

# International Workshop on Cryospheric Change and Sustainable Development Agenda

**Tuesday, August 1<sup>st</sup>**

<b>keynote Session 1</b> (Lanzhou Hotel-First floor conference room)			
<b>Time</b>	<b>Activity</b>	<b>Speaker</b>	<b>Moderator</b>
08:40-09:00	Welcome and Opening Ceremony	NIEER, SOA, IACS, CliC, ICIMOD	Dahe Qin
09:00-09:30	Cryospheric Science: Present and the Future	Dahe Qin	
09:30-10:00	TBD	Tandong Yao	
10:00-10:30	Advancing the Third Pole Science and Strategies through the World Meteorological Organization Polar and High Mountain regions Priority activity	Etienne Charpentier	
10:30-11:00	<b>Group photo and Break</b>		
11:00-11:30	Polar ocean ices: a high-resolution global-regional nested, fully coupled ice-sea-wave coupled ocean model system	Changshen Chen	Tandong Yao
11:30-12:00	Towards the understanding of socioeconomic consequence of climate change impacts in cryospheric areas	Xiaoming Wang	
12:00-14:00	Lunch		
<b>Parallel Session 1</b> (Cryospheric processes and dynamics) Lanzhou Hotel- 4th floor conference room			
14:00-14:15	The Response of Glaciers to Climate Change in Northwestern China	Zhongqin Li (Invited)	Zhongqin Li, Bijeesh K. Veetil
14:15-14:30	Regional climate influence on glacier shrinkage in Peru	Bijeesh K Veetil (Invited)	
14:30-14:45	Glacier change and its potential impacts in the Altai Mountains	Yong Zhang	

14:45-15:00	Black carbon and other light-absorbing impurities from snow cover and glaciers over the Third Pole region	Yulan Zhang	
15:00-15:15	Dramatic climate transition precludes the potential habitability of icy planets and moons	Jun Yang	
15:15-15:30	Climate change and Extremes in Ny-Ålesund, Svalbard in recent decades	Minghu Ding	
15:30-15:45	Ice Velocity Measurement in East Antarctica from 1960s to 1980s based on ARGON and Landsat Imagery	Gang Qiao	
15:45-16:00	2D Evolution and 3D Modeling of Two Large Rifts in Filchner Ice Shelf from Multi-source Satellite Images	Haifeng Xiao	
16:00-16:15	<b>Break</b>		
16:15-16:30	Glaciers bring more precipitation over south slope of the Himalayas and less moisture to the Tibetan Plateau	Kun Yang (Invited)	Kun Yang Anna Sinisalo
16:30-16:45	Monitoring snow in the Hindu Kush Himalaya: Snow Processes and Snow Cover Dynamics	Anna Sinisalo (Invited)	
16:45-17:00	Characterizing permafrost soil active layer dynamics and sensitivity to landscape spatial heterogeneity: a case study in Alaska	Yonghong Yi	
17:00-17:15	Contrasting changes in snow accumulation from ice cores and ERA-20C reanalysis over the West Antarctic Ice Sheet since 1900	Yetang Wang	
17:15-17:30	Recent Research Progresses on Antarctic Ice Sheet Mass Balance and Global Sea Level Rise	Yuan Cheng	
17:30-17:45	Properties of black carbon and other insoluble light-absorbing particles in seasonal snow of northwest China	Wei Pu	

17:45-18:00	Improvement of a Snow Albedo Parameterization in SAST Model: Evaluation of Impacts of Aerosol on Seasonal Snow Cover Process	Efang Zhong	
<b>Parallel Session 2 (Attribution and impacts of cryospheric changes)</b> Lanzhou Hotel- 5th floor conference room			
14:00-14:15	Monitoring and Modeling the “Water- Cryosphere-Atmosphere-Biology” Multi- sphere Interactions over the Third Pole region	Yaoming Ma (Invited)	Yaoming Ma  W. Robert (Bob) Bolton
14:15-14:30	Snow-Vegetation-Topography-Permafrost Interactions in the Seward Peninsula, Alaska	W. Robert (Bob) Bolton (Invited)	
14:30-14:45	Effects of melting ice sheets and orbital forcing on the early Holocene warming in the extratropical Northern Hemisphere	Yurui Zhang	
14:45-15:00	Permafrost collapse shifts alpine tundra to a carbon source but reduces N <sub>2</sub> O and CH <sub>4</sub> release on the northern Qinghai-Tibetan Plateau	Cuicui Mu	
15:00-15:15	The Response of Cryosphere over Northern Hemisphere to the 1.5°C Temperature Rise in Global Surface Temperature	Ying Kong	
15:15-15:30	Environmental controlling factors of soil organic carbon in the boundary area of permafrost regions in the southern Qinghai- Tibetan Plateau	Xiaodong Wu	
15:30-15:45	Long-lead prediction of early summer subtropical front rainfall based on Arctic sea ice	Fei Huang	
15:45-16:00	Permafrost degradation decreases ecosystem carbon in the northeastern margin of the Qinghai-Tibet Plateau	Shengyun Chen	

16:00-16:15	<b>Break</b>		
16:15-16:30	Changes of the Arctic Sea Ice in Autumn and Winter and Their Effects on Winter Climate in the Mid-latitudes of the Northern Hemisphere	Yong Luo (Invited)	Yong Luo Zakaria Abdalla
16:30-16:45	Sea-Level Rise Caused by Climate Change and Ice Sheet Melting its Implications for Society and Environmental Issues "Case Study of Egypt"	Zakaria Abdalla (Invited)	
16:45-17:00	The Global Mean Sea Level Rise, Still Accelerated	Xianyao Chen	
17:00-17:15	Young surface of Pluto's Sputnik Planitia caused by rapid viscous relaxation of N <sub>2</sub> Ice	Qiang Wei	
17:15-17:30	Regional disparities in summer rainfall changes over arid Eastern-Central Asia	Yanluan Lin	
17:30-17:45	Hydrochemical Characteristics, and Spatial Distribution of Stable Isotopes in Aksu River Basin, Northwest China	Hong Wei	
17:45-18:00	Application of Logistic Regression Model and Multi-criteria Analysis methods to map permafrost distribution and assess its dynamics on the Qinghai-Tibetan Plateau	Tianye Wang	
18:00-	<b>Banquet</b>		

**Wednesday, August 2<sup>nd</sup>**

<b>keynote Session 2</b> (Lanzhou Hotel-First floor conference room)			
<b>Time</b>	<b>Activity</b>	<b>Speaker</b>	<b>Moderator</b>
08:30-09:00	Impact of Eurasian spring snow decrement on East Asian summer precipitation: Observational analyses and numerical simulations	Renhe Zhang	Renhe Zhang
09:00-09:30	The Global Cryosphere Watch Overview of objectives, present statuses, and challenges ahead	Arni Snorrason	
09:30-10:00	Arctic amplification and its potential linkage with Eurasian climate	Yongqi Gao	
10:00-10:20	<b>Break</b>		
10:20-10:50	Cryosphere and sustainable development in the HKH region	Mats Eriksson	Yongjian Ding
10:50-11:20	Cryosphere Science: disciplinary framework and frontiers	Yongjian Ding	
11:20-11:50	Different responses of Antarctic and Arctic cryosphere to warming climate.	Cunde Xiao	
11:50-12:20	Atmospheric Pollution and Cryospheric Change (APCC) over Third Pole: Current Status and Future Prospects	Shichang Kang	
12:20-14:00	Lunch		
<b>Parallel Session 1</b> (Cryospheric processes and dynamics) Lanzhou Hotel- 4th floor conference room			
14:00-14:15	Multi-sphere hydrological modelling over the Third Pole Region.	Lei Wang (Invited)	Yuanqing He
14:15-14:30	Thermokarst lake dynamics in the continuous and isolated permafrost zones, Mongolia	Adiya Saruulzaya (Invited)	Adiya Saruulzaya
14:30-14:45	Stable isotopes in different water bodies in Mt. Yulong region	Yuanqing He	

14:45-15:00	Applying Gipl2.0 Model to Estimate the Permafrost Environment on The Qinghai-Tibet Plateau	Tonghua Wu	
15:00-15:15	The Characteristics of Surface Albedo on the Urumqi Glacier No.1 in eastern Tien Shan, During the Ablation Season	Xiaoying Yue	
15:15-15:30	Internal layering structure of ice sheet along a traverse route from Zhongshan station to Dome A, East Antarctica, determined from airborne radio echo sounding	Xueyuan Tang	
15:30-15:45	An investigation of the thermo-mechanical features of Laohugou Glacier No.12 in Mt. Qilian Shan, western China, using a two-dimensional first-order flowband ice flow model	Yuzhe Wang	
15:45-16:00	The mass balance characteristics and sensitivities to 2 climate variables of Laohugou No.12 Glacier, Western 3 Qilian Mountains, China	Jizu Chen	
16:00-16:15	<b>Break</b>		
16:15-16:30	<sup>10</sup> Be Surface Exposure Dating Constrained Late Quaternary Glaciations in the Bhutan-China Himalaya	Gengnian Liu (Invited)	Gengnian Liu Jing Zhang
16:30-16:45	Development of Model Framework WRF-Ice for Glacier/Ice-sheet Surface Mass Balance Modeling	Jing Zhang (Invited)	
16:45-17:00	Past glaciation on the Longmen Shan	Shangzhe Zhou	
17:00-17:15	Using an ultra-long-range terrestrial laser scanner to monitor the net mass balance of Urumqi Glacier No.1, eastern Tien Shan, China, at the monthly scale	Chunhai Xu	
17:15-17:30	Characteristics, source apportionment and cause analysis of air pollution in Lanzhou, China during 2013-2016	Xi Zhou	

17:30-17:45	A brief Introduction to Yulong Mountain Glacial and Environmental Observation Station	Hewen Niu	
17:45-18:00	Cryospheric Hydrochemistry	Jinkui Wu	
<b>Parallel Session 3 (Cryosphere services and sustainable development)</b> Lanzhou Hotel- 6th floor conference room			
14:00-14:15	Recent shrinkage of mountain water tower in the Central Asia	Yaning Chen (Invited)	Yaning Chen  Md. Anowar Hossain Bhuiyan
14:15-14:30	Tourism Value Chain as Potential Cryosphere Service Function for Sustainable Development in Chittagong Hill Tracts (CHT), Bangladesh	Md. Anowar Hossain Bhuiyan (Invited)	
14:30-14:45	Flash Floods or Severe Droughts; A Threat To Food Security In High Mountains Of Swat Pakistan Due To Changes In Snow Cover	Kainat Nafees	
14:45-15:00	Quick release of internal water storage in a glacier leads to underestimation the risk of glacial lake outburst floods in Central Asia	Donghui Shangguan	
15:00-15:15	Literature Review on Services Comprehensive Regionalization of Cryosphere in China	Chuanglin Fang	
15:15-15:30	A literature review on regionalization of water resource service function of Cryosphere in China	Jie Liu	
15:30-15:45	Research Framework of Services Comprehensive Regionalization of Cryosphere in China	Jinchuan Huang	
15:45-16:00	Permafrost and drought mediate vulnerability of Tibetan Plateau grasslands to warming	Yan Yang	
16:00-16:15	<b>Break</b>		

16:15-16:30	Monitoring and simulation of the hydrothermal state indicating the deteriorating stability of moraine dam in the Himalayas	Xin Wang (Invited)	Xin Wang K C, Anup
16:30-16:45	Climate Change and its Impacts on Tourism and Livelihood in Manaslu Conservation Area, Nepal	K C, Anup (Invited)	
16:45-17:00	The spatial distribution and feature research of snow and ice tourism industry in China	Yajuan Shi	
17:00-17:15	Vertical patterns and controls of soil nutrients in alpine grassland: Implications for nutrient uptake	Liming Tian	
17:15-17:30	Progress on Journal Advances in Polar Science and its Perspective	Xiaoliang Ling	
17:30-17:45	Effects of permafrost degradation on hydrological regime in the source regions of the Yangtze and Yellow Rivers, China	Xiqiang Wang	
17:45-18:00	Analysis and prediction about land use change in area along the Belt and Road Initiative: A case study of Qinghai	Xi Zhou	

**Parallel Session 4 (Remote Sensing and Information Integration for Cryosphere)**

Lanzhou Hotel (East Building) - 3rd floor conference room

<b>Time</b>	<b>Activity</b>	<b>Speaker</b>	<b>Moderator</b>
14:00-14:20	Remote sensing on land surface energy balance over Tibetan Plateau	Jiancheng Shi (Keynote)	Xin Li
14:20-14:35	Monitoring glacier annual/decadal elevation and mass changes in the Tibetan Plateau with TanDEM-X SAR interferometry	Liming Jiang (Invited)	
14:35-14:50	Climate change and its impacts on lake area variability in Tibetan Plateau	Kun Yang (Invited)	

14:50-15:05	Spatial Distributions of the Cirque lakes over the Tibetan Plateau and Their Climatological and Environmental Significances	Ninglian Wang (Invited)	
15:05-15:20	Investigations on snow properties and distribution in China	Jian Wang (Invited)	
15:20-15:35	Monitoring the glacier changes in High Asia with SAR and optical remote sensing techniques	Zhiwei Li (Invited)	
15:35-15:45	<b>Break</b>		
15:45-15:57	Decreasing surface snowmelt detected by microwave remote sensing techniques on the Antarctic continent	Lei Zheng	Jiancheng Shi  Tao Che
15:57-16:09	Inter-calibration of passive microwave satellite brightness temperature observed by F13 SSM/I and F17 SSMIS for the retrieval of snow depth on the Arctic first-year sea ice	Qing Ji	
16:09-16:21	Assessment of Antarctic Coastline & Grounding Line Products and Change Analysis	Da Lv	
16:21-16:33	Sensitivity of SAR backscatter to post-fire vegetation recovery in tundra environment	Zhiwei Zhou	
16:33-16:45	Evaluation of satellite soil moisture products and model simulations against observations from Tibetan SMTMS networks	Yingying Chen	
16:45-16:57	Snow depth estimation from passive microwave remote sensing data in China	Tao Che	
16:57-17:09	Estimating water volume variations on Tibetan Plateau lakes over the past 26 years using multi-mission altimetry and remotely sensed images	Hongwei Li	
17:09-17:21	Information Extraction and Change Analysis of Major Lakes in Tibetan Plateau based on Landsat Remote Sensing Images	Yanjun Li	

17:21-17:33	High-resolution ice flow maps reveal unexpected accelerated mass loss in Wilkes Land, East Antarctica	Qiang Shen	
17:33-17:45	The retrieval of snow grain size and albedo using FY-3 MERSI data in China.	Xiaohua Hao	
17:45-18:00	Summary		Xin Li Jiancheng Shi