



## International Network for Alpine Research Catchment Hydrology

### 2021 INARCH Annual Workshop

To be held virtually on Zoom, October 18–20, 2021

<https://inarch.usask.ca/>

#### Agenda

**Monday, October 18, 2021**

Time (GMT)	Presenter(s)	Topic / Title
1:00 – 1:30 PM	John Pomeroy, Ignacio López Moreno	Welcome, Opening, Update on INARCH status & activities; Outline & Objectives of workshop
<b>1. State of INARCH research basins and regional activities</b>		
1:30 – 2:30 PM	<b><i>Updates on the status of field activities and operations at INARCH research basins, and impacts of COVID-19 on research (5–6 min each) Chair: John Pomeroy</i></b>	
	Simon Gascoin	Snow depth and snow surface temperature measurements at Pic du Midi observatory (Pyrenees)
	María J. Polo	Updated monitoring facilities and online monitoring system for the Sierra Nevada, Spain
	Franziska Koch, Karsten Schulz	Snow hydrology studies and installation of a super conductance gravimeter in the high-alpine research catchment Zugspitze, Germany
	Jesús Revuelto	UAV acquisitions obtained in Izas Experimental Catchment and the surrounding area
	Walter Immerzeel	Update on the latest scientific progress and status of the Langtang catchment in Nepal
	John Pomeroy	Sub-canopy Snow Accumulation, Snow Redistribution at the Alpine Treeline and Rapid Retreat of Peyto Glacier in the Canadian Rockies Hydrological Observatory
	Erin Nicholls	Evapotranspiration process analysis and changes at Wolf Creek, Canada
2:30 – 2:40 PM	Break	
2:40 – 3:20 PM	<b><i>Continuation of round table updates on INARCH basins</i></b>	
	Ulrich Strasser	Rofental Open Air Laboratory (OpAL), Ötztal Alps (Austria)
	Nicolas Cullen, Jono Conway	Meteorological observations and analysis at the Brewster Glacier, Southern Alps of New Zealand
	James McPhee	Update on the Upper Diguillín and Upper Maipo research basins, Chile

	Ekaterina Rets	Hydrological, meteorological measurements in the Djankuat research catchment
	Wouter Buytaert	Advances on community-based hydrological monitoring of mountain regions
3:20 – 3:25 PM	<b>2-minute lightning talks on posters Chair: Chris DeBeer</b>	
	Brigitta Goger	Large-eddy Simulations of the Atmospheric Boundary Layer and Surface Fluxes over an Alpine Glacier
	Rafael Pimentel	Snowline elevation changes and streamflow regime at catchment scale: the case of Sierra Nevada (Spain)
3:25 – 4:00 PM	<b>Questions and General discussion (open chat and formal Q&amp;A setup with typed questions) Chair: John Pomeroy</b>	
	<ul style="list-style-type: none"> <li>• Instrumentation: what works, what doesn't?</li> <li>• Possibilities for common experimental design, common instrumentation</li> </ul>	

**Tuesday, October 19, 2021**

Time (GMT)	Presenter(s)	Topic / Title
1:00 – 1:05 PM	James McPhee	Welcome and opening of workshop day-2
<b>2. Modelling advances and intercomparison studies</b>		
1:05 – 1:10 PM	<b>2-minute lightning talks on posters Chair: Chris DeBeer</b>	
	Nariefah Abraham	Boundary layer meteorology and climatology of high alpine areas (Southern Alps of New Zealand), and surface energy and mass balance modelling of glaciers
	Esteban Alonso González	Simulating the snowpack in the Lebanese mountains from dynamical downscaling and fractional snow cover data assimilation
<b>Modelling advancement presentations Chair: James McPhee</b>		
1:10 – 1:25 PM	Martyn Clark	Global datasets to support hydrological modelling in alpine regions
1:25 – 1:45 PM	Ulrich Strasser	Development and application of Alpine MULTIscale Numerical Distributed Simulation ENGINE (openAMUNDSEN)
1:45 – 2:00 PM	María J. Polo	Modeling shallow and ephemeral snow in Sierra Nevada, Spain
2:00 – 2:15 PM	Chris Marsh	Development of the Canadian Hydrological Model (CHM)
2:15 – 2:30 PM	<b>General discussion Chair James McPhee</b>	
2:30 – 2:40 PM	Break	
2:40 – 2:55 PM	Richard Essery	SnowMIP Model intercomparison update; update on ESA Alpine Regional Initiative AlpSnow
2:55 – 3:10 PM	Tobias Jonas	Integrating detailed representation of forest snow processes into the Swiss operational snowmelt model

3:10 – 3:25 PM	Ethan Gutmann	Predictability of Alpine Basin Snow Patterns
3:25 – 3:40 PM	Sebastián Krogh	Snowmelt-driven diel streamflow signal in the mountainous western US
3:40 – 4:00 PM	<b>General discussion Chair James McPhee</b>	

**Wednesday, October 20, 2021**

Time (GMT)	Presenter(s)	Topic / Title
1:00–1:03 PM	Ignacio López Moreno	Welcome and opening of workshop day-3
1:03–1:05 PM	<b>2-minute lightning talks on posters Chair: Chris DeBeer</b>	
	Dhiraj Pradhananga	Hydrological response to changes in climate and glacier in a glacierized region in Nepal Himalaya
<b>3. Using modelling and observations to find solutions to mountain water sustainability under climate change? Chair: Ignacio López Moreno</b>		
1:05 – 1:20 PM	Rainer Prinz	Glacier observation, long range laser scanning and high resolution atmospheric modelling at Hintereisferner in the Ötztal Alps, Austria
1:20 – 1:35 PM	Ekaterina Rets	Modelling and observations at the Djankuat alpine research catchment located in the North Caucasus Russia
1:35 – 1:50 PM	Vincent Vionnet	Multi-scale snowdrift-permitting modelling of mountain snowpack
1:50 – 2:05 PM	James McPhee, Pablo Mendoza	Synthesizing modelling and observations in the Andes
2:05 – 2:25 PM	<b>General Discussion Chair: Ignacio López Moreno</b>	
2:25 – 2:35 PM	Break	
2:35 – 2:50 PM	John Pomeroy	Modelling and simulations of hydrological sensitivity to climate in the Canadian Rockies, Tien Shan and Himalayas
2:50 – 3:05 PM	Ignacio López Moreno	Global changes in snow and hydrology modelled using INARCH research basins
3:05 – 3:20 PM	John Pomeroy, Ignacio López Moreno, James McPhee	INARCH Phase II science plan
3:20 – 3:50 PM	<b>General discussion Chair: John Pomeory</b>	
3:50 – 4:00 PM	John Pomeroy	Summary wrap-up, next steps, workshop closing