



The 24th International Symposium on Polar Sciences
30 years of footsteps in Antarctica: Looking back and looking forward

May 29-30, 2018
Korea Polar Research Institute
Incheon, Republic of Korea

Third Circular

The International Symposium on Polar Sciences has been held annually ever since the conception of Korea's Antarctic research schemes. This Symposium not only serves as an international forum for bringing polar scientists together to exchange views and ideas, but also provides an opportunity to discuss collaborative research among peers and colleagues. Marking the 24th series of the symposium, this year's theme is "30 years of footsteps in Antarctica: Looking back and looking forward" and will be held in Incheon on May 29-30, 2018.

THEME

The King Sejong Station was established and inaugurated on King George Island in February 1988, after the Republic of Korea acceded to the Antarctic Treaty in November 1986. Since then KOPRI has continued to expand its research as well as to strengthen logistic capacities to support world class science, for example a research icebreaker, *Araon* and the second Antarctic Station, Jang Bogo in Terra Nova Bay as a platform for conducting continental Antarctic research. KOPRI has devoted its passion and commitment to explore the uncharted field of Antarctic research for over three decades. In commemoration of the scientific dedication over the years and celebrating the 30 year anniversary of King Sejong Station, the theme of the 24th International Symposium on Polar Science will be "30 years of footsteps in Antarctica: Looking back and looking forward". We would like to cordially invite you to share your knowledge and understanding as well as your perspective of future outlook on Antarctic research.

PLENARY SPEAKERS

Prof. Steven L. Chown
(President, Scientific Committee on
Antarctic Research)

Prof. Axel Timmermann
(Director, Center for Climate Physics,
Institute for Basic Science)

INVITED SPEAKERS

Prof. Bill J. Baker
(University of South Florida)

Prof. John Smellie
(University of Leicester)

Dr. Claus-Dieter Hillenbrand
(British Antarctic Survey)

Prof. Karen Heywood
(University of East Anglia)

Prof. John C. Priscu
(Montana State University)

SESSIONS

The following five sessions are proposed;

S1. Earth's atmosphere and space environment observed from the Antarctica

It has been 30 years since KOPRI first started observing the Earth's atmosphere, including the lower and upper atmospheres at the first Korean Antarctic Station, King Sejong Station. As the second Antarctic station was established in 2014 closer to the inland Antarctica, our observation capability has been vastly expanded to cover not only the polar atmosphere but also the polar space environment, including aurora and cosmic ray. In this session, we will briefly go through atmospheric (and climate change) and space research activities in Antarctica and introduce the recent research activities conducted around Korean Antarctic stations. (Organizer: Dr. Geonhwa Jee)

S2. Ocean and cryosphere changes around the Antarctica

In this session we would like to focus on oceanic, cryospheric, and environmental changes which are taking place in glacially influenced systems such as ice shelves and underlying ocean waters, as well as polynyas impacted by rapid warming around the west Antarctica. The session also targets on studies that cover biological responses nearshore, fjords, sheltered bays and other coastal regions as a consequence of climate-induced processes such as glacier retreats. (Organizer: Dr. Jisoo Park)

S3. Ecological dynamics and biotechnological potential of Antarctic organisms

Although microbes play a critical role as Antarctic inhabitants, much is unknown about their diverse responses to the current environmental changes, induced by either climate changes or increased human activities, in maritime Antarctic ecosystems. The recent studies suggest that environmental changes may have significant and direct effects on the microbial communities and microbes would

subsequently induce biotic changes. The microbial ecological dynamics in Antarctic environments and their interaction with other cold-adapted (micro) organisms are being highlighted. Thus, the findings from these studies will be the basis for searching novel candidates and research for biotechnological application. This session will present recent studies on (micro) organisms ranging from genomic to physiological, and discuss about their biotechnological potential. (Organizer: Dr. Dockyu Kim)

S4. Glacier history around the Antarctic Peninsula

This session will present the reconstruction of paleoclimate and paleoceanography of polar regions during the last hundreds of thousand years. The climate system of the Antarctic Peninsula and its surrounding region is of special interest because it is one of the most rapidly warming areas in the world. This session will focus on studies of the past environmental changes caused by climate changes around the Antarctic Peninsula. (Organizer: Dr. Heejin Hwang)

S5. Chronicle of geoscience in Antarctica: From the Era of Peninsula to the Age of Continent

Geosciences deals with geological history of Earth and is seeking to understand the complexity of the Earth's physical and biogeochemical systems. This session will explore past research achievements in the Antarctic Peninsula, highlighting current activities in the Western Ross Sea, Northern Victoria Land and on other parts of the Antarctic Continent, and discuss the future perspectives of Polar Geosciences. (Organizer: Dr. Mi Jung Lee)

SIDE MEETING

Side meetings will be organized during the course of the symposium to provide a platform for exchanging ideas with experts on appropriate themes as proposed. If you wish to hold a meeting, please contact us at: symposium@kopri.re.kr

LIONESS-WRS Workshop (13:00-18:00, MAY 28)

LIONESS-WRS (Land-Ice/Ocean Network Exploration with Semiautonomous Systems in the Western Ross Sea) Workshop will take place to strengthen international collaboration in the Terra Nova Bay/Northern Victoria Land, Antarctica, and to seek potential research opportunities in other regions (e.g., Thwaites/Totten/Larsen C/Ellsemere etc.) under the LIONESS framework. During the workshop, we will be discussing very interesting preliminary results coming out from our collaborative efforts conducted in the 2017/2018 field season as well.

ABSTRACT SUBMISSION

Abstract submission period has been extended. Please submit your abstract at the symposium website (<http://www.kopri.re.kr/eng/>) no later than April 18, 2018.

REGISTRATION

Registration period has been extended. Please register at the symposium website (<http://www.kopri.re.kr/eng/>) no later than April 18, 2018.

If you have any questions, please do not hesitate to contact us at:
symposium@kopri.re.kr

We look forward to your participation.

Ho Il YOON
President
Korea Polar Research Institute (KOPRI)

Coordinator:

Dr. Geonhwa Jee
E-mail: ghjee@kopri.re.kr

Dr. Mi Jung Lee
E-mail: mjlee@kopri.re.kr

Dr. Jisoo Park
E-mail: jspark@kopri.re.kr

Dr. Heejin Hwang
E-mail: heejin@kopri.re.kr

Dr. Dockyu Kim
E-mail: envimic@kopri.re.kr

Symposium secretariat:

Mr. Sunhwi Kim
E-mail: symposium@kopri.re.kr