Federal University, Russia)*

10:20-10:50 Palaeoecological studies in the Russian Far East *by Dr. Nazarova, L. (University of Potsdam, Germany)*

10:50-11:20 High-resolution OSL dating of a late Quaternary sequence from Xingkai Lake (NE Asia) *by Dr. Long, H. and Shen, J. (Nanjing Institute of Geography and Limnology, Chinese Academy of Science, China)*

11:20-11:50 Anthropogenic iodine-129 and PAHs in seawater from the Japan Sea and the southern Okhotsk Sea *by Assist. Prof. Matsunaka, T. (Kanazawa University, Japan)*

11:50-12:20 Relevance of climate change for business *by Dr. Fuchs, H.G.E. (IBM Deutschland GmbH, Germany)*

12:20-12:25 Closing remarks *by Prof. Nagao, S. (Director of the Institute of Nature and Environmental Technology, Kanazawa University, Japan)*

Poster Session

March 2 - 4, 2018

Seminar room A

- P1: α -melanocyte-stimulating hormone functions to calcium metabolism in goldfish. *by Ishizu, H., Sekiguchi, T., Ikari, T., Kitamura, K., Kitani, Y., Endo, M., Urata, M., Hattori, A., Mizusawa, K., Takahashi, A. and Suzuki, N.*
- P2: Plasma cortisol levels decreases in marine fishes kept in deep ocean water. *by Ikari, T., Kitani, Y., Ogiso, S., Sekiguchi, T., Toyohara, C., Nakayama, Y., Maruyama, Y., Hattori, A., Tabuchi, Y., Kambegawa, A., Asahina, K., Fukushi, K. and Suzuki, N.*
- P-3: Antibacterial l-amino acid oxidase in the red-spotted grouper serum. *by Osaka, Y. and Kitani, Y.*
- P-4: Evolution of a proglacial lake in the south of Kamchatka *by Nazarova, L., Fuchs, H.E.G., Hoff, U., Sachse, D., Dirksen, V., Dirksen, O. and Diekmann, B.*
- P-5: Dynamics of PAH in East Asia estimated from PAH concentration in sediment samples of Shin'ike pond in Noto Peninsula *by Akehi, A., Fukushi, K., Ochiai, S., Hasebe, N. and Hayakawa, K.*
- P-6: Cadmium, lead, zinc and arsenic partitioning in earth surface materials in soils from Kamegai mine tailing, Toyama Prefecture, Japan *by Baasansuren, G., Akehi, A., Kawasaki, K. and Fukushi, K.*
- P-7: Atomic force microscope observation for establishing Alpha Recoil Track method on zircon *by Hayasaka, R., Hasebe, N., Matsuki, A., Fukuma, T. and Tamura, A.*
- P-8: Paleohydrology of Olgoi Basin, headwater of Valley of the Gobi lakes, Mongolia *by Matsumura, Y., Endo, N., Hasebe, N. and Davaasuren, D.*
- P-9: Distribution of heavy metals in water and sediment affected by mining activity in Erdenet city, Mongolia: A preliminary result *by Solongo, T., Altansukh, O., Fukushi, K., Akitoshi, A., Baasansuren, G., Davaadorj, D. and Hasebe, N.*
- P-10: Paleoenvironmental research in southern part of Mongolia by lake sediment analysis *by Uyangaa, U., Hasebe, N., Tanaka, Y., Makoto, S., Davaadoj, D. and Fukushi, K.*

- P-11: Study on migration behavior of suspended solids in Kumaki River water using carbon-nitrogen Isotope ratio and radionuclides *by Tahara, R., Nagao, S., Ochiai, S., Hasegawa, T. and Goto, A.*
- P-12: Existence forms and distribution of radiocesium in marine sediments in the coastal area off Fukushima Prefecture *by Terasaki, S., Nagao, S. and Odano, N.*
- P-13: Sedimentation processes of radiocesium at mountain lakes in Gunma Prefecture, Japan *by Miyasaka, S., Nagao, S., Ochiai, S., Suzuki, K. and Mori, M.*
- P-14: Low-level of the FDNPP-derived radiocesium in marine products around the western Japanese Archipelago *by Yamashita, S., Inoue, M., Fujimoto, K., Miki, S. and Nagao, S.*
- P-15: Radioactivity variation and transport behavior of radiocesium in the Natsui River after the Fukushima Daiichi Nuclear Power Plant Accident *by Morokado, M., Nagao, S., Tomihara, S. and Ochiai, S.*
- P-16: Development of gas ion source and automated sample preparation system for rapid C-14 measurement *by Matsunaka, T., Sasa, K., Hosoya, S., Hongtao, S. and Sueki, K.*
- P-17: Transport processes of particulate organic matter in reservoir-catchment Systems in Noto Peninsula, Japan *by Ochiai, S., Nagao, S., Suzuki, T., Miyata, Y., Yonebayashi, K., Fukuyama, T., Yamamoto, M., Kashiwaya, K. and Nakamura, K.*
- P-18 Characteristics of ambient volatile organic compounds in a suburb of Shanghai, China *by Zhang, L., Tang, N., Yang, L., Hayakawa, K. and Wei, Y.*
- P-19: A comparison of polycyclic aromatic hydrocarbons composition in the atmospheric at the Noto Peninsula and Fukue Island, Japan *by Yang, L., Tang, N., Matsuki, A., Zhang, L., Takami, A., Nagato, G., Sato, K., Shimizu, A., Yoshino, A. and Hayakawa, K.*

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