


ICAM 2023

36th International Conference on Alpine Meteorology

# Programme Booklet

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# Contents

<b>Overview</b> .....	2
<b>Day Schedules</b> .....	3
Monday, 19 Jun 2023 .....	3
Tuesday, 20 Jun 2023 .....	7
Wednesday, 21 Jun 2023 .....	11
Thursday, 22 Jun 2023.....	13
Friday, 23 Jun 2023 .....	17

Mon, 19 Jun 2023	Tue, 20 Jun 2023	Wed, 21 Jun 2023	Thu, 22 Jun 2023	Fri, 23 Jun 2023
Registration	Oral Session O5 Dynamics I	Oral Session O9 Climate I	Oral Session O11 Climate II	Oral Session O15 Numerical Weather Prediction I
Welcome		Poster Pitches P6		
Oral Session O1 Boundary Layer I	Coffee Break	Coffee Break	Coffee Break	Coffee Break
Coffee Break	Oral Session O6 Dynamics II	Oral Session O10 Symposium Christoph Schär	Oral Session O12 Climate III	Oral Session O16 Numerical Weather Prediction II
Oral Session O2 Boundary Layer II		Poster Pitches P4	Group Photo	Poster Pitches P7
Poster Pitches P1	Lunch Break	Introduction to Säntis	Lunch Break	Lunch Break
Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break
Oral Session O3 Clouds and Precipitation I	Oral Session O7 Applications	Excursion	Oral Session O13 Boundary Layer III	Oral Session O17 Forecasting and Verification
				Poster Pitches P11
Poster Pitches P2	Poster Pitches P5		Poster Pitches P8	Announcements and Good Bye
Coffee Break	Coffee Break		Coffee Break	
Oral Session O4 Clouds and Precipitation II	Oral Session O8 Field Campaigns			Oral Session O14 Boundary Layer IV
Poster Pitches P3			Poster Pitches P9	
Icebreaker	Meteodrone Demo	Conference Dinner	ISC Meeting	

Monday, 19 Jun 2023

08:30 - 09:00

Registration

09:00 - 09:15

Welcome

09:15 - 10:30 O1

**Oral Session: Boundary Layer I**

**Chair:** Ivana Stiperski (University of Innsbruck, Austria)

09:15 O1.1

**Ground-based remote sensing of the atmospheric boundary layer in the Colorado Rocky Mountains during the seasonal snow-cover change**

**Bianca Adler** (University of Colorado, United States), James Wilczak, Laura Bianco, Ludovic Bariteau, Christopher J. Cox, Gijs de Boer, Irina Djalalova, Janet M. Intrieri, Tilden Meyers, Timothy Myers, Joseph B. Olson, Sergio Pezoa, Joseph Sedlar, Elizabeth Smith, David D. Turner, Allen White

09:30 O1.2

**Investigating the Planetary Boundary Layer Height in the CLOUDLAB Field Campaign**

**Heather Corden** (University of Bern, Switzerland), Robert Spirig

09:45 O1.3

**An Investigation of Mountain-Meteorological Processes Modulating Fog Formation During the Cold Fog Amongst Complex Terrain (CFACT) Project**

**Sebastian Hoch** (University of Utah, United States), Eric Pardyjak, Ismail Gultepe, Zhaoxia Pu, Anna Gannet Hallar, Alexei Perelet, Zachary Ruble

10:00 O1.4

**Investigation of boundary-layer processes in an Alpine valley with a network of ground-based sensors and UAS**

**Norman Wildmann** (DLR, Germany), Almut Alexa, Alexander Gohm, Friedrich Obleitner

10:15 O1.5

**Observed Structure and Variability of Upslope Flows during CACTI**

**Neil Lareau** (University of Nevada, United States), Daniel Kirshbaum

10:30 - 11:15

Coffee Break

11:15 - 12:15 O2

**Oral Session: Boundary Layer II**

**Chair:** Brigitta Goger (ETH Zurich, Switzerland)

11:15 O2.1

**Anisotropy of turbulence eddies and the implication on similarity theory**

**Ivana Stiperski** (University of Innsbruck, Austria), Marc Calaf

11:30 O2.2

**The Effect of Turbulence Anisotropy on Flux-Gradient Scaling Relations**

**Samuele Mosso** (Universität Innsbruck, Austria), Ivana Stiperski

11:45 O2.3

**Anisotropy effect on the low frequency range of unstably stratified atmospheric flow**

**Claudine Charrondière** (University of Innsbruck, Austria), Ivana Stiperski

12:00 O2.4

**Neutral and stratified turbulent boundary layer flow over low mountains**

**Francois Lott** (PSL Research Institute, France), Lucile Pauget, Anton Beljaars

12:15 -12:30		Poster Pitches 1: Boundary Layer
P1.1	<a href="#"><u>Estimation of the mountainous boundary layer height by a network of ceilometers in the Swiss Alps</u></a> <b>Martine Collaud Coen</b> (MeteoSwiss, Switzerland), Dylan Ifergan, Benjamin Heutte, Rolf Rüfenacht, Maxime Hervo, Daniel Leuenberger, Marco Arpagaus, Alexander Haefele	
P1.2	<a href="#"><u>Quadcopter observations of the evening transition from up-valley to down-valley winds</u></a> <b>Meinolf Kossmann</b> (Deutscher Wetterdienst, Germany), Stephan F.J. de Wekker	
P1.3	<a href="#"><u>A better understanding of the mountain boundary layer processes in the eastern Pyrenees</u></a> <b>Mireia Udina</b> (Universitat de Barcelona, Spain), Laura Trapero, Joan Bech, Alexandre Paci	
P1.4	<a href="#"><u>Structure of turbulence in an ice cave</u></a> <b>Ivana Stiperski</b> (University of Innsbruck, Austria), Maria Wind, Friedrich Obleitner, Tanguy Racine, Mathias W Rotach, Christoph Spötl	
P1.5	<a href="#"><u>An improved method for mesoscale model evaluation over complex terrain</u></a> <b>Gaspard Simonet</b> (UIBK ACINN, Austria), Manuela Lehner, Mathias W. Rotach	
P1.6	<a href="#"><u>Sensitivity study of WRF model parameterization schemes on alpine basin temperature inversion</u></a> <b>Katharina Perny</b> (University of Natural Resources and Life Sciences, Austria), Imran Nadeem, Herbert Formayer	
P1.7	<a href="#"><u>Mesoscale modeling using new method for eddy diffusivity parameterizations and assessment of SO2 concentrations using aviation measurements</u></a> <b>Gašparac Goran</b> (University of Zagreb, Croatia), Jeričević Amela, Željko Večenaj, Esau Igor, Grisogono Branko	

12:30 - 14:00 Lunch Break

14:00 - 15:45		O3	Oral Session: Clouds and Precipitation I <b>Chair:</b> Luca Panziera (MeteoSwiss, Switzerland)
14:00 <b>Invited</b>	O3.1	<a href="#"><u>Why my (and probably your) idealized orographic precipitation simulation is wrong.</u></a> <b>Dale Durran</b> (University of Washington, USA), Lydia Tierney	
14:30	O3.2	<a href="#"><u>Environmental conditions controlling the morphology of shallow orographic convection</u></a> <b>Daniel Kirshbaum</b> (McGill University, Canada), Jialin Liu	
14:45	O3.3	<a href="#"><u>Observations of Mountain Waves and Orographic Precipitation over Basin and Range Topography</u></a> <b>David Kingsmill</b> (University of Colorado, United States), Bart Geerts, Jim Steenburgh	
15:00	O3.4	<a href="#"><u>Dependence of orographic convective rain on model resolution</u></a> <b>Samantha Smith</b> (UK Met Office, United Kingdom), Alison Stirling	
15:15	O3.5	<a href="#"><u>Rainfall regimes over the Western Ghats Mountains of India</u></a> <b>Andrew Ross</b> (University of Leeds, United Kingdom), Jayesh Phadtare, Jennifer Fletcher, Andrew Turner, Reinhard Schiemann, Helen Burns	
15:30	O3.6	<a href="#"><u>Coastal and Orographic Influences on Lake-Effect Systems: Results from Recent Observational and Modeling Studies</u></a> <b>Jim Steenburgh</b> (University of Utah, United States), Peter Veals, Thomas Gowan, Leah Campbell, Sento Nakai, Justin Minder, Satoru Yamaguchi	

15:45 - 16:00		Poster Pitches 2: Clouds and Precipitation
P2.1	<a href="#"><u>Observations of the Characteristics of Cool-Season Precipitation in the Salt Lake Valley and Adjacent Central Wasatch Range of Utah, USA</u></a> <i>Michael L. Wasserstein</i> (University of Utah, USA), <i>Jim Steenburgh</i> , <i>Peter Veals</i> , <i>David Kingsmill</i> , <i>Ashley Evans</i>	
P2.2	<a href="#"><u>Influence of Cold Air Damming on Snowfall in the Yeongdong region of Korea</u></a> <i>Byung-Gon Kim</i> (Gangneung-Wonju National University, South Korea), <i>Young-Gil Choi</i> , <i>Ji-Yoon Kim</i> , <i>Byung-Whan Lim</i> , <i>Si-Woo Lee</i>	
P2.3	<a href="#"><u>Three types of clouds forming over the summit and downwind of a typical conical mountain, Mt. Fuji: a climatological study</u></a> <i>Hiroiyuki Kusaka</i> (University of Tsukuba, Japan), <i>Tomoko Kodama</i> , <i>Tomoka Maeda</i> , <i>Kakeru Konnai</i> , <i>Natsuki Takada</i> , <i>Miru Maebata</i> , <i>Risa Ishida</i> , <i>Rio Ishikawa</i> , <i>Kenshi Murata</i>	
P2.4	<a href="#"><u>Winds make cap and Tsurushi clouds over Mt. Fuji grow larger</u></a> <i>Hiroiyuki Kusaka</i> (University of Tsukuba, Japan), <i>Risa Ishida</i> , <i>Yuma Imai</i> , <i>Takashi Ikeda</i> , <i>Jason C. Knievel</i> , <i>George Bryan</i>	
P2.5	<a href="#"><u>Ambient Flow Influences on Broad-Coverage Lake-Effect Systems Interacting with Downstream Orography</u></a> <i>Jim Steenburgh</i> (University of Utah, United States), <i>Dallas McKinney</i>	
P2.6	<a href="#"><u>On the applicability of the 2D linear upslope model for orographic rainfalls: case studies in the pre-Alpine mountain range</u></a> <i>Andrea Abbate</i> (Ricerca Sistema Energetico, Italy)	
P2.7	<a href="#"><u>Evaluation of High-Resolution Regional Climate Model Simulations of Atmospheric River Impacts on Orographic Precipitation and Snowpack in the Southern Andes</u></a> <i>Erin Potter</i> (University at Albany, United States), <i>Justin Minder</i>	

16:00 - 16:45 Coffee Break

16:45 - 18:15		O4	Oral Session: Clouds and Precipitation II
			<i>Chair: Marcello Miglietta</i> (ISAC-CNR, Italy)
16:45	O4.1	<a href="#"><u>A pan-Alpine climatology of lightning and convective initiation</u></a> <i>Agostino Manzato</i> (ARPA FVG - OSMER, Italy), <i>Stefano Serafin</i> , <i>Mario Marcello Miglietta</i> , <i>Daniel Kirshbaum</i> , <i>Wolfgang Schulz</i>	
17:00	O4.2	<a href="#"><u>Spillover of precipitation in the Swiss Alps</u></a> <i>Luca Panziera</i> (MeteoSwiss, Switzerland), <i>Carlo Guzzon</i> , <i>Lorenzo Giovannini</i> , <i>Dino Zardi</i>	
17:15	O4.3	<a href="#"><u>First analysis of long-term observations of clouds and precipitation at Schneefernerhaus using a synergy of radar, microwave radiometer and ceilometer</u></a> <i>Stefan Kneifel</i> (Ludwig-Maximilians-University Munich, Germany), <i>Bernhard Pospichal</i> , <i>Tobias Zinner</i> , <i>Leonie von Terzi</i> , <i>Martin Hagen</i> , <i>Ulrich Löhnert</i> , <i>Bernhard Mayer</i> , <i>Susanne Crewell</i>	
17:30	O4.4	<a href="#"><u>Atmospheric rivers in the Mediterranean and heavy precipitation over the Alps</u></a> <i>Silvio Davolio</i> (National Research Council of Italy, Italy), <i>Mario Marcello Miglietta</i> , <i>Marco Vercellino</i> , <i>Lucia Drago Pitura</i> , <i>Lorenzo Giovannini</i> , <i>Francesco Sioni</i> , <i>Federico Grazzini</i> , <i>Sante Laviola</i> , <i>Vincenzo Levizzani</i>	
17:45	O4.5	<a href="#"><u>Characteristics of Cool-Season Orographic Precipitation Extremes in the central Wasatch Range, Utah, USA</u></a> <i>Michael L. Wasserstein</i> (University of Utah, United States), <i>Jim Steenburgh</i>	

18:00 O4.6 [CLOUDLAB: Simulating cryogenic cloud seeding of low stratus over the Swiss Plateau in ICON-NWP compared to field observations](#)  
**Ulrike Lohmann** (ETH Zürich, Switzerland), Nadja Omanovic, Sylvaine Ferrachat, Jan Henneberger, Christopher Fuchs, Anna Miller, Fabiola Ramelli, Robert Spirig, Hui-Ying Zhang

18:15 - 18:30

**Poster Pitches 3: Dynamics**

- P3.1 [Climatology and some dynamic features of inversions in Iceland](#)  
**Lilja Jónsdóttir** (University of Iceland, Iceland), Haraldur Ólafsson
- P3.2 [Characteristics of bora pulsations in the lee of the Dinaric Alps](#)  
**Petar Golem** (University of Zagreb, Croatia), Željko Večenaj, Hrvoje Kozmar, Branko Grisogono
- P3.3 [Why does Japan's south foehn, "Jintsu-Oroshi," often blow at night?](#)  
**Hiroyuki Kusaka** (University of Tsukuba, Japan), Kei Nishiba
- P3.4 [Spatial Distribution and Generation Mechanism of Local Winds "Rokko-oroshi"](#)  
**Hiroataka Abe** (University of Tsukuba, Japan), Hiroyuki Kusaka
- P3.5 [Climatological study on valuable local winds of Japan "Obonai-dashi"](#)  
**Tatsuki Kudo** (University of Tsukuba, Japan), Hiroyuki Kusaka
- P3.6 [On the role of the Po Valley cold-air pool in the lifting of Foehn air parcels](#)  
**Lukas Jansing** (ETH Zürich, Switzerland), Yue Tian, Jürg Schmidli, Michael Sprenger
- P3.7 [Large-Eddy Simulations of Föhn in the Rhine Valley](#)  
**Lilja Jónsdóttir** (ETH Zürich, Switzerland), Nikolai Krieger, Michael Sprenger

18:30 - 20:00

Icebreaker



Tuesday, 20 Jun 2023

08:30 - 10:00	O5	<b>Oral Session: Dynamics I</b> <b>Chair:</b> Annelize van Niekerk (ECMWF, UK)
08:30	O5.1	<u><a href="#">Flow past an isolated steep mountain and associated lee-side cloud formation.</a></u> <b>Invited</b> <b>Volkmar Wirth</b> (Johannes Gutenberg Universität Mainz, Germany)
09:00	O5.2	<u><a href="#">The Laseyer windstorm - climatology, mechanism, and sensitivity to ambient conditions</a></u> <b>Nicolai Krieger</b> (ETH Zürich, Switzerland), Christian Kühnlein, Michael Sprenger, Heini Wernli
09:15	O5.3	<u><a href="#">Very High Resolution Simulations of Rotors in the Tibetan Plateau with Selective Terrain Smoothing</a></u> <b>Peter Sheridan</b> (Met Office, United Kingdom), Anlun Xu, Jian Li, Kalli Furtado
09:30	O5.4	<u><a href="#">Numerical and theoretical study of the effects of mountain width on downslope winds</a></u> <b>Yuki Asano</b> (University of Tsukuba, Japan), Hiroyuki Kusaka
09:45	O5.5	<u><a href="#">Warming and descent of the Alpine South Foehn: Revisiting long-standing questions from a Lagrangian perspective</a></u> <b>Lukas Jansing</b> (ETH Zürich, Switzerland), Lukas Papritz, Heini Wernli, Michael Sprenger
10:00 - 10:45		Coffee Break
10:45 - 12:15	O6	<b>Oral Session: Dynamics II</b> <b>Chair:</b> Volkmar Wirth (University of Mainz, Germany)
10:45	O6.1	<u><a href="#">Valley floor inclination affecting valley winds and transport of passive tracers in idealised simulations</a></u> <b>Johannes Mikkola</b> (University of Helsinki, Finland), Alexander Gohm, Victoria Sinclair, Federico Bianchi
11:00	O6.2	<u><a href="#">Numerical simulations of banded orographic convection over the eastern Italian Alps</a></u> <b>Mario Marcello Miglietta</b> (CNR-ISAC, Italy), Tullio Degiacomi, Andrea Zonato, Silvio Davolio, Lorenzo Giovannini
11:15	O6.3	<u><a href="#">Accounting for the three-dimensional nature of mountain waves: parametrizing partial critical level filtering</a></u> <b>Annelize Van Niekerk</b> (ECMWF, United Kingdom), Simon Vosper, Miguel Teixeira
11:30	O6.4	<u><a href="#">Importance of Orographic Gravity Waves over the Tibetan Plateau on the Spring Rainfall in East Asia</a></u> <b>Xin Xu</b> (Nanjing University, China), Runqiu Li, Ted Shepherd, Yixiong Lu
11:45	O6.5	<u><a href="#">Trapped mountain waves developping in stably stratified turbulent flow</a></u> <b>Lucile Pauget</b> (PSL Research Institute, France), Francois Lott, Christophe Millet
12:00	O6.6	<u><a href="#">The momentum fluxes produced by weakly dissipative trapped lee waves: application to Scorer's two-layer atmosphere</a></u> <b>Miguel A. C. Teixeira</b> (University of Reading, United Kingdom), José L. Argain



12:15 - 12:30		Poster Pitches 4: Dynamics & Applications
P4.1		<a href="#"><u>The drag produced by vertically propagating non-hydrostatic mountain waves generated by three-dimensional orography</u></a> <i>Miguel A. C. Teixeira</i> (University of Reading, United Kingdom), Xin Xu, Runqiu Li, Yixiong Lu
P4.2		<a href="#"><u>How is orographic gravity-wave drag affected by a stable boundary layer?</u></a> <i>Miguel A. C. Teixeira</i> (University of Reading, United Kingdom), Holly V. Turner, John Methven
P4.3		<a href="#"><u>Impacts of damping in an idealized model of orographic gravity waves</u></a> <i>Callum Dinnett</i> (Met Office Exeter, United Kingdom)
P4.4		<a href="#"><u>Estimation of extreme winds over the wider Adriatic region</u></a> <i>Kristian Horvath</i> (Croatian Meteorological and Hydrological Service, Croatia), Endi Keresturi, Ines Muić, Lasta Slaviček
P4.5		<a href="#"><u>Orographic winds and the greatest achievement of mankind in the Middle Ages</u></a> <i>Haraldur Ólafsson</i> (University of Iceland, Iceland), Philipp Weitzel, Iman Rousta, Benoit Soula, Léo Jacobin
P4.6		<a href="#"><u>Analysing future behaviour of south-foehn-frequency over Western Austria using an XGBoost machine learning approach</u></a> <i>Philipp Maier</i> (University of Natural Resources and Life Sciences, Austria), Herbert Formayer, Fabian Lehner, Tatiana Klisho, Katharina Perny
P4.7		<a href="#"><u>Investigation of the water vapor channel within the Yarlung Zsangbo Grand Canyon, China</u></a> <i>Xuelong Chen</i> (Chinese Academy of Sciences, 中国)
P4.8		<a href="#"><u>Climate change adaptation scenarios during heat waves in the Grenoble metropolitan area and impact on air quality</u></a> <i>Jacobo Gabeiras-Penas</i> (Université Grenoble Alpes, France)

12:30 - 14:00		Lunch Break
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14:00 - 15:45		O7	Oral Session: Applications <i>Chair: Chantal Staquet</i> (University Grenoble Alpes, France)
14:00	O7.1	<a href="#"><u>Where does mountain water go? Combining efforts to track snowflakes, snow packs, water droplets, and water vapor in the East River Watershed, Colorado.</u></a> <i>Jessica Lundquist</i> (University of Washington, USA)	Invited
14:30	O7.2	<a href="#"><u>Comparison of large eddy simulations with continuous-wave LIDAR measurements of daytime flows in a small Alpine side valley</u></a> <i>Stefan Fluck</i> (ZHAW, Switzerland), Julien Anet, Bruno Neininger	
14:45	O7.3	<a href="#"><u>The relevance of thermally-driven winds for wind energy in High-Arctic complex terrain</u></a> <i>Matthias Henkies</i> (The University Centre in Svalbard, Norway), Aleksey Shestov, Knut Vilhelm Høyland, Anna Sjöblom	
15:00	O7.4	<a href="#"><u>Numerical Modeling of a Passive Tracer Dispersion from a Continuous Source in a Steady Thermally Driven Slope Wind</u></a> <i>Sofia Farina</i> (University of Trento, Italy), Dino Zardi	
15:15	O7.5	<a href="#"><u>Investigating the transport of sulphate particles at the high altitude WMO/GAW Mt. Cimone global station using WRF-CHIMERE</u></a> <i>Bruno Vitali</i> (Department of Civil, University of Trento, Italy), Giancarlo Ciarelli, Dino Zardi, Federico Bianchi, Victoria Sinclair, Angela Marinoni	
15:30	O7.6	<a href="#"><u>Unravelling Mountain Wave Effects in the Troposphere - preliminary results.</u></a> <i>Petr Šácha</i> (Charles University, Czech Republic), Jan Karlický, Harald Rieder	

15:45 - 16:00		<b>Poster Pitches 5: Field Campaigns</b>
P5.1		<a href="#"><u>Precipitation characteristics obtained from Disdrometers and Doppler Micro Rain Radars: from WISE-PreP (LIAISE-2021) to ARTEMIS projects (Cerdanya-2024).</u></a> <i>Francesc Polls</i> (Universitat de Barcelona, Spain), Mireia Udina, Joan Bech, Eric Peinó
P5.2		<a href="#"><u>The Inn Valley exit jet: results of the TEAMx pre-campaign</u></a> <i>Katrin Sedlmeier</i> (German Meteorological Service, Germany), Meinolf Kossmann, Ivan Paunovic, Oliver Nitsche, Ronny Leinweber, Eileen Päscke, Lothar Bock, Gudrun Mühlbacher
P5.3		<a href="#"><u>High resolution observations of tributary valley outflows under nighttime stable conditions</u></a> <i>Andreas Wieser</i> (Karlsruhe Institute of Technology (KIT), Germany), Nevio Babic, Jan Handwerker, Alexander Gohm, Lena Pfister
P5.4		<a href="#"><u>Exploring the spatial and temporal variability of downslope flows during SWEX using a mobile wind lidar</u></a> <i>Stephan De Wekker</i> (University of Virginia, United States), Gert-Jan Duine, Leila Carvalho
P5.5		<a href="#"><u>Visualization of surface heat transfer around the Jungfrauoch, Switzerland, using thermal imaging</u></a> <i>Nicolas Bukowiecki</i> (University of Basel, Switzerland), Oliver Indra, Roland Vogt, Markus Kalberer
P5.6		<a href="#"><u>Development and use of LoRaWAN IoT technology for realtime data acquisition and transmission in remote mountain areas (Alps - Italy)</u></a> <i>Andrea Costantini</i> (Experimental Meteorological Monitoring Project in the Pian Cansiglio Regional Forest, Italy), Mauro Grotto
P5.7		<a href="#"><u>LiMnADs Project: Holistic environmental monitoring of the Mediterranean alpine zone</u></a> <i>Konstantinos Alexopoulos</i> (University of Cambridge, United Kingdom), Stylianos Sarantellis, Komninellis, Emmanouil Vlassis, Benedikt Aurelian Kaspar, David O'Brien-Møller, Andreas Kalyvas, Panagiotis Gkotsis, Christos Salmas, Stavros Dafis, Vasilios Vafeiadis, Konstantinos Lagouvardos, Haritakis Papaioannou
P5.8		<a href="#"><u>Sämtisersee: A multi-method approach to track the eternal battle between foehn and cold-air pool</u></a> <i>Stephan Vogt</i> (MeteoSwiss, Switzerland), Julien Anet, Curdin Spirig, Timothy Wright

16:00 - 16:45		Coffee Break
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16:45 - 18:30		<b>Oral Session: Field Campaigns</b>
O8		<b>Chair:</b> Sebastian Hoch (University of Utah, USA)
16:45	O8.1	<a href="#"><u>TEAMx pre-campaign 2022: Overview and highlights.</u></a> <b>Invited</b> <i>Alexander Gohm</i> (University of Innsbruck, Austria)
17:15	O8.2	<a href="#"><u>TEAMx - state of affairs</u></a> <i>Mathias Rotach</i> (University of Innsbruck, Austria), Marco Arpagaus, Stephan De Wekker, Daniel Kirshbaum, Peter Knippertz, Manuela Lehner, Stephen Mobbs, Alexandre Paci, Elisa Palazzi, Stefano Serafin, Helen Ward, Christoph Wittmann, Dino Zardi
17:30	O8.3	<a href="#"><u>CLOUDLAB: Ice crystal formation and growth in wintertime stratus clouds over the Swiss Plateau, ground-based remote sensing and in-situ</u></a> <i>Robert Spirig</i> (ETH Zurich, Switzerland), Jan Henneberger, Fabiola Ramelli, Christopher Fuchs, Anna Miller, Nadja Omanovic, Huiying Zhang, Michael Rösch, Heather Corden, Jannis Portmann, Ulrike Lohmann, Kevin Ohneiser, Martin Radenz, Johannes Bühl, Tom Gaudek, Patric Seifert, Maxime Hervo, Phillip Bättig, Daniel Leuenberger
17:45	O8.4	<a href="#"><u>Orographic influences on precipitation type in the Champlain and Saint Lawrence Valleys during the WINTRE-MIX field campaign</u></a>

**Justin Minder** (University at Albany, United States), Bin Han, Jeffery French, Katja Friedrich, Andrew Winters, David Kingsmill, Nick Bassill

18:00 O8.5

[Observing convection in complex terrain - combining Lidar and in situ observations](#)

**Thomas Spengler** (University of Bergen, Norway), Christiane Duscha, Juraj Palenik, Joachim Reuder

18:15 O8.6

[The Study of Precipitation, the Lower Atmosphere and Surface for Hydrometeorology \(SPLASH\): Perspectives on Two Years in the Rocky Mountains](#)

**Gijs de Boer** (University of Colorado Boulder, United States), Allen White, Rob Cifelli, Tilden Meyers, Kathy Lantz, Janet Intrieri, Erik Hulm, Mimi Hughes, Kelly Mahoney, Jack Elston, Jonathan Hamilton, Jennifer Reithe, Joseph Sedlar, Laura Riihimaki, Darren Jackson, Anarelli Morales, Bianca Adler, Ryan Currier, Laura Bianco, James Wilczak, Christopher Cox, Mike Meyers, Maciej Stachura, James Pinto, Elizabeth Smith, Sara Morris, Michael Gallagher, Janice Bytheway, Robert Webb

18:30 - 20:00

Meteodrone Demo

Wednesday, 21 Jun 2023

08:30 - 09:45		09	<b>Oral Session: Climate I</b> <i>Chair: Sven Kotlarski (MeteoSwiss, Switzerland)</i>
08:30	09.1	<a href="#"><u>The Swiss Alpine zero degree line: Methods, past evolution and sensitivities</u></a> <i>Simon C. Scherrer (MeteoSwiss, Schweiz), Stefanie Gubler, Kathrin Wehrli, Andreas M. Fischer, Sven Kotlarski</i>	
08:45	09.2	<a href="#"><u>Global warming and the valley wind system in the Inn Valley</u></a> <i>Petra Seibert (University of Natural Resources and Life Sciences, Austria), Herbert Formayer, Fabian Lehner, Tatiana Klisho</i>	
09:00	09.3	<a href="#"><u>Analysis of past and future temperature extremes in the Greater Alpine Region (1951-2050)</u></a> <i>Beatrice Diana (University of Trento, Italy), Ioana Colfescu, Massimo Bollasina, Dino Zardi</i>	
09:15	09.4	<a href="#"><u>Attributing heatwaves to climate change in mountainous areas. An analysis of the summer 2022 heatwaves in the Pyrenees</u></a> <i>Laura Trapero (Andorra Research + Innovation, Andorra), Marc Lemus-Canovas, Sergi Gonzalez-Herrero, Anna Albalat, Damian Insua-Costa, Martin Senande-Rivera, Gonzalo Miguez-Macho</i>	
09:30	09.5	<a href="#"><u>Dynamically downscaled flow over Greenland</u></a> <i>Haraldur Ólafsson (University of Iceland, Iceland), Philipp Weitzel</i>	

09:45 - 10:00		<b>Poster Pitches 6: Climate</b>	
P6.1	<a href="#"><u>A new dataset of daily observations from a dense network of weather stations covering the Extended Alpine Region (1991-2020)</u></a> <i>Giulio Bongiovanni (University of Trento, Italy), Michael Matiu, Alice Crespi, Anna Napoli, Bruno Majone, Dino Zardi</i>		
P6.2	<a href="#"><u>Adding value to historical data: A new reference dataset for climate change studies in Berchtesgaden National Park</u></a> <i>Katrin Sedlmeier (German Meteorological Service (DWD), Germany), Annette Lotz, Oliver Nitsche, Sebastian Heiser, Ivan Paunovic, Lothar Bock, Gudrun Mühlbacher</i>		
P6.3	<a href="#"><u>Indicators for study the temporal evolution of snow depth in the Pyrenees</u></a> <i>Laura Trapero (Andorra Research + Innovation, Andorra), Anna Albalat, Marc Lemus-Cánovas, Marc Pons</i>		
P6.4	<a href="#"><u>A survey of mountaineers' observations of global warming effects in the Hex River mountains, South Western Cape, South Africa.</u></a> <i>Gavin Heath (University of KwaZulu-Natal, South Africa)</i>		
P6.5	<a href="#"><u>Geo-hydrological Disasters in the Uttarakhand Himalaya: A Case Study of Bandal Valley</u></a> <i>Saurav Kumar (Mizoram University, India), Vishwambhar Prasad Sati</i>		

10:00 - 10:45		Coffee Break
10:45 - 11:45	O10	<b>Oral Session:</b> Symposium Christoph Schär <b>Chair:</b> Michael Sprenger (ETH Zurich, Switzerland)
10:45	O10.1	<u><a href="#">The history of numerical modelling over complex terrain.</a></u> <b>Christoph Schär</b> (ETH Zurich, Switzerland)
11:15		Looking back to the research by Christoph Schär - I <b>Nikolina Ban</b> (University of Innsbruck, Austria)
11:30		Looking back to the research by Christoph Schär - II <b>Juerg Schmidli</b> (Goethe University Frankfurt, Germany)
11:45 - 12:15		Group Photo
12:15		Säntis: The weather mountain - A meteorological and climatological introduction <b>Simon Scherrer</b> (MeteoSwiss, Switzerland)
12:30 - 13:00		Lunch Break (Sandwiches for participants of excursion will be provided)
13:00 - 18:00		Excursion
19:00 - 23:00		Conference Dinner

Thursday, 22 Jun 2023

08:30 - 10:00		O11	<b>Oral Session: Climate II</b> <b>Chair: Nikolina Ban (University of Innsbruck, Austria)</b>
08:30	O11.1	<a href="#"><u>Climate change in the mountains: From elevation-dependent warming to elevation-dependent climate change.</u></a> <b>Elisa Palazzi (University of Turin, Italy)</b>	<b>Invited</b>
09:00	O11.2	<a href="#"><u>Evaluation of the elevation dependence of climatic indices from EURO-CORDEX regional climate models in the Alpine region</u></a> <b>Anna Napoli (University of Trento, Italy), Michael Matiu, Sven Kotlarski, Dino Zardi, Alberto Bellin, Bruno Majone</b>	
09:15	O11.3	<a href="#"><u>Elevation-dependent precipitation change in global mountains</u></a> <b>Olivia Ferguglia (University of Turin, Italy), Enrico Arnone, Elisa Palazzi</b>	
09:30	O11.4	<a href="#"><u>Trends in temperature and moisture from a 5000 metre elevational transect across Kilimanjaro: 2004-2022</u></a> <b>Nicholas Pepin (University of Portsmouth, United Kingdom), Harold Lovell, Clare Boston</b>	
09:45	O11.5	<a href="#"><u>Temperature, Water Vapor and Lapse Rate Trends Point to Elevation Dependency of Climate Trends in the Peruvian Northern Andes</u></a> <b>Robert Hellstrom (Bridgewater State University, United States), Bryan Mark, Emily Mazan, Emilio Mateo</b>	
10:00 - 10:45		Coffee Break	
10:45 - 12:15		O12	<b>Oral Session: Climate III</b> <b>Chair: Elisa Palazzi (University of Turin, Italy)</b>
10:45	O12.1	<a href="#"><u>Dynamically downscaled global climate models over the western United States using the Intermediate Complexity Atmospheric Research Model</u></a> <b>William Currier (NOAA/ESRL/PSL, United States), Ethan Gutmann, Rachel McCrary, Mimi Hughes, Bert Kruyt, Abigail Smith, Kelly Mahoney, Rebecca Smith, Seth Shanahan, Jim Praire</b>	
11:00	O12.2	<a href="#"><u>Parameterising sub-grid topographic effects on surface radiation in high-resolution atmospheric and climate modelling</u></a> <b>Christian R. Steger (ETH Zürich, Switzerland), Christoph Schär</b>	
11:15	O12.3	<a href="#"><u>Confronting Systematic Mountain Cold-Biases in Regional Climate Simulations: Observations, Discussion, and Synthesis with SAIL Field Campaign Observations</u></a> <b>William Rudisill (Lawrence Berkeley National Lab, United States), Daniel Feldman, Alan Rhoades, Erica Siirila-Woodburn, Zexuan Xu, Nicholas Thiros</b>	
11:30	O12.4	<a href="#"><u>Impact of climate change on wintertime persistent inversions in the Grenoble valley during the 21st century</u></a> <b>Chantal Staquet (University Grenoble Alpes - LEGI, France), Sara Bacer, Julien Beaumet, Martin Menegoz, Hubert Gallee, Enzo Le Bouedec</b>	



11:45	O12.5	<a href="#">Evaluation of hail and lightning climatology using km-scale climate model over the Alpine region</a> <i>Ruoyi Cui</i> (ETH Zurich, Switzerland), <i>Nikolina Ban</i> , <i>Marie-Estelle Demory</i> , <i>Christoph Schär</i>
12:00	O12.6	<a href="#">Diurnal cycle of precipitation along the Himalayan foothills: observations, reanalyses, and climate simulations</a> <i>Bodo Ahrens</i> (Goethe University Frankfurt, Germany), <i>Alexander Halbig</i> , <i>Prashant Singh</i>

12:15 - 12:30 **Poster Pitches 7: Climate**

P7.1	<a href="#">Dependence of future changes in river discharge on weather patterns seen in a mountainous heavy snowfall area in Japan.</a> <i>Masamichi Ohba</i> (Central Research Institute of Electric Power Industry, Japan), <i>Ryosuke Arai</i> , <i>Masahiro Imamura</i> , <i>Takahiro Sato</i> , <i>Yasushi Toyoda</i>
P7.2	<a href="#">Future changes in Rain-on-Snow events in Japan</a> <i>Masamichi Ohba</i> (Central Research Institute of Electric Power Industry, Japan), <i>Hiroaki Kawase</i>
P7.3	<a href="#">Variability of simulated mean winds over Iceland</a> <i>Benoit Soula</i> (University of Iceland, Iceland), <i>Léo Jacobin</i> , <i>Philipp Weitzel</i> , <i>Haraldur Ólafsson</i>
P7.4	<a href="#">Understanding and quantifying mountain climate change and variability: The role of TEAMx and its Mountain Climate working group</a> <i>Nikolina Ban</i> (Universität Innsbruck, Austria), <i>Sven Kotlarski</i> , <i>Emily Collier</i> , <i>Anna Napoli</i> , <i>Dino Zardi</i> , <i>Bodo Ahrens</i> , <i>Ioana Colfescu</i> , <i>Katrin Sedlmeier</i> , <i>Heimo Truhetz</i>
P7.5	<a href="#">A new report on the state of the climate in the central and eastern Alps</a> <i>Katrin Sedlmeier</i> (German Meteorological Service, Germany), <i>Alexander Orlik</i> , <i>Elias Zubler</i>

12:30 - 14:00 **Lunch Break**

14:00 - 15:45 O13 **Oral Session: Boundary Layer III**  
**Chair:** *Stefano Serafin* (University of Vienna, Austria)

14:00	O13.1	<a href="#">Representation of the mountain boundary layer in NWP models: Does higher resolution mean improved model performance?</a> <i>Invited</i> <i>Brigitta Goger</i> (ETH Zurich, Switzerland)
14:30	O13.2	<a href="#">Effects of smoothed orography on stable boundary-layer flow in the Grenoble valley</a> <i>Charles Chemel</i> (National Centre for Atmospheric Science, United Kingdom), <i>Enzo Le Bouédec</i> , <i>Chantal Staquet</i>
14:45	O13.3	<a href="#">Representation of the Stable Boundary Layer in ICON over the Swiss Plateau</a> <i>Shweta Singh</i> (Goethe University Frankfurt, Germany), <i>Juerg Schmidli</i>
15:00	O13.4	<a href="#">A south foehn case study with ICON-NWP and ICON-LES in the Alpine Rhine Valley</a> <i>Yue Tian</i> (Goethe University Frankfurt, Germany), <i>Julian Quimbayo-Duarte</i> , <i>Shweta Singh</i> , <i>Juerg Schmidli</i>
15:15	O13.5	<a href="#">Transient quasi-periodic behavior of flow past an isolated steep mountain</a> <i>Marius Levin Thomas</i> (Johannes Gutenberg University Mainz, Germany), <i>Volkmar Wirth</i>
15:30	O13.6	<a href="#">Boundary-layer plumes and slope winds over hilly terrain in idealized large-eddy simulations</a>

*Jan Weinkaemmerer (Goethe University Frankfurt, Germany), Matthias Göbel, Ivan Bašták Ďurán, Stefano Serafin, Jürg Schmidli*

15:45 - 16:00		Poster Pitches 8: Boundary Layer
P8.1	<a href="#">Storage and transport processes in an idealized valley with a LES reference</a> <i>Ivan Bašić (Goethe University Frankfurt, Germany), Shweta Singh, Juerg Schmidli</i>	
P8.2	<a href="#">AlpTherm 3d – a heuristic Lagrangian convection model on highly resolved orography</a> <i>Bruno Neiningner (Zurich University of Applied Sciences (ZHAW), Switzerland)</i>	
P8.3	<a href="#">The representation of valley winds at the hectometric range in NWP models - Does higher resolution improve model performance?</a> <i>Brigitta Goger (ETH Zurich, Switzerland), Anurag Dipankar</i>	
P8.4	<a href="#">Evaluation of thermally driven local winds in the Swiss Alps simulated by the ICON model</a> <i>Juerg Schmidli (Goethe University Frankfurt, Germany), Julian Quimbayo-Duarte</i>	
P8.5	<a href="#">Analysis of the wind response to resolved versus parametrized turbulent orographic drag over moderately complex terrain.</a> <i>Julian Quimbayo Duarte (Goethe Universität, Germany), Juerg Schmidli, Martin Köhler, Linda Schlemmer</i>	
P8.6	<a href="#">Performance assessment of the Two-Energies Turbulence Scheme over complex terrain: Cold air pool process.</a> <i>Julian Quimbayo Duarte (Goethe Universität, Germany), Juerg Schmidli, Ivan Bašták Ďurán</i>	
P8.7	<a href="#">ICON Model Validation in Forecasting Cold Air Pools in Complex Topography</a> <i>Stephanie Westerhuis (ETH Zürich, Switzerland), Fabian Schoeni, Brigitta Goger, Oliver Fuhrer</i>	

16:00 - 16:45

Coffee Break

16:45 - 18:15		O14	Oral Session: Boundary Layer IV <i>Chair: Juerg Schmidli (Goethe University Frankfurt, Germany)</i>
16:45	O14.1	<a href="#">Including entrainment in Prandtl (1942) model for thermally driven slope winds</a> <i>Dino Zardi (University of Trento, Italy)</i>	
17:00	O14.2	<a href="#">The Shape of the Boundary Layer: Revealing the Types of Temperature Profiles using Distributed Temperature Sensing</a> <i>Karl Lapo (University of Innsbruck, Austria), Lena Pfister, Samuele Mosso, Manuela Lehner, Ivana Stiperski</i>	
17:15	O14.3	<a href="#">Challenges and opportunities of quantifying advection at mountain eddy covariance sites in the Alps</a> <i>Marta Galvagno (Environmental Protection Agency of Aosta Valley, Italy), Georg Wohlfahrt, Nadia Vendrame, Peng Zhao</i>	
17:30	O14.4	<a href="#">Characterization of near-surface turbulence in the stable atmosphere of the Alpine Inn Valley</a> <i>Manuela Lehner (University of Innsbruck, Austria)</i>	
17:45	O14.5	<a href="#">Wind-driven processes at the snow-atmosphere interface: Challenges and approaches in snow modeling</a> <i>Rebecca Mott (WSL Institute for Snow and Avalanche Research SLF, Switzerland), Dylan Reynolds, Michael Haugeneder, Tobias Jonas, Michael Lehning</i>	
18:00	O14.6	<a href="#">Downscaling coarse resolution snowfall in mountainous terrain</a>	

18:15 - 18:30	Poster Pitches 9: Boundary Layer
P9.1	<a href="#"><u>Lake effects on local circulation and energy exchange in mountainous area</u></a> <b>Lujun Xu</b> (Chinese Academy of Sciences, China), Huizhi Liu, Yang Liu, Jihua Sun, Anlun Xu, Xiaoni Meng
P9.2	<a href="#"><u>Identifying an appropriate filter time for stable conditions over mountainous terrain</u></a> <b>Manuela Lehner</b> (University of Innsbruck, Austria), Mathias W. Rotach
P9.3	<a href="#"><u>Study of turbulent energy fluxes in a coniferous forest at the complex-terrain site of Renon (Italian Alps)</u></a> <b>Nadia Vendrame</b> (University of Trento, Italy), Martina Destro, Mirco Rodeghiero, Leonardo Montagnani, Dino Zardi
P9.4	<a href="#"><u>Empirical representations of vertical temperature gradients in complex mountainous terrain and their impact on similarity relations</u></a> <b>Lena Pfister</b> (University of Innsbruck, Austria), Karl Lapo, Manuela Lehner, Ivana Stiperski, Mathias W. Rotach
P9.5	<a href="#"><u>Evaluation of Eddy Diffusion Coefficients for Thermally Driven Slope Winds</u></a> <b>Sofia Farina</b> (University of Trento, Italy), Dino Zardi
P9.6	<a href="#"><u>An analytic model for daily-periodic slope winds driven by a realistic surface energy budget</u></a> <b>Mattia Marchio</b> (University of Trento, Italy), Sofia Farina, Dino Zardi
P9.7	<a href="#"><u>On pressure and temperature surface temporal variations</u></a> <b>Francesco Sioni</b> (ARPA Friuli Venezia Giulia–OSMER, Italy), Agostino Manzato, Gabriele Fasano, Arturo Pucillo, Richard Rotunno

18:30

ISC Meeting

Friday, 23 Jun 2023

08:30 - 10:00		O15	<b>Oral Session: Numerical Weather Prediction I</b> <b>Chair: Marco Arpagaus (MeteoSwiss, Switzerland)</b>
08:30	O15.1	<a href="#"><u>Prospects for high-resolution data assimilation over complex orography: Motivation, challenges, feasibility.</u></a> <b>Stefano Serafin</b> (University of Vienna, Austria)	<b>Invited</b>
09:00	O15.2	<a href="#"><u>Probabilistic observation pre-processing for ensemble-based data assimilation: An application to surface temperature observations in Alpine terrain</u></a> <b>Valentina Hutter</b> (University of Vienna, Austria), Stefano Serafin, Martin Weißmann, Daniel Leuenberger	
09:15	O15.3	<a href="#"><u>Benefit and challenges in assimilating near-surface temperature and humidity observations in complex terrain</u></a> <b>Daniel Leuenberger</b> (MeteoSwiss, Switzerland), Claire Merker, Bas Crezee, Daniel Regenass, Marco Arpagaus	
09:30	O15.4	<a href="#"><u>The Alpine Digital Twin project and its relevance for TEAMx</u></a> <b>Günther Zängl</b> (Deutscher Wetterdienst, Germany), Chiara Marsigli, Marco Arpagaus, Carlo Cacciamani, Paola Mercogliano, Antonio Vocino	
09:45	O15.5	<a href="#"><u>Improving Cool-Season Snowfall Forecasts from Operational Modeling Systems over the Western United States</u></a> <b>Peter Veals</b> (University of Utah, United States), Jim Steenburgh, Michael Pletcher, Michael Wessler	
10:00 - 10:45		Coffee Break	
10:45 - 12:15		O16	<b>Oral Session: Numerical Weather Prediction II</b> <b>Chair: Günther Zängl (DWD, Germany)</b>
10:45	O16.1	<a href="#"><u>Using machine learning to improve thunderstorm prediction for air traffic planning</u></a> <b>Roman Attinger</b> (Federal Office of Meteorology and Climatology MeteoSwiss, Switzerland), Hélène Barras, Johannes Landmann, Kathrin Wehrli, Gabriela Aznar	
11:00	O16.2	<a href="#"><u>A climatology of lee waves over the UK derived using machine learning</u></a> <b>Jonathan Coney</b> (University of Leeds, United Kingdom), Andrew Ross, Leif Denby, He Wang, Simon Vosper, Annelize van Niekerk, Tom Dunstan	
11:15	O16.3	<a href="#"><u>3D Radiation for Mountaineous Simulations</u></a> <b>Fabian Jakub</b> (LMU University Munich, Germany), Hermann Boettcher, Janik Schaefer, Philipp Gregor, Bernhard Mayer	
11:30	O16.4	<a href="#"><u>The effect of complex orography on the development of a tornadic outbreak in the Po Valley</u></a> <b>Francesco De Martin</b> (University of Bologna, Italy), Silvio Davolio, Mario Marcello Miglietta, Vincenzo Levizzani	

11:45	O16.5	<a href="#"><u>A model inter-comparison study of convective events over the Alpine region</u></a> <b>Yann Seity</b> (Météo-France, France), Elenio Avolio, Manfred Dorninger, Dieter Mayer, Mario Marcello Miglietta, Didier Ricard, Juerg Schmidli, Stefano Serafin, Shweta Singh, Christoph Wittmann
12:00	O16.6	<a href="#"><u>A model intercomparison study of the thermally-driven wind system in an Alpine valley</u></a> <b>Lorenzo Giovannini</b> (University of Trento, Italy), Eric Bazile, Paolo Deidda, Silvia Ferrarese, Enrico Ferrero, Brigitta Goger, Alexander Gohm, Alessio Golzio, Rachel Honnert, Martin Köhler, Dietmar Oettl, Lippin Pauly, Quentin Rodier, Juerg Schmidli, Yann Seity, Stefano Serafin, Peter Sheridan, Shweta Singh, Silvia Trini Castelli, Clemens Wastl, Stephanie Westerhuis, Andrea Zonato

12:15 - 12:30		Poster Pitches 10: Numerical Weather Prediction
P10.1		<a href="#"><u>Improving ICON for Alpine Forecasts</u></a> <b>Stephanie Westerhuis</b> (ETH Zürich, Switzerland), André Walser, Daniel Regenass
P10.2		<a href="#"><u>Evaluation of simulated valley winds at different model resolutions</u></a> <b>Tobia Lezuo</b> (Federal Office for Meteorology and Climatology, MeteoSwiss, Switzerland), Stephanie Westerhuis, Brigitta Goger, Oliver Fuhrer
P10.3		<a href="#"><u>Comparison between ground-based remote sensing observations and NWP model profiles in a complex topography: the Meiringen campaign</u></a> <b>Martine Collaud Coen</b> (Federal Office of Meteorology and Climatology, MeteoSwiss, Switzerland), Alexandre Bugnard, Maxime Hervo, Samuel Monhart, Daniel Leuenberger, Rolf Rüfenacht, Marco Arpagaus
P10.4		<a href="#"><u>EURO1k: A high-resolution European weather model for alpine weather forecasts by Meteomatics</u></a> <b>Julie Pasquier</b> (Meteomatics, Switzerland), Johannes Rausch, Lukas Umek, Martin Fengler
P10.5		<a href="#"><u>High resolution Austrian Re-analysis ensemble with AROME (ARA)</u></a> <b>Nauman Awan</b> (Geosphere Austria, Austria), Christoph Wittman, Clemens Wastl, Florian Meier
P10.6		<a href="#"><u>Global km-scale modelling: The Himalaya Problem</u></a> <b>Annelize Van Niekerk</b> (ECMWF, United Kingdom), Benoit Vanniere, Irina Sandu, Inna Polichtchouk, Birgit Seutzl, Michail Diamantakis
P10.7		<a href="#"><u>Spatio-temporal reconstruction of snow water equivalent with a combined data assimilation and machine learning approach</u></a> <b>Matteo Guidicelli</b> (University of Fribourg, Switzerland), Kristoffer Aalstad, Désirée Treichler, Yves Bühler, Nadine Salzmann
P10.8		<a href="#"><u>Developing a machine learning based product for trapped lee wave detection and characterisation</u></a> <b>Jonathan Coney</b> (University of Leeds, United Kingdom), Andrew Ross, Leif Denby, He Wang, Simon Vosper, Annelize van Niekerk, Tom Dunstan
P10.9		<a href="#"><u>Analog-based post-processing of NWP in complex terrain: performance evaluation and challenges</u></a> <b>Iris Odak Plenkovic</b> (Croatian Meteorological and Hydrological Service, Croatia), Ivan Vujec

12:30 - 14:00

Lunch Break

14:00 - 15:00

O17

**Oral Session: Forecasting and Verification****Chair:** *Jessica Lundquist (University of Washington, USA)*

14:00

O17.1

**[A customized machine learning based wind and visibility prediction at Zürich Airport](#)****Hélène Barras** (*Federal Office of Meteorology and Climatology MeteoSwiss, Switzerland*), *Kathrin Wehrl, Fabian Pfister, Gabriela Aznar, Johannes Landmann, Roman Attinger, Thomas Jordi*

14:15

O17.2

**[Elevation Dependence of Seasonal Weather Forecast Biases in the Alpine Region](#)****Sameer Balaji Uttarwar** (*University of Trento, Italy*), *Anna Napoli, Diego Avesani, Bruno Majone*

14:30

O17.3

**[Operational Use of Meteomatics Meteodrones for Mountain Weather Applications](#)****Brad Guay** (*Meteomatics AG, Switzerland*), *Lukas Hammerschmidt, Matthias Piot, Julie Pasquier, Martin Fengler*

14:45

O17.4

**[Disentangling synoptic and orographic processes relevant for the extreme hailstorms on 20-24 June 2021 in the Northern Alpine forelands](#)****Georg Pistotnik** (*Geosphere Austria, Austria*), *Christoph Wittmann*

15:00 - 15:15

Poster Pitches 11: Numerical Weather Prediction &amp; Forecasting and Verification

P11.1

**[Analysis of Downslope Wind Events in Northern Utah](#)****John Horel** (*University of Utah, United States*), *Kimberly Bestul*

P11.2

**[On the role topography and trigger mechanism on the development of a large-hail supercell storm event, on the Adriatic Sea](#)****Antonio Ricchi** (*University Of L'Aquila, Italy*), *Rossella Ferretti, Mario Marcello Miglietta, Errico Picciotti, Alessandro Tiesi, Lorenzo Sangelantoni, Vincenzo Mazzarella, Richard Rotunno, Mario Montopoli, Simone Mazzà, Frank Silvio Marzano*

P11.3

**[Convective-scale predictability of a short-lived mountain thunderstorm during CACTI](#)****Daniel Kirshbaum** (*McGill University, Canada*), *Andrés Lopez, Neil Lareau*

P11.4

**[Downscaling of surface wind forecasts using convolutional neural networks](#)****Thierry Hedde** (*CEA, DES, IRESNE, DTN, Laboratory for Environmental Transfer Modeling, Cadarache, France*), *Florian Dupuy, Pierre Durand*

P11.5

**[Statistical downscaling of temperature using Machine learning over the Alpine region](#)****Sudheer Bhakare** (*University of Trento, Italy*), *Sara Dal Gesso, Marco Venturini, Dino Zardi*

P11.6

**[Spatial correlation of weather parameters in the complex terrain of Iceland](#)****Léo Jacobin** (*University of Iceland, Iceland*), *Philipp Weitzel, Benoit Soula, Haraldur Ólafsson*

15:15 - 15:45

Announcements and Good Bye