

# **INTERNATIONAL SUMMER SCHOOL**

## **ARCTIC ENVIRONMENT AND ECOSYSTEM-SENTINEL OF GLOBAL CLIMATE**

### **CHANGE**

26 June-09 July 2023

Harbin Institute of Technology, Harbin, P.R. China

#### **GENERAL INFORMATION**

Once in the environment, POPs and CEACs disperse into air, water, soils and sediments in the Arctic, and can be taken up by Arctic biota. Many of the processes that determine the environmental fate of POPs and CEACs and their potential for uptake and bioaccumulation in food webs can be influenced by climate change. As young generations and future elites in different disciplines and fields from China and the eight Arctic countries, our goals on the Arctic are to understand, protect, develop and participate in the governance of the Arctic. To understand human health in the Arctic is the important step to reach the goal.

#### **ATTENDANCE REQUIREMENTS**

This Summer School invites undergraduate students from universities worldwide who love and care the Arctic and intend to achieve relevant scientific knowledge of the Arctic. This program is open to undergraduate students of all academic backgrounds. The student is motivated to enhance understanding and friendship among the students from different countries. The students must have enough knowledge of English, both oral and written, for academic studies.

#### **COURSES AND LECTURES**

The summer school offers three lectures and ten seminars. Lecturers and speakers are invited from top institutions in Russia, Norway, Canada and China, including North-Eastern Federal University, Norwegian University of Life Sciences, Environment & Climate Change Canada, Harbin Institute of Technology, Tianjin

University, Chinese Research Academy of Environmental Sciences, Research Center for Eco-Environmental Sciences, and Xiamen University.

<b>Lecturer/ Speaker</b>	<b>Institution</b>	<b>Topic (preliminary)</b>	<b>Unit (50 mins/unit)</b>
Prof. Roland Kallenborn	Norwegian University of Life Sciences, Norway	Local sources of contaminants in Arctic Environment	10 (lecture)
Prof. Derek Muir	Environment & Climate Change Canada	Legacy and emerging contaminants in the Arctic	10 (lecture)
Prof. Yifan Li	Harbin Institute of Technology, China	Contaminants in Arctic Environment due to long-range transport	4 (lecture)
Prof. Anatoly N. Nikolaev	North-Eastern Federal University, Russia	Introduction to Arctic ecosystems	4(talk)
Prof. Minggang Cai	Xiamen University, China	Organic pollutants in the changing environments: From the North Pacific to the Arctic	4(talk)
Prof. Pingqing Fu	Tianjin University, China	Sources and molecular composition of organic aerosols in the polar regions	4(talk)
Prof. Qinghua Zhang	Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China	Persistent organic pollutants in polar regions: occurrence, variations, sources and bioaccumulation	4(talk)
Prof. Fengchun Zhang	Chinese Research Academy of Environmental Sciences	Introduction to biodiversity in the Arctic	4(talk)
Prof. Qingchao Xu	China Institute for Innovation & Development Strategy, Chinese Academy of Sciences, China	China in the Arctic: the Past, the Present and the Future	4(talk)
Prof. Jiannan Wang	Arctic human observer, China	Some thoughts inspired by documentary images and human observation from more than 180 Arctic settlements	2(talk)
Prof. Defeng Xing	Harbin Institute of Technology, Chin	Polar microbial ecosystem and anaerobic biotechnology	2(talk)
Prof. Liyan Liu	Harbin Institute of Technology, Chin	Indoor environment and human health in cold regions	2(talk)

### **GROUP RESEARCH PROJECTS**

Participants will be grouped into 6 teams or more, each with 7-10 members, to work on a project on Arctic air pollution, Arctic water pollution and Ecological Environment. Each group needs to have group discussions and to give group presentations.

### **PROGRAM DATES AND TIMES**

	<b>6.26</b>	<b>6.27</b>	<b>6.28</b>	<b>6.29</b>	<b>6.30</b>	<b>7.1</b>	<b>7.2</b>
Morning	Opening ceremony	Lecture	Lecture	Lecture	Lecture	Seminar	Free activities
Afternoon	Lecture	Talk	Talk	Talk	Talk	Visit	
	<b>7.3</b>	<b>7.4</b>	<b>7.5</b>	<b>7.6</b>	<b>7.7</b>	<b>7.8</b>	<b>7.9</b>
Morning	Lecture	Lecture	Lecture	Talk	Seminar	Ecological investigation	Leaving school
Afternoon	Talk	Talk	Talk	Seminar	Group report		

### **CONTACT INFORMATION**

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