

High altitudes meet high latitudes

Globalizing Polar Issues

11–12 September 2017

**Crans-Montana,
Switzerland**



**SWISS POLAR
INSTITUTE**

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Climate change has global causes and effects. This conference addresses growing challenges and their consequences for fragile environments both in the high latitudes and high altitudes, focusing on the polar regions and the Alps. It brings together research from natural and social sciences to facilitate dialogue among experts with the aim of comparing observations from these regions, tracing causal chains, and connecting the global and local scales of analysis. Problem-based issues such as biodiversity, urbanization, permafrost, health and risk management, structure the conference workshops. The conference's emphasis on links between local and global processes, as well as its interdisciplinary approach, also enable the promotion of academic and public awareness on the climate change mechanisms impacting familiar and distant locations

MONDAY 11 SEPTEMBER 2017

Great Room J.-P. Delamuraz

09:00

Welcome coffee at the cafeteria

10:00

Opening – Plenary session

Mr Marc-André Berclaz

Operational Director of the EPFL Valais Wallis Outpost

Message from EPFL President **Prof. Martin Vetterli**
by **Mr Stéphane Decoutère**, EPFL Presidency

Prof. Micheline Louis-Courvoisier

Vice-Rector, University of Geneva

Prof. Philippe Gillet

Swiss Polar Institute & EPFL

Dr Frederik Paulsen

President of the Ferring Pharmaceutical Group, Consul
General (Russia), Member of the Board of Directors, Swiss
Polar Institute

Mr Stefan Flückiger

Ambassador, Head of Global Issues, Coordinator of Arctic
policies, Federal Department of Foreign Affairs

Mr Christophe Darbellay

Conseiller d'Etat, Head of the Department of Economic
Affairs and Education in the canton of Valais

Prof. Jean Jouzel

Former Vice-President of IPCC (Nobel Prize for Peace 2007),
Gold medal of CNRS

12:00

Flash talks (20 x 2')

13:00

Standing lunch & poster session at the cafeteria

14:00

Workshops 1–4 (in parallel)

Water resources room 6

Focus on chemical pollution room 7

Tourism rooms 8-9

Paleogeography rooms 10-11

16:00

Coffee break at the cafeteria

16:30

Round table 1

Security and risk management

17:30

Round table 2

Arctic resources

18:30

Aperitif at the cafeteria

20:15

Dinner at Hotel Valaisia

22:00

Program

TUESDAY 12 SEPTEMBER 2017

Great Room J.-P. Delamuraz

08:30	Workshops 5–8 (in parallel) Evolution of permafrost Ecology and biodiversity Ice and snow processes Antarctic circumnavigation expedition	room 6 room 7 rooms 8–9 rooms 10–11
10:30	Coffee break at the cafeteria	
11:00	Round table 3 Remoteness and infrastructure	
12:00	Flash talks (21 x 2')	
13:00	Standing lunch & poster session at the cafeteria	
14:00	Round table 4 Awareness	
15:00	Antarctic circumnavigation expedition Prof. David Walton, British Antarctic Survey	
15:30	Coffee break at the cafeteria	
16:00	Conference summary	
16:30	Presentations: other projects Ice memory, Prof. Carlo Barbante, University of Venice Arcticpedia, Prof. Lars Kullerud, UArctic Geneva Global, Dr Ksenia Tatarchenko, Geneva Global	
17:30	Conference closing Prof. Konrad Steffen, Director of Swiss Polar Institute	
18:00		

Program

WEDNESDAY 13 SEPTEMBER 2017

Scientific excursion : Cryospheric degradation
in upper Anniviers Valley

07:45	Departure from Congress Center “Le Regent” Around one hour travel in a coach to Zinal
09:30	Excursion with scientific adress on cryosphere degradation
11:30	Lunch
13:00	Visit of measurement station
14:30	Continuation of excursion
15:00	Around one hour trip back to Sierre train station

The upper Anniviers' Valley is one of the last valley where the hydrological cycle is entirely natural. It is highly glacierized and could be seen as a prototype of Alpine Valley. Like in other place past glacial outburst floods occurs to remind us the power of Nature. The cryosphere degradation due to global warming is sensible and runs today causing immediate worries. Tomorrow evolution of the cryosphere will have a great impact on the processes shaping the valley as well as the life of its inhabitants.

Since 2006, the Canton du Valais has developed its research turned towards applications. Creeping rockglacier, outbursting debris flows, glacial sediment release, discharge evolution are studied for establishing strong scientific basis for supporting the authorities choices. R&D actions encompassed some of the first sites of Switzerland where: near on-line GNSS position is measured, RFID tagged cobbles are recorded and bedload of the glacial tributaries is continuously gauged. More theoretic science action are running with the EPFL regarding the effects of the change in the cryosphere state on the downslope natural processes.

The field trip will synthetize the last eleven years findings, present the current infrastructures and the future perspectives in environmental research in extreme conditions.

Workshop 1

WATER RESOURCES

Prof. Martin Beniston, University of Geneva, Switzerland
Converging responses of high altitude and high latitude hydrological systems to climatic change

Climatic change at both high altitudes and high latitudes will be accompanied not only by overall warming in all seasons, but by shifts in the seasonality of precipitation in many instances. One particular area of convergent response of river systems in both high altitudes and high latitudes will be the impacts of a warming climate on the behavior of the cryosphere, in particular snow (duration and quantity) and glaciers (speed of retreat, volume loss). These changes in the cryosphere will have obvious and often significant impacts on the quantity and seasonality of surface flows both in the Arctic zone and in mountain ranges where snow and ice is still today an important component of the hydrological cycle. This workshop will bring together speakers who are experts in Canadian Arctic climate and hydrological processes, and those who have focused much of their recent research on high mountains such as the European Alps, but also the Andes and the Central Asian mountains, to provide the conference with estimates of past, current and future changes in hydrology in these regions.

Guest Speakers

Prof. John Pomeroy, University of Saskatchewan, Canada
Cold regions hydrology in mountain and northern river basins: measurements, processes and modelling

Prof. Laxmi Sushama, McGill University, Canada
Advances in regional climate modelling in support of water resource assessments for high latitude and altitude regions

Workshop 2

FOCUS ON CHEMICAL POLLUTION

Prof. Vera Slaveykova, University of Geneva, Switzerland

Environmental threats in changing alpine and polar regions: focus on chemical pollution

This workshop focuses on two major environmental issues common to both alpine and polar regions: climate change, pollution and their interaction. Despite their specificity, the alpine and polar regions share characteristics making them vulnerable to anthropogenic threats. For examples, they concentrate different chemicals used at mid-altitudes. Climate change not only directly affects the alpine and polar environment but also interacts synergistically and exacerbates the impact of other anthropogenic threats. Increasing evidences suggest that the melting of ice and snow, as well as thawing the glaciers and permafrost result in a release of the stored chemicals and could increase their risk for environment and human health.

The workshop has wide and interdisciplinary perspectives on the chemical pollution in the alpine and polar regions with specific emphasis on the contaminant fate and effect on the ecosystem and human health in changing environment.

Contributions at multiple scales – from molecular studies to global cycle – of the fate and effects of both legacy (e.g. POPs, mercury) and emerging contaminants (e.g. perfluoroalkyl sulfonamide) and their environmental impacts are welcomed. In addition, we welcome contributions on contaminant risk assessment and mitigation under climate changes scenarios. Discussing the similarities and differences of the contaminant issues in the alpine and polar regions, sharing the scientific lessons profitable for the development of an efficient long-term management and for improved environmental and human health protection is also expected.

Guest Speakers

Prof. Marc Amyot, Uni. of Montreal, CA. *Mercury in the changing Arctica*

Prof. Arja Rautio, University of Oulu, Finland

Climate change in Arctic, environmental contamination and human health

Prof. Jérôme Fort, CNRS & University of La Rochelle, France

Spatial ecotoxicology: tracking large scale mercury contamination of the avian community in a changing Arctic

Workshop 3

TOURISM

Prof. Christophe Clivaz, University of Lausanne, Switzerland
*Convergence and divergence between tourism issues
in the arctic and alpine areas*

During the workshop, we will explore possible convergences between tourism issues in the arctic and alpine areas. Both these regions offer great tourism opportunities featuring pristine nature, diverse natural and cultural landscapes and unique emotional experiences. In the same time, the arctic and the alpine regions experience partly similar kind of tourism-related problems such as limited accessibility, hindered logistics, community impact etc. In addition to that, these two regions are directly affected by ongoing climate change threatening to destroy vulnerable landscapes and local communities. By putting together researchers studying tourism development in the arctic and alpine areas, we hope to gain a profound understanding of the high latitude and high-altitude tourism and possibly develop common approaches to studying these areas.

Guest Speakers

Prof. Albina Pashkevich, Dalarna University, Sweden

Challenges and prospects of developing tourism in the Russian Arctic

Prof. Olof Stjernström, Umeå University, Sweden

Planning in tourist destinations with seasonal variations in population - the provision of technical infrastructure and service facilities

Prof. Tobias Lütke, University of Applied Sciences, Switzerland

Cooperation, circular economy and tourism: building resilience of arctic and alpine communities

Prof. Martine Rebetez, WSL & University of Neuchâtel, Switzerland

Impact of decreasing snowfall and snow pack on alpine tourism

Workshop 4

PALEOGEOGRAPHY AND CLIMATE CHANGE

Prof. Carlo Barbante, University of Venice, Italy

Paleogeography and climate change

Under the pressure of current climate change, landscapes of polar and mountain regions are profoundly affected. It leaves imprints on cryospheric features such as glacier volume and extent, permafrost as well as the extent and duration of snow cover. But other features evolve strongly, such as vegetation type, fauna and human occupation. This session will address temporal information provided by different archives such as ice cores or lake records, coming from both polar and mountain regions, allowing one to put in a temporal perspective the current evolution of these environments.

Guest Speakers

Prof. Vladimir Y. Lipenkov, Arctic and Antarctic Research Institute, Russia
Air content of ice – a useful source of paleoenvironmental information in polar and mountain ice cores

Prof. Vladimir Mikhalenko, Russian Academy of Sciences, Russia
Glaciological changes in the Caucasus mountains and their link with global climate

Dr Bruno Wilhelm, University Grenoble Alpes, France
From high-altitude alpine lake sediments to past extreme flood patterns and human interactions

Workshop 5

EVOLUTION OF PERMAFROST

Prof. Reynald Delaloye, University of Fribourg, Switzerland
Evolution of permafrost in high latitudes and high altitudes

What is changing in the far north? What is changing in the Alps or in other mountain ranges over the world? What do we know and what is unknown? What about the consequences on the carbon cycle, the erosion of coasts, the instability of mountain slopes? Are critical feedback or cascading mechanisms to be point out? These are some of the questions the workshop is intending to tackle about the ongoing evolution of permafrost in the high latitudes or high altitudes and its consequences.

Guest Speakers

Prof. Hugues Lantuit, University of Potsdam, Germany
Coastal permafrost and climate change in the Arctic

Dr Britta Sannel, University of Stockholm, Sweden
Lowland permafrost in subarctic regions – current status and future challenges

Dr Jeannette Nötzli, PERMOS & SLF, Switzerland
Trends and strategies of permafrost long-term observation

Prof. Christian Hauck, University of Fribourg, Switzerland
The importance of water content/soil moisture monitoring for polar and high mountain permafrost studies

Prof. Reynald Delaloye, University of Fribourg, Switzerland
Moving frozen slopes

Dr Ludovic Ravanel, University Savoie Mont Blanc, France
The role of permafrost in rockfall triggering, a decade of research in the Mont Blanc massif

Workshop 6

ECOLOGY AND BIODIVERSITY

Prof. David Grémillet, CEFE & CNRS, France

Challenges to ecological research at high latitude/altitude

As Alexander von Humboldt climbed Mount Chimborazo in 1802, he recognized that alpine and polar areas share a series of environmental constraints, which shape the ecology of organisms living in these harsh areas. Over two centuries later, global change is drastically and rapidly modifying such conditions, as well as ecological, evolutionary and ecosystem processes within high altitude and high latitude regions. Modern ecological research, on the basis of long-term monitoring programmes, high-tech measurements and experiments, as well as elaborated modelling work, is capable of identifying, rating and forecasting the varied impacts of shifting environmental conditions upon the biosphere in alpine and polar regions. This session will draw from the latest ecological research, to illustrate these exciting scientific advances, thereby stressing parallels, but also contrasts, between high altitude/latitude natural and anthropogenic processes.

Guest Speakers

Prof. Ruben Sommaruga, University of Innsbruck, Austria

Consequences of glacial retreat and meltwaters for the biota of lakes

Dr Helen Wheeler, Centre d'écologie fonctionnelle et évolutive, France

What are the needs for effective pan-arctic wildlife monitoring under climatic, environmental and socio-economic change

Prof. Kyle Elliott, McGill University, Canada

Extreme energetics: climate change and physiological limits of animals in cold environments.

Dr Dorothee Ehrich, University of Tromsø, Norway

Interactions in vertebrate food webs of Arctic and Alpine environments in a changing climate

Dr. Anne Bjorkman, Aarhus University, Denmark

Plant functional trait change across the tundra biome

Dr Sonja Wipf, WSL, Switzerland

Faster, taller, more – patterns and drivers of change in arctic and alpine plant communities

Workshop 7

ICE AND SNOW

Prof. Konrad Steffen, WSL & EPFL, Switzerland

Prof. Michael Lehning, SLF & EPFL, Switzerland

Ice and snow processes for reliable climate change predictions

Over the past quarter of a century, Polar Regions have warmed more than other regions on Earth, causing accelerating ice losses. Assessing the current knowledge of the contribution of ice sheets to global and regional sea-level rise is of prime importance now and for the coming decades. The loss of ice can be partitioned into processes related to surface mass balance and to ice discharge, which are forced by internal or external (atmospheric/oceanic/basal) fluctuations. Most ice masses on earth have been built-up from snowfalls via sintering and firn formation. Our understanding on the relevant processes of snow deposition and snow – firn dynamics is incomplete because the physical mechanisms behind e.g. drifting and blowing snow or water transport in snow and firn are very complicated. This session reviews the current knowledge on snow and ice processes and their relevance in the context of climate change predictions. The grand challenges are presented, and it is shown how a combination of remote (satellite) and in situ observations together with modelling can advance our knowledge of these processes.

Guest Speakers

Prof. Michiel van den Broeke, Utrecht University, Netherlands

Tipping points in the melt behaviour of ice caps and ice sheets

Dr Rebecca Mott, SLF, Switzerland

Complexity of snow - atmosphere interactions in the ablation period

Dr Ghislain Picard, University Grenoble Alpes, France

Snow microstructure and remote sensing

Prof. Isabella Velicogna, University of California, USA

Workshop 8

ANTARCTIC CIRCUMNAVIGATION EXPEDITION

David Walton, ACE

Highlights from southern high latitudes

The first project of the Swiss Polar Institute, the Antarctic Circumnavigation Expedition (ACE) will investigate the Southern Ocean, the sub-Antarctic islands and their interactions. This unique expedition will collect data all around the continent in a single summer from December 2016 to March 2017. With a total of 22 international and interdisciplinary projects, we selected only the projects that have a link with high altitude. These projects aim at better understanding the forcing of climate change, at reconstructing climate from ice cores, or at studying the evolution of biodiversity on isolated islands, as well as the potential of organisms to disperse and colonize newly deglaciated sites.

Guest Speakers

Dr Julia Schmale, Paul Scherrer Institut, Switzerland

In Search of the Preindustrial Atmosphere

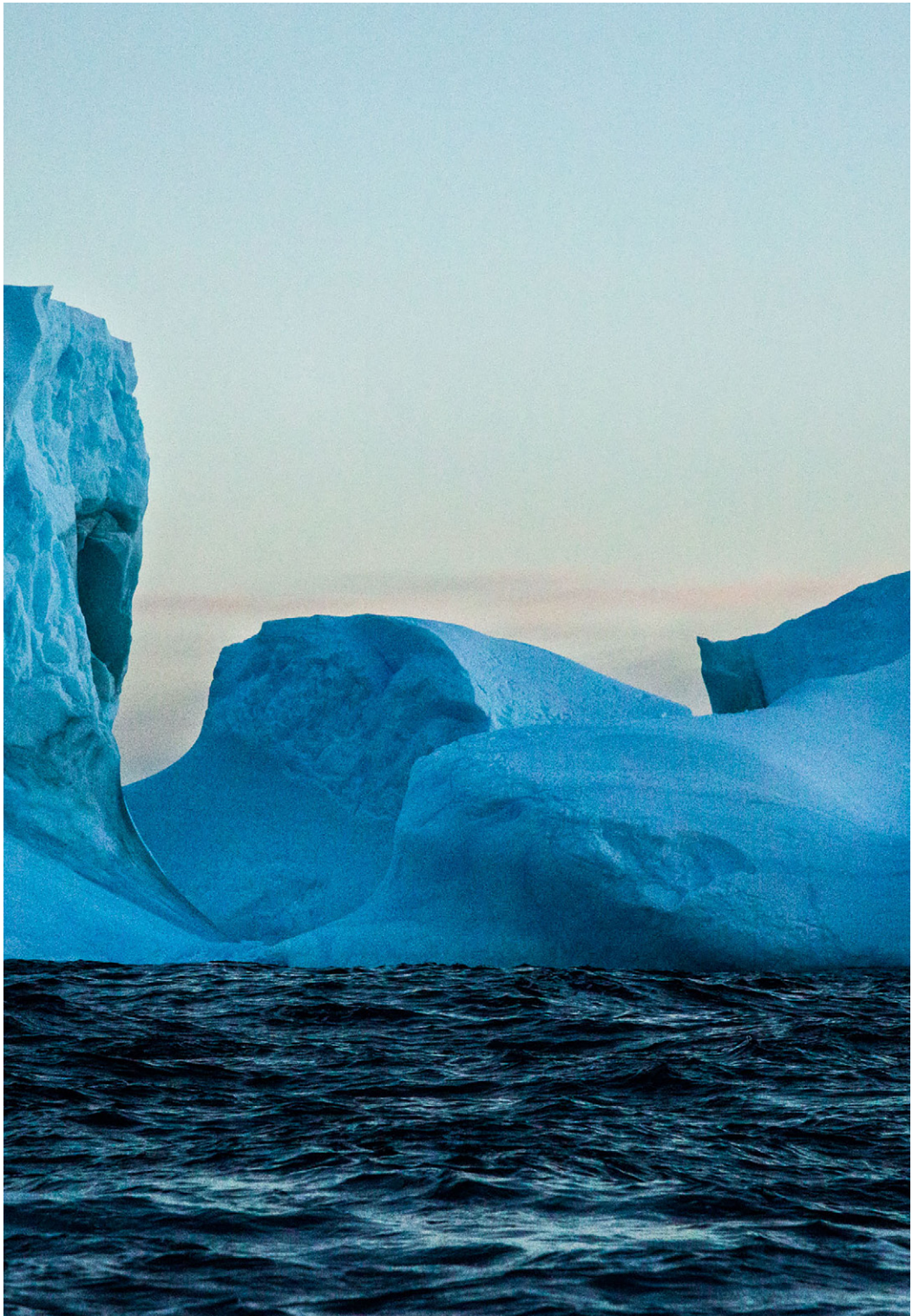
Dr Elizabeth Thomas, British Antarctic Survey, UK

Reconstructing past climate from sub-Antarctic ice cores

Ms Pau Cortés, Marine Institute, Spain

Surveying organic reactive gases and particles across the surface Southern Ocean

Mr Lewis Cuthbertson, Northumbria University, UK



Round table 1

SECURITY AND RISK MANAGEMENT

Dr Lassi Heininen, University of Lapland, Finland

Thematizing arctic security, and (re)defining the new nexus of security risks in the globalized Arctic

Long-range pollution and climate change are global issues, environmental challenges or wicked problems. Their causes and impacts are seen and will be manifested differently in various parts of the world. At the same time, when this global – local relationship is very important, the impacts will need to be dealt with regionally and locally. This panel on Security and Risk Management aims to discuss on how the security nexus of the 21st century's globalized Arctic, including stability-building and risk management, is thematised and reconceptualised, and why the Arctic has become geopolitically stable and peaceful. It looks at the human dimension of security, exploring how rapid environmental changes and grand challenges, much due to long-range pollution and climate change, can threaten people(s), local communities and even states, as well as cause changes in security discourses and premises. The panel, consisted of social scientists, analyses on how environmental security first, and then human security were raised and implemented, as well as how the high geopolitical stability was achieved. Followed from this, it argues, and invites the audience to discuss and respond, that a precondition for this was a change in security premises of the Arctic states. It will then make some comparisons on the one hand, between some local communities in the Alps and coastal communities in Iceland, and on the other hand, between the state of security of the 'global' Arctic, without real (nuclear) disarmament, to that of the 'demilitarized' Antarctic, determined by the International Antarctic Treaty System. Finally, the panel concludes by drawing out both differences and similarities on how security, as well as risk management, is thematised and (re)defined in these three areas.

Guest Speakers

Dr Audur Ingólfssdóttir, University of Akureyri, Iceland

Dr Teemu Palosaari, University of Tampere, Finland

Round table 2

ARCTIC RESOURCES

Prof. Matthias Finger, EPFL, Switzerland

Arctic resources: possible scenarios of exploitation

This round-table will address the issue of Arctic resources from an interdisciplinary perspective. It will cover the main relevant resources, namely oil, gas, coal, minerals and fisheries. We will look at both the available potential of such resources as well as at the conditions for their exploitation, as influenced by global warming, economics, geopolitics and social issues. The purpose of this workshop is to get a thorough understanding about the likelihood of these resources becoming exploited on an industrial scale along with possible scenarios. The round-table will feature experts and academics specialized in geopolitics, resources dynamics, climate change and geology.

Guest Speakers

Dr Andrey Krivorotov, Shtokman Development AG, Russia

Prof. Markus Kroger, University of Helsinki, Finland

Round table 3

INFRASTRUCTURES

Ksenia Tatarchenko, University of Geneva, Switzerland

Remoteness and infrastructure: knowing, living and imagining the environments of polar and alpine regions

The goal of this round-table is to create a dialogue that gives center stage to the questions about human/nature relationships. Whereas the notions of “locality” and “globalization” are the watchwords of all present-day discussions on climate change, we will consider the constitutive elements of the human/nature relationships hinging upon a multiplicity of spatial and temporal scales. Instead of reinforcing traditional dichotomies, such as urban communities and rural areas, humanities and natural sciences, scientific exploration and artistic representation, we will use the concepts of “remoteness” and “infrastructure” as they play out across national, geographical, and disciplinary boundaries. Our lines of inquiry bring together the processes of knowing, living and imagining the natural environments of polar and alpine regions: How does one live a “good life” in the extreme conditions of harsh environments? What connects the Socialist revolution, the conquest of nature, and the vocabulary of the international scientific community? Why does the phrase “climate change” have the potency to hide as much as it reveals about changes on the ground?

Guest Speakers

Prof. Peter Schweitzer, University of Vienna, Austria

Prof. Pey-Yi Chu, Pomona College, USA

Dr Ekaterina Kalemeneva, National Research University Higher School of Economics, Russia

Dr Fabien Arnaud, CNRS - University Savoie Mont Blanc, France

Round table 4

AWARENESS

Marina Kalinina, Northern (Arctic) Federal University, University of the Arctic, Russia

Developing Awareness of Changing Arctic

The round-table discussion includes the issues of raising awareness of changing Arctic in the light of the region's affecting the rest of the world. Invited experts will introduce their perspectives in cooperation and communication of Arctic science on the level of international arctic organizations and networks; role of teaching and teacher education in the Arctic as a response to the challenges of diverse population, small communities and a need to empower Arctic inhabitants and take a lead on their own lives and environments; as well as best practices of circumpolar education cooperation provides by University of the Arctic (UArctic) member institutions

Guest Speakers

Prof. Lars Kullerud, UArctic

Prof. Tuija Turunen, University of Lapland, Finland

Prof. Peter Sköld, University of Umeå, Sweden

Dr Kirsi Latola, University of Oulu & University of Arctic, Finland

Prof. Paul Arthur Berkman, Tuft University, USA



Flash talks

MONDAY

Agnieszka Ason, Frei University
Berlin, DE

*Could boundary disputes in
high latitudes be resolved in
high altitudes?*

Alex Haumann, ETH Zurich, CH
*Sea-ice induced Southern
Ocean cooling in a warming
world*

Alexandra Meyer, University of
Vienna, AT
*Cultural adaptation: some
theoretical contributions from
anthropology to the study of
climate change*

Benjamin Amann, Queen's
University, CA
*When seasonality matters:
climate reconstructions from
the canadian high arctic and
the european Alps over the last
millennium using varved lake
sediments*

Benjamin Hofmann, University of
St. Gallen, CH
*Stringent policy responses to
new threats? Arctic warming,
maritime industries and
international environmental
regulation*

Berill Blair, University of
Alaska Fairbanks, USA
*Toward arctic transformations
and sustainability: modeling
risks and resilience across
scales of governance*

Florian Vidal, University of
Paris Descartes, FR
*Resilience: from the Andean
mountains to the arctic*

Francesco Comola, EPFL, CH

Franziska Gerber, EPFL & SLF,
CH

Johannes Landmann, ETH
Zurich, CH
*CRAMPON – Cryospheric
monitoring and prediction
online*

Kirill A. Smirnov, SPGU, RU
*Applying method of automatic
iceberg identification for the
barents sea area*

Marin Kneib, ETH Zurich, CH
*Monitoring the water flow
of meltwater plumes at the
front of Bowdoin glacier,
northwest Greenland, by UAV
photogrammetry and particle
image velocimetry*

Michael Sigl, Paul Scherrer
Institut, CH
*Volcanic eruptions cast shadow
over monsoon precipitation and
water availability: assessing
the risks arising from future
eruptions on low-latitude
hydroclimate with the help of
polar ice cores*

Sabuj Bhattacharyya, Indian
Institute of Science, IN
*Understanding impact of cli-
matic variability on mountain
ecosystem using alpine small
mammal as model system*

Salla Kalliojarvi, University of
Lapland, FI
*Global security policy and
climate change*

Suzanna Gartler, University of
Vienna, AU
*Anthropological methods and
theories in interdisciplinary
climate change research –
thoughts on adaptation and
collaborative processes*

Tyler Jones, University of
Colorado, CA
*The human-centric spectrum of
climate variability from a west
antarctic ice core*

Ulrike Egerer, Institute for
Tropospheric Research, DE
*Understanding atmospheric
processes of arctic
amplification: balloonborne
measurements of vertical
energy exchange*

Xavi Gallach, Université de
Savoie & CNRS, FR
*Reconstruction of the rockfall/
rock avalanche frequency in
the Mont Blanc massif since
the last glacial maximum.
New results using terrestrial
cosmogenic nuclide dating and
reflectance spectroscopy*

Violetta Gassiy, Kuban State
University, RU
*Climate change and industrial
development in Arctic: threats
or opportunities for the
indigenous communities?*

Flash talks

TUESDAY

Alexandru Onaca, West
University of Timisoara, RO
*Investigating permafrost
occurrence in the Rila and Pirin
mountains (Bulgaria)*

Andrea Baccarini, Paul Scherrer
Institut, CH
*First results from the Antarctic
Circumnavigation Expedition:
new particle formation and
its chemistry over the sub-
Antarctic Ocean*

Diana Vladimirova, Arctic and
Antarctic Research Institute, RU
*Does the temperature affect
the isotopic composition
of the deposited snow in
Princess Elizabeth Land (East
Antarctica)?*

Dimitri Zogg, EPFL & Geneva
Global, CH

Elena Gusakova, Northern Arctic
University, RU

Esther Frei, WSL, CH
*Climate change impacts on
Arctic plants: responses to
experimental warming and
altered snowmelt regimes*

Fabian Lindner, ETH Zurich, CH
*Seismic investigations of a
Glacier's weathering crust*

Gautier Davesne, University of
Montreal, CA
*Perennial icy-snow patches
and the hydro-morphological
dynamic of slopes in a High
Arctic polar desert (Ward Hunt
Island, Ellesmere, Nunavut)*

Iñigo Irarrázav, UNIL, CH
*Abstract for session: ice and
snow processes for reliable
climate change predictions
(Koni Steffen, WSL & Michael
Leaning, EPFL/SLF)*

Iris Thurnherr, ETH Zurich, CH
*Meteorological overview and
linkage to stable isotopes of
atmospheric water vapour in the
Southern Ocean during ACE*

Jacopo Grazioli, EPFL, CH
*Effect of low-level sublimation
due to katabatic winds on
snowfall in Antarctica*

Josué Gehring, EPFL, CH
*Riming in alpine and antarctic
precipitation*

Julien Fouché, Queen's
University, CA

*Assessing the remobilization
of permafrost carbon during
the Holocene using Arctic lake
sediments: development of a
multi-proxy method for direct
physical evidences.*

Laure Gandois, CNRS, FR
*Fate of carbon in ecosystems
affected by permafrost
degradation in Northern Siberia*

Natalia Nesterova, SPGU, RU
*Modelling of hydrological
processes at the remote
mountainous area of eastern
Siberia (the Suntar-Hayata
ridge) based on historical data*

Pavel Kotov, MGU, RU
*Thaw settlement hazard in
russian permafrost*

Pierre-Allain Duvillard,
Université de Savoie & CNRS, FR
*Damages on high-mountain
infrastructures in the French
Alps: A warning sign on the
permafrost fast degradation?*

Rémy Mercenier, University of
Zurich, CH
*Using continuum damage
mechanics to simulate iceberg
calving from tidewater outlet
glaciers*

Saskia Gindraux, WSL, CH
*Improving runoff predictions in
high mountain catchments*

Sebastian Vivero Andrade, UNIL,
CH
*Monitoring high rates of
permafrost creep in the Western
Swiss Alps*

Ashutosh Singh, Wildlife
Institute of India, IN
*Causes of avian diversity
gradients along the Himalayas*







VALAIS
WALLIS



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