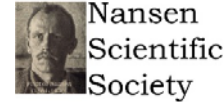




All-Russian non-governmental organization
RUSSIAN GEOGRAPHICAL SOCIETY
Founded in 1845



The Arctic Ocean and the marginal ice zone (MIZ). Interdisciplinary research, management practices and policy developments.

**An interdisciplinary PhD and Post-Doc summer school in Longyearbyen, Svalbard
31 July - 6 August 2017**

Introduction

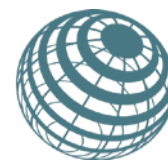
The consequences of climate change are particularly evident in the Arctic. In recent years, we have witnessed significant changes and reductions in Arctic sea ice distribution and volume. Seized as an opportunity, plans are being made for expansion of economic activities such as shipping, fisheries, petroleum extraction and deep-sea mining. Changes in ice cover and distribution will have consequences for national and international management regimes.

This new situation represents challenges for scientists, managers and policy makers and for the private sector. More and better communication between different parts is required, and the best way forward needs to be further developed for sound management and sustainable use of the Arctic oceans' vast renewable and non-renewable resources.

The international summer school in Longyearbyen, Svalbard 2017 will have a multi- and cross-disciplinary thematic approach to meet challenges and opportunities related to governance of the Arctic Ocean's marginal ice zone. The summer school is hosted by the Norwegian Scientific Academy for Polar Research (NVP), in cooperation with the University Centre in Svalbard (UNIS), UiT – the Arctic University of Norway, the Nord University, the Norwegian Polar Institute (NPI), Akvaplan-niva, the Nansen Environmental and Remote Sensing Center (NERSC), the Nansen Scientific Society and the Russian Geographical Society (RGS). Scientists and experts from Norway and abroad will contribute with lectures and with interactive student and teacher sessions. The participating students will be challenged to start drafting a peer-reviewed publication for an international journal.

Summer school coordinators:

- Professor Willy Østrem; the Norwegian Scientific Academy for Polar research (NVP)
- Lasse H. Petterson; Director for International Cooperation and Marketing, the Nansen Environmental and Remote Sensing Center (NERSC)
- Jorge Kristiansen; Office Manager, the Norwegian Scientific Academy for Polar research (NVP)



Saturday 29th July: Arrival in Longyearbyen Group 1, transport to Nybyen/UNIS

20.20	SK4494 arrival at LYR - Group 1
20.50	Bus to Nybyen and UNIS Guesthouse. Check in at accommodation.

Sunday 30th July – Registration; Location: UNIS - Kapp Wijk

09.30-11.00:	Group 1 – Orientation / Registration at UNIS – the University Centre in Svalbard (≈3 km from Nybyen, individual walk) - Breakfast – UNIS Kapp Wijk
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Monday 31th July, Arrival in Longyearbyen Group 2, transport to Nybyen/UNIS

00.30	SK4496 arrival at LYR - Group 2
01.00	Bus to Nybyen and UNIS Guesthouse. Check in at accommodation.

Monday 31th July, Location: UNIS Lassegrotta / Kapp Wijk

[Session 1: Introducing NVP and the Summer School 2017.](#)

[Session chair: Lasse H. Petterson, Director for International Cooperation and Marketing/NERSC.](#)

08.30-09.00:	Group 2 - Orientation / Registration at UNIS – the University Centre in Svalbard (≈3 km from Nybyen, individual walk)
09.00-09.30	Breakfast – UNIS Cantina
09.30-10.10	Brief information about the NVP and on the purpose of the summer school. Dr. Anton G. Kjelaas, NVP
10.10-11.00	Student life at UNIS & Safety briefing: Security and risk in Svalbard. TBA - UNIS
11.00-12.00	Lunch – UNIS Cantina
12.00-14.10	Presentation of the participants - (10 min. per person including questions) – presentation & posters? - Relevant studies and the relation to the summer school topics.
14.10-14:30	Coffee break – UNIS Cantina
14:30-16:40	Presentation of the participants - (10 min. per person including questions) – presentation & posters? - Relevant studies and the relation to the summer school topics.
17.00-18.00	Dinner – UNIS Cantina



Tuesday 1st August, Location - NVP Academy – Isdammen

Session 2: Framing the course and introducing the lectures.

Session chair: Professor Phil Steinberg, Durham University.

08:30	<i>Bus from NyByen to UNIS to Isdammen</i>
09.00-09.30:	Introduction of the summer school topics and the purpose of group work. Dr. Anton G. Kjelaas, NVP
09.30-10.20	The Marginal Ice Zone: Variability and future projection - A brief review. Prof. Ola M. Johannessen, Nansen Scientific Society.
10.20-10.40	Coffee break
10.40-11.30	Inter-and transdisciplinarity in polar research: Why? Listen to others and understand others. Prof. Willy Østreg, NVP
11.30-12.20	Satellite observation of sea ice - a key to safe operations in the marginal ice zone. Prof. Stein Sandven, NERSC
12.20-13.30	Lunch - Isdammen
13.30-14:20	Politics and Imaginaries in the Circumpolar North. Prof. Phil Steinberg, Durham University.
14.20-15:15	Plenary questions from students and discussion with the lecturers.
15:15-15:30	Coffee break
15.30-16.30	Group work: Preparations for one or more joint peer review articles
16:30	Bus to UNIS
17.00-18.00	Dinner – UNIS Cantina



Wednesday 2nd August, Location: UNIS – Lassegrotta

Session 3: Marginal Ice Zone Management and Policy Challenges in an international policy context. Session Chair: Professor Dr. Denis Alexeev, Russian State Hydrometeorological University.

09.00-09.40:	The MIZ in the context of the terror balance. Prof. Willy Østreg, NVP
09.40-10.30	Navigating the Arctic and a changing MIZ. Prof. Scott Stephenson, University of Connecticut.
10:30-10:50	Coffee break
10.50-11.40	Russia's foreign and security policy with reference to a changing Arctic and the MIZ. Prof. Dr. Nikita Lomagin, the European University at St. Petersburg.
11.40-12:30	Slippery Ice: Mapping and Knowing the Polar Environment. Prof. Phil Steinberg, Durham University
12.30-13.15	Lunch
13:15-15:00	Future industry development and sea transportation in the Arctic. Prof. Odd Jarl Borch, Nord University
15.00-15:40	Climate variability and change in the Eurasian Arctic, a Norwegian-Russian Project-CLIMARC NORRUSS. Prof. Ola M. Johannessen, Nansen Scientific Society.
15.40-16:30	Plenary questions from students and discussion with the lecturers.
17.00-18.00	Dinner – UNIS Cantina
18.30-19.30	Public lecture at UNIS-Lassegrotta GoNorth – Geosciences in the northern Arctic – a national research initiative. Prof. Matthias Forwick (UiT)



Thursday 3rd August. Location: UNIS – Lassegrotta

Session 4: Marginal Ice Zone Management and Policy Challenges. Local, National and International Management contexts.

Session Chair: Professor Dr. Nikita Lomagin, the European University at St. Petersburg.

09.00-10.00	The local perspective from Longyearbyen: Challenges and opportunities for sustainable development as a result of the increasing activity in the arctic. Discussion panel Moderator: Dr. Anton G. Kjelaas, NVP
10.00-10.30	Ice Matters: Plans and Probabilities in the Barents Sea. Prof. Phil Steinberg, Durham University.
10.30-10.50	Coffee break
10.50-11.40	The governance of the Arctic and the MIZ as an Object of Regulation. Prof. Willy Østrem, NVP
11.40-12.30	Russian perspectives on international cooperation related to a changing Arctic and the MIZ . Prof. Dr. Nikita Lomagin, the European University at St. Petersburg.
12.30-13.30	Lunch – UNIS Cantina
13.30-14:20	Shipping on the Northern Sea Route: Legal and jurisdictional issues, icebreaking, commercial outlook and drivers, Asian interest in NSR, alternative transportation corridors. Arild Moe, Senior Research Fellow - The Fridtjof Nansen Institute.
14.30-16:30	Visit to SvalSat
17.00-18.00	Dinner – UNIS Cantina
18.30-19.30	Public lecture at UNIS-Lassegrotta Canadian Arctic Policy – A Careful Balance. Bob Paquin; Director - Canadian International Arctic Centre



Friday 4th August, Location: UNIS – Lassegrotta

Session 5: Marginal Ice Zone Management and Policy Challenges, continued. National and International Management contexts.

Session chair: Professor Willy Østregren, NVP.

09.00-09.50:	Monitoring and Modelling of the MIZ. Lasse H Pettersson, Director International Cooperation - NERSC
09.50-10.40	Consequences of MIZ expansion for the Barents Sea ecosystem. Prof. Paul Renaud, Adjunct professor - UNIS and Senior Scientist - Akvaplan Niva.
10.40-11:00	Coffee break
11.00-12.00	The MIZ in the context of Arctic marine ecosystems and ecological sustainability. Prof. Dr. Denis Alexeev, Russian State Hydrometeorological University, St. Petersburg
12.00-13.00	Lunch
13.00-13.40	The Ice Edge and Oil Exploration. Dr. Anton G. Kjelaas, NVP
13.40-14.15	Plenary questions from students and discussion with the lecturers.
14.15-14:30	Coffee break
14.30 -17.00	Group work: Preparations for one or more joint peer review articles
17:00	Dinner – UNIS Cantina



Saturday 5th August. Location: UNIS / Isdammen

10.00-16:00	Hike around Longyearbyen Starting point: UNIS
16:00 – 20:00	Dinner : Summer BBQ – Isdammen

Sunday 6th August; Location: UNIS – Lassegrotta

Session 6 - Reporting and conclusions

Session chair: Lasse H. Pettersson, NERSC

Moderators: Prof. Willy Østreg, Dr. Anton G. Kjelaas.

08:30 - 12.00	Reporting, discussion and schedule for finalizing the report/paper from the summer school.
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Departures

13:00	Departure Group 1 - Buss from UGH and Nybyen to LYR airport for departure.
14:45	Flight SK4425 LYR-TOS-OSL, scheduled arrival in Oslo @ 1900.
	Monday 07.08.17
01:00	Departure Group 2 - Buss from UGH and Nybyen to LYR airport for departure.
02:30	Flight SK4497 LYR-TOS-OSL, scheduled arrival in Oslo @ 05.30.