15th International Circumpolar Remote Sensing Symposium

Potsdam, Germany, 10-15 September, 2018

Final Program Schedule

05. Sept. 2018

Keynote presentations (25+5 min): 7x

Oral presentations (15+5 min): 54x

Poster flash talks (1 min): 38x

Poster presentations: 38x

	Monday (10 Sept.)	Tuesday (11 Sept.)	Wednesday (12 Sept.)	Thursday (13 Sept.)	Friday (14 Sept.)	Saturday (15 Sept.)
Venue	arcona hotel	arcona hotel	arcona hotel	arcona hotel	AWI	Golm Campus at U Potsdam
Registration	08:00 – 14:00	08:30 – 14:00	08:30 – 14:00	08:30 – 14:00	08:30 – 14:00	
Housekeeping		08:50 – 09:00	08:50 – 09:00	08:50 – 09:00	08:50 – 09:00	
Start	09:00	09:00	09:00	09:00	09:00	09:00
I. Time Slot	09:00 – 09:10 *Opening* **09:10 – 09:40** ***IEEE Keynote*** 09:40 – 10:40 *Glaciers & Ice Sheets*	09:00 – 10:00 *Floating Ice I* **10:00 – 10:30** ***Keynote***	09:00 – 09:40 *Snow* **09:40 – 10:10** ***Keynote*** 10:10 – 10:30 *Polar Oceanography I*	09:00 – 10:20 *Arctic Land Cover II*	09:00 – 10:00 *New Sensors & Operational Services I* **10:00 – 10:30** ***Keynote***	*Full-day workshop: LiDAR and Point-Cloud processing*
Coffee Break	10:40 – 11:00	10:30 – 10:50	10:30 – 10:50	10:20 – 10:40	10:30 – 10:50	
II. Time Slot	**11:00 – 11:30** ***Keynote*** 11:30 – 12:30 *Arctic Land Cover I*	10:50 – 12:10 *Floating Ice II*	10:50 – 12:30 *Polar Oceanography II*	**10:40 – 11:10** ***Keynote*** 11:10 – 12:30 *Arctic Land Cover III*	10:50 – 11:50 *New Sensors & Operational Services II* 11:50 – 12:20 *Wrap-up, Award Ceremony & Closure*	
Lunch Break	12:30 – 14:00	12:10 – 13:40	12:30 – 13:45	12:30 – 14:00	12:20 – 14:00 lunch on your own (canteen, or café)	
III. Time Slot	14:00 – 15:20 *Permafrost I*	13:40 – 14:40 *Polar Coasts & Deltas*	13:45 – 16:45 *Local excursions to Park Sanssouci*	14:00 – 15:20 *Permafrost II*	14:00 – 17:00 *Organized workshops:* *InSAR subsidence (A45-S)* *Arctic Vegetation (Building H)* *Big data image processing (A45-S)* *Polar ocean color (Building H)*	
Coffee Break	15:20 – 15:40	14:40 – 15:00		15:20 – 15:40		
IV. Time Slot	15:40 – 16:40 *Polar Atmosphere*	15:00 – 16:40 *Polar Lakes*		15:40 – 16:25 *Poster Flash Talks* 16:25 – 18:25 *Poster Session*		
End	16:40	16:40	16:45	18:25	12:20	16:00
Housekeeping	16:40 – 16:45	16:40 – 16:45		18:25 – 18:30		
Evening Event	18:00 – 21:00 *Ice breaker (WIS)*	18:00 – 19:00 *Guided tour (AWI)* **19:00 – 19:30** ***Keynote (AWI)*** 19:30 – 22:00 *BBQ (AWI)*	18:00 – 21:00 *Ship cruise and conference banquet*	20:00 *Get-together at Rückholz Bar*		
Evening Venue	*WIS*	*AWI*	*Harbor + Ship*	*Rückholz Bar*		

DAY 1: Monday, 10. September 2018, acona hotel		
08:00 – 14:00		Registration Desk Open
09:00 – 09:10	10‘	Symposium Opening
09:10 – 10:40		***Oral Session: Glaciers and Ice Sheets***
09:10 – 09:40	30’	**Irena Hajnsek *(Invited IEEE Keynote)*:** TanDEM-X: Contribution to a better understanding of Cryospheric Applications
09:40 – 10:00	20’	**Sophie Berger:** Detecting and monitoring ice-shelf basal mass balance in Dronning Maud Land, East Antarctica
10:00 – 10:20	20’	**Marie-Andrée Dumais:** Sub-glacial bedrock topography of Austfonna, Svalbard derived from potential field modeling
10:20 – 10:40	20’	**Christian Wohlfahrt (presented by Achim Roth):** Multi-temporal Analysis of the Greenland Ice Sheet based on TanDEM-X DEM Data between 2010 and 2017
10:40 – 11:00	20‘	Coffee Break
11:00 – 12:30		***Oral Session: Polar Land Cover and Vegetation I***
11:00 – 11:30	30’	**Charles Miller *(Invited Keynote)*:** The 2017 Arctic Boreal Vulnerability Experiment (ABoVE) Airborne Campaign
11:30 – 11:50	20’	**Gerald “JJ” Frost:** Retrospective remote sensing reveals environmental changes on Alaska’s Yukon-Kuskokwm Delta: Bellwether of the future Arctic, or black sheep?
11:50 – 12:10	20’	**Sander Veraverbeke:** More lightning in the high latitudes: implications for fire and carbon
12:10 – 12:30	20’	**Matthew Macander:** Progress towards pan-arctic shrub mapping using spectral, radar, and stereo metrics
12:30 – 14:00	90‘	Lunch Break
14:00 – 15:20		***Oral Session: Observing Permafrost State and Changes I***
14:00 – 14:20	20’	**Annett Bartsch:** The impact of exceptional warming conditions in 2016 on central Yamal –observations in situ and from space
14:20 – 14:40	20’	**Wouter Hantson:** Linking tundra landscapes with its disturbance history. A ThawTrendr pilot study in Nome, Alaska
14:40 – 15:00	20’	**Christine Kroisleitner:** Representation of mean annual ground temperature by satellite derived surface status
15:00 – 15:20	20’	**Jaroslav Obu:** Remote-sensing based global map of permafrost
15:20 – 15:40	20‘	Coffee Break
15:40 – 16:40		***Oral Session: Remote Sensing of the Polar Atmosphere***
15:40 – 16:00	20’	**Ana Radovan:** Characteristics and genesis conditions of January polar lows: Microwave satellites, radiative transfer simulations and Arctic system reanalysis
16:00 – 16:20	20’	**Soheila Jafariserajehlou:** A new algorithm for cloud identification over the Arctic using AATSR/SLSTR and its application for ACLOUD/PASCAL campaigns
16:20 – 16:40	20’	**Bing Lin:** Understanding of polar atmospheric dynamics by measurements of surface air pressure using O2-band differential absorption radar
18:00 – 21:00		Organized Evening Event: Ice Breaker @ WIS Building

DAY 2: Tuesday, 11. September 2018, arcona hotel		
08:30 – 14:00		Registration Desk Open
09:00 – 10:30		***Oral Session: Floating Ice: Sea, River, and Lake Ice I***
09:00 – 09:20	20'	**Stefan Hendricks:** Remote Sensing of Arctic Sea Ice Thickness with Radar Altimeters
09:20 – 09:40	20'	**Jack Landy:** Towards a reliable method for measuring Arctic sea ice thickness from satellite radar altimetry during summer months
09:40 – 10:00	20'	**Marcus Hunteman:** Microwave emission of sea ice - variability of permittivity and transmissivity at interfaces
10:00 – 10:30	30'	**Thomas Krumpen *(Invited Keynote)*:** From shelf seas to Fram Strait: A changing transpolar drift system
10:30 – 10:50	20'	Coffee Break
10:50 – 12:10		***Oral Session: Floating Ice: Sea, River, and Lake Ice II***
10:50 – 11:10	20'	**Suman Singha:** Operational Synthetic Aperture Radar Based Sea Ice Classification
11:10 – 11:30	20'	**Helena Bergstedt:** Influence of lake ice formation and break-up on ASCAT backscatter
11:30 – 11:50	20'	**Wayana Dolan:** Eighteen-year MODIS detection of ice breakup on Alaskan rivers wider than 150 m
11:50 – 12:10	20'	**Christoph Held:** Remote sensing; a key tool for understanding change in carbon storage on polar seabeds
12:10 – 13:40	90'	Lunch Break
13:40 – 14:40		***Oral Session: Changing Polar Coasts and Deltas***
13:40 – 14:00	20'	**Benjamin Jones:** High temporal and spatial resolution satellite image observations for the past decade highlight complexities associated with permafrost coastal bluff erosion in the Arctic
14:00 – 14:20	20'	**Nataliya Belova:** Temporal variability of coastal retreat at Kharasavey area, Western Yamal Peninsula, the Kara Sea
14:20 – 14:40	20'	**Anna Irrgang:** Impacts of coastal dynamics on the socio-economic component of the Yukon coast, western Canadian Arctic
14:40 – 15:00	20'	Coffee Break
15:00 – 16:40		***Oral Session: Polar Lake Dynamics***
15:00 – 15:20	20'	**Marina Leibman:** Relief modification caused by formation of gas-emission craters, remote-sensing and field studies
15:20 – 15:40	20'	**Yuri Dvornikov:** Terrestrial CDOM in lakes of Yamal Peninsula: Connection to lake and lake catchment properties – a remote sensing study
15:40 – 16:00	20'	**Mark Lara:** Decadal time-scale controls on catastrophic lake drainage in northern Alaska
16:00 – 16:20	20'	**Ingmar Nitze:** Detection of recent permafrost region disturbances across the Arctic and Subarctic with Landsat time-series and machine-learning classification
16:20 – 16:40	20'	**Erin Trochim:** Using Google Earth Engine to examine water and permafrost
18:00 – 19:00	60'	Guided Tour of the Telegrafenberg Science Campus (max. 2x 20 people)
19:00 – 19:30	30'	**Angelika Humbert *(Invited Cryosphere@AWI Keynote)*:** Remote sensing at AWI
19:30 – 22:00		Barbeque + Band @ AWI

		DAY 3: Wednesday, 12. September 2018, arcona hotel
08:30 – 14:00		Registration Desk Open
09:00 – 10:30		***Oral Session: Snow Trends***
09:00 – 09:20	20’	**Rune Solberg:** Local and regional trends in snow cover from a 34-year time series of satellite observations
09:20 – 09:40	20’	**Samuel Stettner:** TerraSAR-X time series fills a gap in high spatiotemporal monitoring of snowmelt in small Arctic catchments
09:40 – 10:30		***Oral Session: Oceanography of Polar Seas I***
09:40 – 10:10	30’	**Atsushi Matsuoka *(Invited Keynote)*:** Ocean color of the Arctic Ocean
10:10 – 10:30	20’	**Yangyang Liu:** Highly resolved data set on different phytoplankton pigments and functional types retrieved from underway spectrophotometry in the Fram Strait
10:30 – 10:50	20’	Coffee Break
10:50 – 12:30		***Oral Session: Oceanography of Polar Seas II***
10:50 – 11:10	20’	**Vasileios Pefanis:** First steps towards assessing the radiation budget in the shelf areas of the Laptev Sea by remote sensing and radiative transfer modelling
11:10 – 11:30	20’	**Bennet Juhls:** Measuring bio-optical properties in coastal waters of the Laptev Sea and Lena River for the improvement of Ocean Color algorithms
11:30 – 11:50	20’	**Astrid Bracher:** Validation of ocean colour products for the Arctic Ocean
11:50 – 12:10	20’	**Konstantin Klein:** Assessing nearshore sediment and sea surface temperature dynamics using Landsat satellite imagery at Herschel Island, western Canadian Arctic
12:10 – 12:30	20’	**Charlotte Robinson:** Spatio-temporal patterns of the carbon-to-chlorophyll ratio of natural phytoplankton communities in the Southern Ocean
12:30 – 13:45	75‘	Lunch Break
13:45 – 16:45		Local excursion (start and end at the arcona hotel): Walking Tour to Park and Sanssouci Palace, or Guided Tour of Park and Sanssouci Palace
18:00 – 21:00		Organized Evening Event: Ship cruise with conference banquet

DAY 4: Thursday, 13. September 2018, arcona hotel		
08:30 – 14:00		Registration Desk Open
09:00 – 10:20		***Oral Session: Polar Land Cover and Vegetation II***
09:00 – 09:20	20’	**Sofia Antonova:** Estimation of forest properties in the treeline zone using TanDEM-X and airborne laser scanning data
09:20 – 09:40	20’	**Paul Montesano:** Quantifying patterns of forest structure across a circumpolar biome boundary
09:40 – 10:00	20’	**Christopher Neigh:** 3D Satellite observations North American boreal forest growth
10:00 – 10:20	20’	**Iuliia Shevtsova:** Changes in land cover classes of north-eastern Siberia between 2001 and 2016 inferred from combining field data with Landsat spectral ratio indices
10:20 – 10:40	20‘	Coffee Break
10:40 – 12:30		***Oral Session: Polar Land Cover and Vegetation III***
10:40 – 11:10	30’	**Martha Raynolds *(Invited Keynote)*:** A new raster version of the Circumpolar Arctic Vegetation Map (CAVM)
11:10 – 11:30	20’	**Alison Beamish:** Influence of litter and non-vascular components on the spatial aggregation of hyperspectral data in a low-Arctic ecosystem
11:30 – 11:50	20’	**Aleksi Räsänen:** Mapping vegetation in a north-boreal fen in very-high and ultra-high spatial resolution
11:50 – 12:10	20’	**Howard Epstein:** Ecosystem functional diversity of the circumpolar Arctic tundra
12:10 – 12:30	20’	**Victoria Miles:** Urban heat island effects in the northern high latitudes as revealed by remote-sensing
12:30 – 14:00	90‘	Lunch Break
14:00 – 15:20		***Oral Session: Observing Permafrost State and Changes II***
14:00 – 14:20	20’	**Yonghong Yi:** Sensitivity of soil freezing process to snow cover changes and permafrost active layer dynamics in Arctic Alaska
14:20 – 14:40	20’	**Jiahua Zhang:** Investigating the decadal changes of frozen ground at Resolute Bay in the Canadian High Arctic through surface elevation changes measured by GPS Interferometric Reflectometry
14:40 – 15:00	20’	**Franck Garestier:** Polarimetric D-InSAR for ground deformation estimation over permafrost environment
15:00 – 15:20	20’	**Philipe Bernhard:** Large-scale monitoring of rapid permafrost thaw with satellite radar Interferometry
15:20 – 15:40	20‘	Coffee Break
15:40 – 16:25	45’	Poster Flash Talks (1 min each)
16:25 – 18:25	120’	Poster Session
		Dinner On Your Own
From 20:00		Get-together at the local Rückholz-Bar

DAY 4: Thursday, 13. September 2018: Poster session
Sofia Antonova: Thaw subsidence of a yedoma landscape in northern Siberia, measured in situ and estimated from TerraSAR-X interferometry
Florianna Ardelean: Predicting potential permafrost distribution based on land surface variables and remote sensing data in Southern Carpathians (Romania)
Annett Bartsch: Circumpolar to global remote sensing of permafrost – contributions of ESA DUE GlobPermafrost to a permafrost information system
Annett Bartsch: Evaluation of a Metop ASCAT derived surface soil moisture product in the Lena Delta
Frederic Brieger: ArcticDEM terrain roughness and structure from motion for forest structure analysis and biomass quantification in the tundra-taiga ecotone (Sibiria)
Tilman Bucher: FireBIRD – High dynamic range thermal infrared satellite systems for hot and cold temperature environments
Jan Riad El-Kassar: Analyzing Arctic seasonal phytoplankton dynamics with MERIS satellite fluorescence
Lida Fanara: Global-scale mapping of periglacial landforms on Earth and Mars using deep convolutional networks
Matthias Fuchs: The spatial extent of Arctic river deltas: Version 1.0 of the Arctic river delta data set
Anne Gädecke: Multi-model assessment of climate change impacts on Arctic infrastructure
Guido Grosse: Remote Sensing of Drained Thermokarst Lake Basin Successions
Stephane Guillaso: Spatial analysis of periglacial processes and landforms on Hurd Peninsula, Livingston Island, Antarctica, using advanced SAR techniques
Stephane Guillaso: Analysis of Permafrost Taiga by means of X/C-Bands SAR imagery
Frank Günther: Repeat terrestrial LiDAR for quantification of extensive thaw subsidence within different tundra vegetation groups
Antonie Haas: Persys – WebGIS-based permafrost data visualisation system for ESA GlobPermafrost
Mahmud Haghshenas Haghighi: Measuring elevation change in arctic permafrost landscape using SAR interferometry
Till Hainbach: Quantifying spring snow cover evolution on Kurungnakh Island, North Siberia
Daniel Hayes: Thawtrendr: characterizing patterns of disturbance history in permafrost landscapes using Landsat time-series segmentation algorithms
Birgit Heim: Spatial and temporal variability at the Toolik Lake vegetation grid (Alaska)
Theresa Henning: Thermokarst lake monitoring on the Bykovsky Peninsula using high-resolution remote sensing data
Mikael Hovemyr: Viability of interferogram stacking for change detection in Arctic environments using ESA Sentinel-1 Data
Soraya Kaiser: Identifying erosional hot spots around thermokarst lakes using RapidEye imagery
Andrei Kartoziia: Morphostratigraphy investigation of alas on Kurungnah Island (the Lena River Delta) by means of remote sensing UAV data and field studies
Alexander Kizyakov: Coastal destruction in the western and eastern-most occurrence of tabular ground ice in the Eurasian Arctic
Katrin Kohnert: Towards understanding the contribution of permafrost waterbodies to methane emissions on a regional scale using aircraft measurements

Sebastian Laboor: The data catalogue of the Permafrost Information System PerSys – An open access geospatial data dissemination and visualization portal for products from ESA DUE GlobPermafrost
Ariane Mueting: Decadal changes of glacial extents and snowline altitude of the Batura Glacier, Karakoram: Classification and spectral unmixing of remote sensing data
Anna Novikova: Dynamics of permafrost coasts of Baydaratskaya Bay (the Kara Sea) based on multi-temporal remote sensing data
Julia Oelker (presented by Astrid Bracher): Phytoplankton diversity in the Southern Ocean retrieved from hyperspectral satellite observations
Charlotte Robinson: Reassessing satellite algorithms for phytoplankton in the Southern Ocean
Alexandra Runge: Comparing spectral characteristics of Landsat-8 and Sentinel-2 data for Arctic permafrost regions
Roberto Salzano: Fractional snow cover area from terrestrial photography in Svalbard Islands (Norway)
Natalia Shabanova: Satellite-derived changes of ice-free period in the Barents and Kara Seas coastal zones
Jennifer Sobiech-Wolf: Zackenberg Valley seen by TerraSAR-X – land cover and moisture conditions
Kanayim Teshebaeva: Ground displacement in permafrost terrain from Sentinel-1 time-series SAR interferometry
Mariana Verdonen: UAS Remote Sensing in detection of the rapid decay of Palsa mires
Alexandra Veremeeva: Analyzing tundra vegetation characteristics for enhancing terrestrial LiDAR surveys of permafrost thaw subsidence
Melissa Ward Jones (presented by Benjamin Jones): Rapid initialization and retreat rates of retrogressive thaw slumps in the Fosheim Peninsula, Ellesmere Island, Nunavut

DAY 5: Friday, 14. September 2018, Telegrafenberg Campus, Building H		
08:30 – 14:00		Registration Desk Open
		Transfer to Telegrafenberg Campus on your own
09:00 – 10:30		***Oral Session: New Sensors and Operational Services I***
09:00 – 09:20	20’	**Johann Wagner:** The role of satellite-based information to inform change in Arctic ecosystems at the Canadian High Arctic Research Station, Nunavut
09:20 – 09:40	20’	**Tillman Bucher:** A customized airborne optical remote sensing system for polar environments
09:40 – 10:00	20’	**Eberhard Sauter:** From basic research to application – Technology transfer from AWI
10:00 – 10:30	30’	**Tobias Bolch *(Invited Keynote)*:** Impact of climate change on glaciers and rock glaciers on the Third Pole
10:30 – 10:50	20‘	Coffee Break
10:50 – 11:50		***Oral Session: New Sensors and Operational Services II***
10:50 – 11:10	20’	**Lothar Schüller:** The EUMETSAT network of satellite application facilities (SAF Network): Operational data and software products for Polar Regions
11:10 – 11:30	20’	**Ali Nadir Arslan (presented by Cemal Tanis):** A webcam network, open data and free toolbox for monitoring phenology and snow cover
11:30 – 11:50	20’	**Christopher Irrgang:** Remote sensing the ocean-induced magnetic field in polar regions
11:50 – 12:20	30’	Scientific Symposium Wrap-Up, Award Ceremony and Closure
12:20 – 14:00	100’	Lunch on your own at Telegrafenberg Canteen or Café Freundlich
14:00 – 17:00	180’	***Organized Workshops (Telegrafenberg Campus)*** InSAR Subsidence Workshop by RUS-Copernicus (A45-S Lecture Hall, **Frank Günther**) Arctic Vegetation Workshop (Building H Conference Rooms, **Birgit Heim**) Big Data Image Processing Workshop (A45-S Conference Room, **Ingmar Nitze**) Polar Ocean Color Workshop (Building H Conference Rooms, **Bennet Juhls**)

DAY 6: Saturday, 15. September 2018, Golm Campus, University of Potsdam	
09:00 – 16:00	1-Day Workshop: LiDAR and Point-Cloud Processing Workshop (Lead: **Prof. Dr. Bodo Bookhagen**, University of Potsdam) Limited to 20 Participants