



# EMS Annual Meeting 2018

European Conference for Applied Meteorology and  
Climatology 2018



# PROGRAMME

BUDAPEST | HUNGARY | 3-7 SEPTEMBER 2018

*Weather and climate: global change and local hazards*



EMS Annual Meeting: European Conference for Applied Meteorology and Climatology 2018						
	ground floor E II 350 seats	ground floor E I 350 seats	ground floor E III 150 seats	ground floor E IV 400 seats	second floor E 238 80 seats	date
Mon, 09:30-11:00				Opening		3 Sept
Mon, 11:30-12:45				Awards		
	<b>start 13:00:</b>					
Mon, 14:00-16:00	OSA2.5	OSA2.7	UP2.5	UP1.3 - from 15:00	UP3.4	
Mon, 16:30-18:30	OSA2.5	OSA2.7	ES1.3	OSA1.8/ES1.6	UP3.4	
Mon, 19:00-20:30	Icebreaker					
Tue, 09:00-09:30				UP Keynote		4 Sept
Tue, 09:30-10:30	Poster Session & refreshment break					
Tue, 10:30-12:30	ES1.5	UP1.4	ES1.2	UP3.1	UP2.2	
Tue, 13:15-13:45				WMO Townhall		
Tue, 14:00-16:00	OSA3.5	UP1.2	OSA1.9	UP3.1	OSA2.5	
Tue, 16:30-18:30	UP3.6	UP1.2	OSA3.6	UP3.1	ES1.8	
Tue, 18:30-19:00						
Wed, 09:00-09:30				ES Keynote		5 Sept
Wed, 09:30-10:30	Poster Session & refreshment break					
Wed, 10:30-12:30	ES1.1 [9:45 - 13:00]	UP1.3	UP1.5	ES2.1	OSA1.1	
Wed, 13:15-13:45		Townhall/UP1.3 AMS Lecture				
Wed, 14:00-16:00	OSA3.3	UP1.3	UP1.5	ES2.1	OSA1.2	
Wed, 16:30-18:30	OSA1.10	UP1.1	UP1.5/UP1.6	UP3.5	OSA3.4	
Wed, 19:00-20:30	Convenor Reception					
Thu, 09:00-09:30				OSA Keynote		6 Sept
Thu, 09:30-10:30	Poster Session & refreshment break					
Thu, 10:30-12:30	OSA1.7	UP3.3	OSA3.7	UP2.3	OSA1.6	
Thu, 14:00-16:00	OSA1.7	UP3.3 - unt. 14:45 UP3.2 - from 15:00	OSA2.3	OSA2.4	ES3.1	
Thu, 16:30-18:30	OSA1.5	UP3.2	OSA3.2	OSA2.4	UP2.4	
Fri, 09:00-10:30	OSA1.4	ES2.2	OSA3.1	OSA2.4	UP2.1	7 Sept
Fri, 10:30-11:30	Poster Session & refreshment break					
Fri, 11:30-13:30	OSA1.4	OSA2.1	OSA3.1	OSA2.4	UP2.1	
Fri, 13:45	Closing Reception					
	ground floor E II 350 seats	ground floor E I 350 seats	ground floor E III 150 seats	ground floor E IV 400 seats	second floor E 238 80 seats	date

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Welcome	2
Good to know ...	3
General Information, WiFi, ems2018-app	3
Registration information	4
Breaks & social events	5
Publications	6
Committees	6
Excursions	7
Exhibition	8
Opening session	12
Plenary keynotes & Townhall meetings	13
Awards session	14
Side meetings	19
About the session programme	21
Outstanding Poster Award	22
Session index	23
Conference Programme	25
Oral Conference Programme – Monday	25
Oral Conference Programme – Tuesday	35
Poster Conference Programme – Tuesday	46
Oral Conference Programme – Wednesday	51
Poster Conference Programme – Wednesday	63
Oral Conference Programme – Thursday	73
Poster Conference Programme – Thursday	84
Oral Conference Programme – Friday	91
Poster Conference Programme – Friday	97
Author & convener index	107
Floor plans	112

# WEATHER AND CLIMATE: GLOBAL CHANGE AND LOCAL HAZARDS

## Dear participants, welcome to the EMS Annual Meeting 2018 in Budapest.

Under this year's theme the conference explores the growing challenges for meteorology. Citizens, decision-makers, indeed all of society requires more tailored information on the consequences of our changing climate, and especially on weather and climate hazards that seem to occur more frequently and to have a significant impact on humans, nature, and infrastructure.

The role of meteorology – the provision to society of reliable forecasts and trustworthy warnings – is extending in the 21st century to impact predictions and long-term projections of climate change. These are needed to support national strategic decisions aimed at saving lives and reducing the costs of natural hazards. All of these challenges place increasing responsibility on scientists and forecasters, as well as on meteorological companies, institutions, and organisations: the whole "weather and climate enterprise".

## The programme

The session programme includes 375 poster and 435 oral presentations in 46 sessions. All these presentations share the essential role of the conference – offering diverse opportunities for discussions and promoting the work of the various authors. Poster sessions are scheduled in the mornings: 9:30-10:30 Tuesday to Thursday and 10:30-11:30 on Friday.

The winner of the Outstanding Poster Award will be announced after the conference on the website and the prize will be presented at the Annual Meeting in Copenhagen in 2019.

Side meetings, workshops and the social programme will provide many additional opportunities for networking at the conference. Make ample use of these – this is the *raison d'être* of the meetings.

Detailed and up-to-date information about the session programme is available through the [ems2018-app](#) for mobile devices.

## The exhibition – use the opportunity

The conference will feature a small exhibition involving manufacturers of meteorological instruments, research projects, a publisher and

the association of private service providers. Also the EMS will be present with a booth this time. It will be open from Monday lunchtime to Thursday afternoon and we hope you will make use of the opportunity to find out about the new developments and plans of these organisations. Also the NinJo project, recognised through the EMS Technology Achievement Award, will demonstrate the capabilities of the meteorological workstation in live situations in the foyer.

## Weather briefing

Throughout the week daily weather forecast briefings by OMSZ forecasters are given during morning refreshment breaks, with opportunities to discuss personally with the forecaster.

## Guided tours

OMSZ-Hungarian Meteorological Service will celebrate its 150-year anniversary in 2020. Discover some of the ancient memories during the visit at the OMSZ Headquarters.

Pálvölgyi cave is a dripstone-rich cave, the longest one in the Buda Hills and the third longest in Hungary; it is a highly protected natural preservation area.

## Thank you

We are grateful to all who have contributed to make this meeting in Budapest a reality – the local organising committee, the EMS Member Societies and Associates, the Copernicus organisation, the exhibitors, and the volunteer helpers.

To build the session programme would not have been possible without the work of the convenors who developed and promoted the sessions. Our thanks to all of them for their commitment and hard work! We are also grateful to the Programme and Science Committee (PSC) for having devised a very interesting programme. We hope you will enjoy and benefit from the wealth of research, results and applications that will be presented and discussed during the week.

Welcome again, and we hope you will have a very interesting and rewarding week in Budapest.

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**Bob Riddaway**

EMS President

**Zoltán Dunkel**

President, Hungarian  
Meteorological Society (MMT)

**Kornélia Radics**

President, Hungarian Meteorological  
Service (OMSZ)

## Good to know ...

### General Information, WiFi, ems2018-app

#### About this programme book

The EMS aims at making the Annual Meeting more sustainable and to minimize the use of resources. During the abstract submission, authors were asked to indicate whether a printed programme book is needed. 70% of the authors indicated that they would not need a programme book. Thus, only a limited number of programme books is available on request. Copies for every one's use will be distributed around the conference venue; personal copies will be handed out on request at the registration desk.

The mobile app with continuous updates and the EMS2018 website offer the option of generating and printing your own personal programme.

#### Venue

The EMS Annual Meeting: European Conference for Applied Meteorology and Climatology 2018 is held in Budapest, Hungary, from 3 to 7 September 2018.

Corvinus University  
Fővám tér 8.  
1093 Budapest  
Hungary

#### Rules of conduct

- Smoking is prohibited in the conference centre.
- It is prohibited to copy any presentation from the desktops in the lecture rooms.
- Please switch off any mobile phones or set them in mute mode during the sessions.
- Please note that video-graphic recordings are not allowed.

#### Official language

The official language of the conference is English. Simultaneous interpretation is not provided. It is therefore expected that authors are able to present their research in the English language.

#### Insurances

The organisers cannot accept liability for personal accident and loss, or damage to private property, which may be incurred as a

result of participation in the conference. Participants are, therefore, advised to arrange appropriate insurance cover. This should extend not only to travel but also to cancellation costs.

#### Photos, webcasts, graphics

Parts of the EMS Annual Meeting 2018 will be recorded; audio recording plus slides of some plenary presentations will also become available on demand after the meeting.

Photos of some of the plenary sessions and the Media session will be taken by Szabolcs Dudás. In addition a few events will be graphically recorded by *Grafacity*.

#### Cover picture

The cover picture was kindly provided by and is copyrighted to Zoltán Dunkel.

#### Local transportation information

Information on local transportation to and from the venue is available at [https://www.ems2018.eu/venue/how\\_to\\_get\\_there.html](https://www.ems2018.eu/venue/how_to_get_there.html)

#### Lunch & snack options

The Corvinus University provides two cafes and one Cafeteria in the conference building. Around the venue, plenty of lunch possibilities in different price ranges are available. This includes the Central Market Hall of Budapest.

#### Wireless network access

Corvinus University provides free WiFi access.  
Network: EMS2018  
Password: ems2018!

#### EMS2018 app

#### Download the EMS2018 app for iPhones and Android smartphones.

The EMS2018 app provides the complete programme, including all abstracts. You can synchronise your personal programme and the latest updates are always included. You have the option to contact authors of specific contributions directly via the app and use the built-in Twitter interface for posting tweets. The EMS2018 hashtag is #emsannual2018.





## Registration information

### Registration & information desk

The registration & information desk is located in the foyer of the University building on the ground floor.

### Opening hours

Sunday, 2 September 2018  
15:00–18:00

Monday–Thursday, 3–6 September 2018  
08:00–18:00

Friday, 7 September 2018  
08:00–12:00

Registration fees cover access to all scientific events, refreshments during the coffee & tea breaks, and the icebreaker reception.

### Registration & abstract management

Copernicus Meetings  
Bahnhofsallee 1e  
37081 Göttingen, Germany  
Phone: +49-551-900339-22  
meetings@copernicus.org  
www.copernicus.org

### EMS Sustainable Meetings Policy

The EMS Sustainable Meetings Policy includes actions as well as recommendations for collaborating organisations and participants. It covers a variety of areas such as travel activities with their impact on the climate, consumption of resources (energy, water, paper etc.) and considerations about reduction and minimisation of waste. For details on actions and recommendations consult <https://www.emetsoc.org/events/ems-annual-meetings/future-venues/ems-sustainable-meetings-policy/>.

- This programme book has been printed on recycled paper.
- The lanyard of the name badge is made of recycled PET. We kindly ask you to return the name badge with the lanyard at the registration counter when leaving the conference centre.
- For the Festa menu we offer to choose the vegetarian option to reduce the effect on the climate through meat production.
- The registration process includes the option to compensate the CO<sub>2</sub> emission caused by your travel to Budapest.

**EMS  
ANNUAL MEETING  
2019**

European Conference  
for Applied  
Meteorology and Climatology

**9 - 13 September 2019**  
Technical University  
of Denmark  
Lyngby Campus  
Copenhagen, Denmark

*photo by Jacob Schjørring & Simon Lau  
provided through Wonderful Copenhagen*

## Breaks & social events

### Refreshment breaks

Free coffee & tea will be served during the morning and afternoon breaks. Catering stations are located in the Aula and in the Foyer.

Monday: 11:00–11:30 and 16:00–16:30

Tuesday–Thursday:

9:30–10:30 (poster session)

16:00–16:30

Friday: 10:30–11:30 (poster session)

Fruit bowls will be provided near the catering stations in the Aula.

### Lunch breaks

Monday, 12:45–14:00

Tuesday–Thursday, 12:30–14:00

Cafes, restaurants and supermarkets are available nearby the conference venue.

### Townhall Meetings

During Townhall Meetings on Tuesday and Wednesday 13:15–13:45 sandwiches are provided.

### Weather briefings

Location: Lecture room E III

Dates and times:

Monday: 11:15

Tuesday to Thursday, 09:45

Throughout the week daily weather forecast briefings will be given by forecasters of the Hungarian Meteorological Service OMSZ. They will all be presented in lecture room EIII, during the refreshment breaks, with the option to discuss with the forecasters personally. More details see under side meetings on page 19.

### NinJo workstation demonstration

The NinJo operational meteorological workstation, developed by an international consortium receives the EMS Technology Achievement Award 2018. Demonstrations will be given Monday through Thursday in the foyer. A timetable for the different demonstrations is provided at the registration & information desk and in the ems2018-app.

### Icebreaker reception

Location: Aula

Date: Monday, 3 September 2018,  
19:00–20:30

### EMS Festa

The EMS Festa of the EMS Annual Meeting will be a cruise (about 3 hours) on the Danube. The boarding point can be reached with a short walk (about 5 min) by crossing the Danube with the nearest bridge to the conference venue.

Date: Thursday, 6 September 2018, 19:30

By registration only (Deadline was 30 August 2018. Please check for spare tickets at the registration desk.)

### Closing reception

Location: Aula

Date: Friday, 7 September 2018, 13:45–14:30

## Publications

### Upload of presentations

After the conference, you have the option to upload your oral presentation or your poster as Power Point or PDF file for online publication alongside your abstract under Creative Commons Attribution 4.0 License. This shall give all interested participants the chance to revisit your contribution. Details will be sent to the authors by email after the conference.

### Paper publication in *Advances in Science and Research*

Authors of contributions that have been accepted to one of the EMS Annual Meeting 2018 session topics are invited to submit short conference papers to the open access journal *Advances in Science and Research – Contributions in Applied Meteorology and Climatology (ASR)*

(<http://www.adv-sci-res.net/volumes.html>).

Details will be sent to the authors by email after the conference.

Articles of ASR are included in the Conference Proceeding Citation Index (CPCI). The CPCI is part of Web of Science™ Core Collection which helps researchers access the published literature from the most significant conferences, symposia, seminars, colloquia, workshops, and conventions worldwide. This resource offers a complete view of conference proceedings and their impact on global research, providing cited reference search to track emerging ideas and new research beyond what is covered in the journal literature. Two editions cover the sciences and social sciences (see

<http://thomsonreuters.com/en/products-services/scholarly-scientific-research/scholarly-search-and-discovery/conference-proceedings-citation-index.html>).

All conferences (edition to edition) are evaluated individually regarding their inclusion.

## Conference committees

### Programme and Science Committee (PSC)

**Chair:** Sylvain Joffre (EMS Committee on Meetings)

Ingeborg Auer (EUMETNET Climate Programme)  
 Eric Bazile (Météo France)  
 Frank Beyrich (DWD)  
 Dick Blaauboer (EUMETNET)  
 Tanja Cegnar (Slovenian Environment Agency)  
 Christian Csekits (EUMETNET-WGCEF)  
 Marie Doutriaux Boucher (EUMETSAT)  
 Zoltan Dunkel (Hungarian Meteorological Society)  
 Gerald Fleming (Met Éireann)  
 Sven-Erik Gryning (Danish Meteorological Society)  
 Renate Hagedorn (EMS Committee on Meetings)  
 Paul Halton (Irish Meteorological Society)  
 Tim Hewson (ECMWF)  
 Martina Junge (EMS)  
 Andrea Kaiser-Weiss (DWD)  
 Haleh Kootval (EMS Committee on Meetings)  
 Marc Korevaar (representing HMEI)  
 Blaz Kurnik (EEA)  
 Eszter Lábó (Hungarian Weather Service)  
 Pierre-Philippe Mathieu (ESA)  
 Andrea Montani (ARPA)  
 Ákos Nemeth (Hungarian Meteorological Society)  
 Manuel Palomares (EUMETNET)  
 Kornélia Radics (Hungarian Weather Service)  
 Dennis Schulze (MeteoGroup, PRIMET)  
 Gert-Jan Steeneveld (EMS Committee on Meetings)  
 Tony Wardle (MetOffice)  
 Saskia Willemse (EMS Committee on Meetings)

### Programme Stream Moderators

Engagement with Society (ES):  
 Tanja Cegnar  
 Gerald Fleming

Operational Systems and Applications (OSA):  
 Andrea Montani  
 Renate Hagedorn

Understanding Weather & Climate Processes (UP):  
 Frank Beyrich  
 Andrea Kaiser-Weiss



# EMS AT THE CONFERENCE

COME AND FIND US AT THE EMS BOOTH IN THE FOYER.



The EMS Member Societies will display material on their activities; the EMS President and Chairs of EMS Committees will be present to discuss whatever it is you always wanted to ask.



**Tuesday, 16:00**

Meet the President: Bob Riddaway



**Wednesday, 16:00**

Meet the Chairs:

Sylvain Joffre, Chair of the Programme and Science Committee



**Wednesday, 16:00**

Meet the Chairs:

Emily Gleeson, Chair of the EMS Liaison Committee

## EXCURSIONS

The Hungarian hosts offer two guided tours. To register, please follow the registration link on [https://www.ems2018.eu/guided\\_tours.html](https://www.ems2018.eu/guided_tours.html)

### Visit to the Hungarian Meteorological Service:

We walk around in the 108-year-old building of the Hungarian Meteorological Service viewing its museum of measurement instruments and historical documents established in 1896. In the studio we can try ourselves as a TV weatherman. Finally we can admire the panorama of Buda Hills from the roof of the building.

**Wednesday, 5 September 2018, 17:00-18:30**

**Thursday, 6 September 2018, 17:00-18:30**

### Tour into the Szemlő-hegyi Cave:

The 0.5-1 million-year-old Szemlő-hegyi Cave is often called "Budapest's underground flower garden". The cave was discovered in 1930. After a long period of research and construction of visitor facilities the cave was opened to the public in 1986. The most beautiful parts of the cave can be observed during guided tours along the 300 metre long tourist path; these parts are characteristic of thermal karst formations. You can see walls covered with thick layers of mineral deposits that are unique in Europe: splendid, white crystals of gypsum, popcorn formations and calcite plates. The comfortable and safe walkways and modern lighting make the tour even more enjoyable.

Ticket can be purchased at the entrance of the cave, 1400 HUF per person.

**Wednesday, 5 September 2018, 17:00-18:00**

**Wednesday, 5 September 2018, 18:00-19:00**



Visit our  
stand in the  
ground floor  
foyer

# How could environmental data benefit you?

Water management

Agriculture and forestry

Tourism

Insurance

Transport

Energy

Health

Infrastructure

Disaster risk reduction

Coastal areas

Find out more at  
[atmosphere.copernicus.eu](http://atmosphere.copernicus.eu)  
[climate.copernicus.eu](http://climate.copernicus.eu)  
[copernicus.eu](http://copernicus.eu)



## Exhibition

**Monday, 12:00–18:00, and Tuesday–Thursday, 09:00–18:00**

Please use the opportunity to visit the exhibition in the conference foyer (the exhibitors are listed in alphabetical order):

### ECMWF Copernicus

Shinfield Park  
Reading RG2 9AX  
United Kingdom



<http://atmosphere.copernicus.eu>  
<http://climate.copernicus.eu>  
<http://www.ecmwf.int>



Copernicus is the European Commission's flagship Earth Observation programme that delivers freely accessible operational data and information services for policy-makers, public authorities, businesses, citizens and scientists alike with reliable and up-to-date information related to environmental issues. The European Centre for Medium-Range Weather Forecasts (ECMWF) has been entrusted to operate two key parts of the Copernicus programme and is assisting with a third to bring a consistent standard to the measurement, forecasting and predicting of atmospheric conditions and climate change:

- The Copernicus Atmosphere Monitoring Service provides daily forecasts detailing the makeup composition of the atmosphere from the ground up to the stratosphere.
- The Copernicus Climate Change Service will routinely monitor and analyse around 20 essential climate variables to build a global picture of our climate, from the past to the future, as well as developing customisable climate indicators in relevant economic sectors.
- The Copernicus Emergency Management Service supports improvements to flood forecasting and understanding of the frequency, variability and consequences of extreme weather.

The European Centre for Medium-Range Weather Forecasts (ECMWF) is an international organisation which specialises in numerical weather prediction and is supported by many European states.

### EMS & EMS Members

c/o Insitut für Meteorologie, FU Berlin  
C-H-Becker-Weg 6 – 10  
12165 Berlin  
Germany

<https://www.emetsoc.org/>



The EMS is the association of Meteorological Societies in Europe. The network consists of 37 Member Societies and 30 Associate Members. The EMS is a non-profit-making organisation. The EMS Annual Meetings attract some 600 people each year from all sectors of the field. With a number of Awards outstanding contributions to the science, its applications and communication are honoured; young scientists are supported through travel grants.

**MDPI**

St. Alban-Anlage 66  
4052 Basel  
Switzerland



**Academic Open Access Publishing**  
since 1996

<http://www.mdpi.com/>

MDPI is a pioneer in scholarly open access publishing who has supported academic communities since 1996 (<http://www.mdpi.com/>). Published journals include *Atmosphere* (launched in 2010; Impact Factor 1.704), *Climate* (launched in 2013; indexed by ESCI, Scopus), *Sustainability* (launched in 2009; indexed by SCIE), and *Urban Sciences* (launched in 2017).

*Atmosphere* (ISSN 2073-4433) is an open access, international, interdisciplinary scholarly journal of scientific research related to the earth's atmosphere, with a strong emphasis on aerosols, air quality, air quality–climate interactions, biosphere/hydrosphere/land–atmosphere interactions, climatology, meteorology, and biometeorology. It is now indexed by the Science Citation Index Expanded (Web of Science), Ei Compendex, Scopus, and other databases. The aim is to publish original research papers, reviews, communications, and short notes. Additionally, Special Issues are devoted to cutting-edge research topics. There is no restriction on the length of papers, and manuscripts undergo a rigorous peer review before publication. We welcome experimental and modeling research or combinations thereof. Supplemental material providing additional data files or detailed methodical information is optional and offers the opportunity for publication of the full details of research investigations. Manuscripts are peer-reviewed, and a first decision is provided to authors approximately 22 days after submission; acceptance to publication is undertaken in 5.7 days (median values for papers published in *Atmosphere* in 2017).

For more details about *Atmosphere*, please see <http://www.mdpi.com/journal/atmosphere>

**PRIMET – Association of Private Meteorological Services**

292 Vauxhall Bridge Road  
London SW1V 1A  
United Kingdom



<http://www.primet.org>

Many people across Europe access their daily weather information through private sector companies that are not part of a publicly-funded government meteorological service. These companies vary in size and are able to respond quickly to local needs and advances in technology. They form a vital link between the citizen taxpayer and the public sector organisations that gather global weather data and run large scale numerical models.

For this to work effectively there must be a good working relationship between the public and private sector within the European meteorological community. It is essential that information flows freely where 'Open Data' policies exist and that any commercial competition takes place on an equitable basis.

PRIMET is a pan European Trade Association for meteorological service providers operating in the private sector. It aims to promote a fair trading environment between the public and private sector in meteorology and its related disciplines.

PRIMET provides the channel of communication between the private sector in Europe and key organisations, including WMO, ECOMET, EUMETSAT, ECMWF as well as the National Meteorological and Hydrological Services.

Membership of PRIMET is open to private sector companies across Europe. Members benefit from a Board of Directors and Secretariat that actively support their business interests by proactively monitoring data service quality and scenarios where unfair competition occurs with commercial services embedded within publicly-funded bodies. For more information see the PRIMET website [www.primet.org](http://www.primet.org).

For EMS2018, PRIMET and ECOMET are working together to sponsor a session on the 'Global Weather Enterprise'.

**Scintec**

Wilhelm-Maybach-Straße 14  
72108 Rottenburg  
Germany



<http://www.scintec.com>

Scintec is a developer and manufacturer of ground-based sensing systems using optical, radio wave and acoustic technology. Continuing scientific and technical innovation, outstanding product design and quality, and a customer-oriented philosophy has made Scintec a global leader in its field. Today, Scintec produces the most advanced and comprehensive line of wind and temperature profilers in SODAR, RADAR and RASS technology. These systems are replacing towers, tethered balloons and radiosondes all over the world. Scintec also offers optical SCINTILLOMETERS for the measurement of boundary layer turbulence and heat flux. Customers include research institutes and universities, the military, major airports, wind farms and weather services worldwide. Scintec is ISO 9001 certified.

# OPENING SESSION

MONDAY, 3 SEPTEMBER 2018

Lecture room E IV

## 09:30–10:00: Opening ceremony

Opening by the EMS President	Bob Riddaway
Welcome address by the President of Hungary	János Áder
Welcome address by the WMO Secretary General	Petteri Taalas
Welcome address by the OMSZ President	Kornélia Radics
Welcome address by the MMT President	Zoltán Dunkel

## 10:00–11:00 Strategic Lectures

### 10:00–10:30 | Diana Ürge-Vorsatz

Director, Center for Climate Change and Sustainable Energy Policy (3CSEP)

### 10:30–11:00 | Julia Slingo | EMS Silver Medallist 2017

*The Changing Landscape of Climate Risk*

## EMS NEWSLETTER: “EMS-MESSAGE”

The European Meteorological Society’s newsletter, the *ems-message*, is distributed by e-mail and contains information about activities of the EMS Member organisations, upcoming meetings, award announcements and other news from the wider meteorological community.

The EMS Liaison Committee aims to publish editions every six weeks. Submissions are welcome at any time.

### Submission of material for the *ems-message*

Articles are generally a few paragraphs in length. To submit an item for publication in the *ems-message*, please send the text and at least one accompanying image to the following e-mail address: [publications@emetso.org](mailto:publications@emetso.org).

Please include the name of the photographer if including a photograph and ensure that we have permission to publish it.

### Subscription to the *ems-message*

[www.emetsoc.org/newsletter](http://www.emetsoc.org/newsletter)

### SAVE THE DATES:

Deadlines for upcoming editions of the *ems-message*

- Deadline for the October 2018 edition: October 1st 2018
- Deadline for the December 2018 edition: November 15th 2018



# PLENARY KEYNOTES & TOWNHALL MEETINGS

Lecture room E IV

Keynote presentations related to each of the Programme Streams (PS) will be given on Tuesday, Wednesday and Thursday from 9:00 to 9:30.

Townhall meetings will take place on Tuesday and Wednesday from 13:15 to 13:45.

## Monday

### Keynote Lecture (18:30)

Building Weather-Ready Nations – The New International Need

Louis Uccellini                                      Director of the US National Weather Service

## Tuesday

### Keynote Lecture on Understanding Weather & Climate Processes (UP)

Projecting changes in impacts at 1.5°C vs 2°C global warming: The role of land processes

Prof. Sonia I. Seneviratne                      ETH Zurich

### WMO Townhall Meeting

Strategic Lecture: Climate Change, Disasters and their Impacts: How to mitigate

Prof. Petteri Taalas                              WMO Secretary General

## Wednesday

### Keynote Lecture on Engagement with Society (ES)

Great Forecast – Poor Outcome

Haleh Kootval                                      Consulting specialist in meteorology and service delivery at the World Bank

### AMS Townhall Lecture (Room E I)

The Visual Characteristics of the Tornado Funnel Cloud with the Evolving Debris Cloud using Polarimetric Radar Measurements and High Resolution Photographs

Roger Wakimoto                                      AMS President

## Thursday

### Keynote Lecture on Operational Systems and Applications (OSA)

Kilometric-scale Numerical Weather Prediction of severe and localized precipitation event

Dr. Tiziana Paccagnella                      Director Hydro Meteo Climate Service of ARPAE

# AWARDS SESSION

MONDAY, 3 SEPTEMBER 2018

Lecture room E IV

11:30–12:45

## AWARD CEREMONIES

YOUNG SCIENTIST TRAVEL AWARDS  
OUTSTANDING POSTER AWARD 2017  
EMS YOUNG SCIENTIST AWARD  
EMS TROMP AWARD and TROMP  
FOUNDATION TRAVEL AWARDS  
HARRY OTTEN PRIZE: ANNOUNCEMENT  
EMS TECHNOLOGY ACHIEVEMENT AWARD  
EMS SILVER MEDAL  
EMS SILVER MEDAL LECTURE: Architecture  
for Climate Monitoring from Space.



photo private

The EMS Silver Medal is presented annually to a person that has made distinguished contributions to the development of meteorology in Europe. Tillmann Mohr as the Laureate of the EMS Silver Medal 2018 is honoured for his key role in shaping the European Meteorological Infrastructure (EMI). Under his visionary leadership, EUMETSAT matured into an internationally recognised organisation. In addition, he made an outstanding contribution to establishing a global space-based meteorological observing programme under the umbrella of WMO and has been instrumental in developing training and educational programmes for satellite meteorological products in Africa and worldwide. Through his entire career, he has been committed to the European meteorological community and has been very active in convincing decision-makers, as well as the public, about the importance of meteorological observations from space.

The laudation will be given by Anton Eliassen, EMS Silver Medallist 2015.



© NinJo consortium

With the EMS Technology Achievement Award achievements are recognised that are influential on developments of technologies and technical solutions in meteorology and related areas, have advanced the methods and technologies of environmental observing and forecasting systems and demonstrated the potential to impact on the field at the European scale. The international Consortium that developed the NinJo operational meteorological workstation receives the EMS Technology Achievement Award 2018. NinJo is a major contribution to meteorology: innovative and widely applicable as a universal monitoring, forecasting and warning system of greatest importance for the daily information of all kind of users, NinJo has proven its quality in the daily production of countless forecast products even in critical weather situations. Developed by an international Consortium in Europe and Canada, its production capabilities are applicable in any operational environment.



© E. Cusack

The EMS Broadcast Meteorologist Award is presented to honour life achievement of an outstanding broadcast meteorologist. Evelyn Cusack, Head of the Forecasting Division in the Irish Meteorological Service, Met Éireann, has been selected to receive the EMS Broadcast Meteorologist Award 2018. Her long, distinguished career in meteorological science began as a weather forecaster in 1981 and she extended her broadcasting skills to television in 1988. Evelyn Cusack has presented the weather on the Irish national television station, RTE, for more than two decades and is the public face of meteorology in Ireland.



The EMS Outreach and Communication Award is given in recognition of projects that explore new and effective ways to communicate the science of meteorology. The Award 2018 is presented to the online course **Come Rain or Shine**. The Royal Meteorological Society partnered with the University of Reading to develop this three week course which focusses on the processes and phenomena which govern UK weather. This education endeavour, launched in 2016, was selected for its outstanding outreach and sustainability: up to day it has been taken by more than 23,000 members of the public, including students and teachers. Numerous comments online confirm the value of this project as a resource in the classroom. The course is accessible on-line and it is offered free of charge to everybody around the world. In this way, it can reach new and harder to reach audiences. Running a course on a FutureLearn platform supports interactive and engaging aspect of this project.



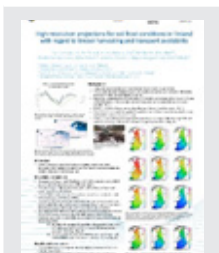
The EMS TV Weather Forecast Award is presented to individuals to acknowledge best practice in weather presentation.

The forecast by Dunja Mazzocco Drvar, Croatia, was selected for the EMS TV Weather Forecast Award 2018. The entry integrated climate information to put the forecast in perspective - the type of information that should be encouraged. The forecast consisted of general information, a regional forecast, and sea surface temperatures that viewers might find helpful. The broadcast was well-paced with clean graphics.



photo © C. Chantzi

The EMS Young Scientist Award is presented annually to acknowledge excellence in young scientists. The EMS Young Scientist Award 2018 is awarded to **Georgios Varlas** from the Harokopio University of Athens for the publication: "Implementation of a two-way coupled atmosphere-ocean wave modelling system for assessing air-sea interaction over the Mediterranean Sea", G. Varlas et al, Atmospheric Research, (2017), <http://dx.doi.org/10.1016/j.atmosres.2017.08.019>. Georgios Varlas will give a Young Scientist Award Lecture on his recent work, in session UP2.1: Ocean – atmosphere interactions and coastal processes on **Friday, 7 September 2018 at 9:15 in Room E238**.



With the Outstanding Poster Award good quality posters that serve as Best Practice examples are highlighted. Ilari Lehtonen from the Finnish Meteorological Institute and his colleagues have been selected to receive the Outstanding Poster Award 2017 for their poster "High-resolution projections for soil frost conditions in Finland with regard to timber harvesting and transport availability". The poster shows a fantastic combination of a clear and concise message underpinned by sound science and good presentation. The impact of climate change on the soil and human activity is shown through an innovative approach.

**Young Scientist Travel Awards (YSTAs) are given to support participation of outstanding students and young scientists at EMS-co-sponsored conferences. The award is given as travel expenses support.**

**Andreina Belušić**, Croatia

EMS2018-10: The relationship between wind and pressure fields over the broader Adriatic Region in CORDEX Climate Change Scenarios

Presentation day and time: **Thu, 06 Sep, 11:45–12:00, Room E I**

Session: UP3.3 Synoptic climatology

**Júlia Góndöcs**, Hungary

EMS2018-16: Regional dynamical downscaling with WRF model for the estimation of potential changes in urban heat island intensity in Budapest

Presentation day and time: **Thu, 06 Sep, 09:30–10:30, Poster P.5**

Session: OSA1.2 The Weather Research and Forecasting Model (WRF): development, research and applications

**Aleksandar Janković**, Bosnia and Herzegovina

EMS2018-11: Future global warming impacts on residential heating and cooling energy demand over part of Pannonian basin and Balkan Peninsula

Presentation day and time: **Tue, 04 Sep, 09:30–10:30, Poster P.39**

Session: OSA2.7 The Water and energy cycles in the Pannonian Basin and their interactions with human activities

**Lorenzo Minola**, Sweden

EMS2018-7: How well do Regional Climate Models simulate and parametrize surface wind speed and wind gust across Scandinavia?

Presentation day and time: **Tue, 04 Sep, 11:45–12:00, Room E I**

Session: UP1.4 Towards a better understanding of wind gusts: observations, processes, predictions and verification

**Vladimir Platonov**, Russian Federation

EMS2018-9: Extreme wind speed analysis: a new approach to observational high-resolution modelling data

Presentation day and time: **Thu, 06 Sep, 09:30–10:30, Poster P.209**

Session: UP3.5 Climate modelling



The EMS Tromp Award honours outstanding achievements in biometeorology. The EMS Tromp Award 2018 winner is **Fiorella Acquaoita**, Department of Earth Sciences, University of Turin, Italy, nominated with the paper: "Role of climate in the spread of shiga toxin-producing *Escherichia coli* infection among children", F. Acquaoita, G. Ardissino, S. Fratianni, M. Perrone, published in April 2017 in *Int J Biometeorol*: DOI 10.1007/s00484-017-1344-y. The awardee will give a presentation on **3 September 2018** at the **Session OSA2.5 Atmospheric effects on humans at 16:30 in room E II**.

The *Tromp* foundation travel award to young scientists (TFTAYS) are aimed at supporting young scientists who present papers in the area of biometeorology at EMS Annual Meetings.

**Livia Labudová**, Slovakia

EMS2018-34: Monitoring of drought impacts and the DriDanube project

Presentation day and time: **Mon, 03 Sep, 16:30–16:45, Room E III**

Session: ES1.3 Impacts: vulnerability and adaptation to climate change

**Claudia Di Napoli**, United Kingdom

EMS2018-66: Towards a pan-European forecasting system for heatwave-related health hazards

Presentation day and time: **Mon, 03 Sep, 15:30–15:45, Room E II**

Session: OSA2.5 Atmospheric effects on humans

**Coral Salvador**, Spain

EMS2018-317: Health effects on daily mortality of a hydrological extreme: the case of the droughts in Galicia, Spain

Presentation day and time: **Mon, 03 Sep, 17:15–17:30, Room E II**

Session: OSA2.5 Atmospheric effects on humans

**Irena Nimac**, Croatia

EMS2018-563: Urban climate of Zagreb (Croatia) – its characteristics and changes

Presentation day and time: **Tue, 04 Sep, 14:00–14:15, Room E238**

Session: OSA2.5 Atmospheric effects on humans

**Mikhail Varentsov**, Russian Federation

EMS2018-684: Effects of the climate change and city development on summering urban heat island and heat stress indices for Moscow megacity

Presentation day and time: **Tue, 04 Sep, 14:45–15:00, Room E238**

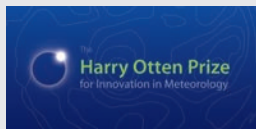
Session: OSA2.5 Atmospheric effects on humans

**Dian Csenge**, Hungary

EMS2018-599: Urban heat island intensity analyse based on surface and air temperature measurements in Budapest.

Presentation day and time: **Tue, 04 Sep, 14:30–14:45, Room E238**

Session: OSA2.5 Atmospheric effects on humans



The *Harry Otten Prize for Innovation in Meteorology* encourages individuals and groups to come forward with new ideas on how meteorology in a practical way can further move society forward. The next prize will be given in 2019.

The

# Harry Otten Prize

for Innovation in Meteorology

## 25000 Euro

for the best innovative idea in meteorology



The Harry Otten Prize is a prize of **25000 Euro** that will be awarded every two years for the best innovative idea in Meteorology.

The prize encourages individuals and small groups (maximum of 3 individuals) to propose new ideas of how meteorology in a practical way can further move society forward.

The prize will be awarded during the meeting of the European Meteorological Society (EMS) in Copenhagen in September 2019.

Ideas for the prize may be submitted from **15 September 2018** until the closing date of **10 March 2019**.

Harry Otten was the founder of MeteoGroup, a successful company providing meteorological services. He expressed his gratitude to the meteorological community by creating an endowment that supports the prize.

The endowment is governed by an independent board. The members of the board also form the jury that awards the prize.

For additional information please see [www.harry-otten-prize.org](http://www.harry-otten-prize.org)



## Side meetings

### **SIM1**

#### **Tips for effectively dealing with the media – training workshop (by invitation only)**

Thursday, 6 September 2018, 09:00–18:00  
Room E338

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### **SIM2**

#### **Get-together of Public Communications Officers (by invitation only)**

Wednesday, 5 September 2018, 16:30–18:30  
Room 2001

This will be a half-day meeting, following the EMS session on Communication and Media. If you are interested to participate please contact Tanja Cegnar.

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### **SIM3**

#### **EUMETNET-DARE**

Wednesday, 5 September 2018, 11:00–13:00  
Room 2001

Meeting of the Data Rescue Expert Team  
11:00–12:00: EUMETNET  
12:00–13:00: HISTALP

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### **SIM4**

#### **Programme and Science Committee EMS2019 (by invitation only)**

Tuesday, 4 September 2018, 18:45–19:45  
Room 2001

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### **SIM5**

#### **Weather briefings**

Monday, 3 September 2018, 11:15–11:30  
Tuesday, 4 September – Thursday, 6 September 2018, 09:45–10:00  
Lecture room E III

Throughout the week daily weather forecast briefings will be given by forecasters of the Hungarian Meteorological Service OMSZ. They will all be presented in lecture room EIII, during the refreshment breaks.

The forecasters will be available to further discuss the specific situations and forecasts of the day.

The forecasters will be:

- Kornél Kolláth: He has 15 years of experience at the OMSZ Department of Forecasting. His special interests are nowcasting and warnings. Kornél Kolláth recently started working on an interdisciplinary research project on light pollution and meteorological observation.
  - Péter Baár: He graduated in January 2018, and is now working at the OMSZ Department of Forecasting. His special interests are weather induced damage research and warnings.
- 

### **SIM6**

#### **Meet the President**

Tuesday, 4 September 2018, 16:00–16:30  
EMS booth, details see page 7

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### **SIM7**

#### **Meet the committee chairs**

Wednesday, 5 September 2018, 16:00–16:30  
EMS booth, details see page 7

**SIM8**

**Conveners' reception (by invitation only)**

Wednesday, 5 September 2018, 19:00–20:30

Foyer, 2nd floor

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**SIM9**

**PRIMET AGM (by invitation only)**

Tuesday, 4 September 2018, 13:00–16:00

Room E338

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**SIM10**

**PRIMET-ECOMET Meeting (by invitation only)**

Wednesday, 5 September 2018, 13:15–16:15

Room 2001

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**SIM11**

**European Climate Services**

Friday, 7 September 2018, 11:00–13:00

Room 2001

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**SIM12**

**IABM Annual General Meeting (by invitation only)**

Tuesday, 4 September 2018, 16:30–18:30

Room E338

## THE GLOBAL WEATHER ENTERPRISE: PANEL DISCUSSION

WEDNESDAY, 5 SEPTEMBER, 09:45–12:00 | ROOM E II

"The weather enterprise is a well-established and successful global public-private partnership in which both sectors share common goals. There are new opportunities emerging to develop this partnership further that will enable the whole enterprise to grow and produce more accurate and reliable weather forecasts. The urgency to do this comes from the need to be even more effective in saving lives and protecting infrastructure because of vulnerability to weather hazards in a changing climate." WMO Bulletin Vol.65 (2) – 2016

There is an increasing demand for accurate weather and climate information to serve the needs of our global community. Users may be individuals or corporations and their needs may relate to activities involving leisure, safety or commerce. The delivery of the required information depends on the successful operation of three key elements: The Public sector, Academia, The Private sector.

- The Session will be chaired by **Dr Louis Uccellini**, Director National Weather Service, USA
- **Dimitar Ivanov**, Executive Assistant to Secretary-General WMO will review current Activities and progress

Three eminent speakers will present their views on the current state of the Global Weather Enterprise:

- **Dr Michael Staudinger**: President of ECOMET and Director, ZAMG Austria National Weather Service
- **Prof Leonard Smith**: Director Centre for the Analysis of Time Series, London School of Economics
- **Dennis Schulze**: Chair of PRIMET and Chief Meteorology Officer, MeteoGroup

This will be followed by a panel discussion to address some issues raised in the presentations.

More details on the programme on page 51.

## About the session programme

### Conference hours

#### Oral and poster sessions times

##### Monday, 3 September 2018

Opening:	09:30–11:00
Awards session:	11:30–12:45
Oral block 3:	14:00–16:00; note: On Monday OSA2.5 starts at 13:00.
Oral block 4:	16:30–18:30
Plenary lecture:	18:30–19:00

##### Tuesday, 4 September – Thursday 6 September 2018

Keynote lecture:	09:00–09:30
Poster session:	09:30–10:30
Oral block 1:	10:30–12:30
Townhall Meeting (Tue & Wed):	13:00–14:00
Oral block 2:	14:00–16:00
Oral block 3:	16:30–18:30

##### Friday, 7 September 2018

Oral block 1:	09:00–10:30
Poster session:	10:30–11:30
Oral block 2:	11:30–13:30
Closing reception	13:45–14:30

▲ Please note that video-graphic recordings of oral and poster presentations are not allowed, unless permission has been given in advance by the author/presenter, and mobile phones must be switched off/in mute mode during the oral sessions.

### Oral programme

The oral programme takes place in four lecture rooms located on the ground floor (EI, EII, EIII, EIV) and one lecture room located on the second floor (E238).

In the detailed programme (pages 25 to 106) oral sessions are listed according to the time block for the oral presentations (i.e. 10:30–12:30, 14:00–16:00, ...).

Within each time block sessions are listed in the following order: ES – OSA – UP.

### Poster programme

Posters are displayed on the ground floor in the central Aula (poster numbers P.1–P.158) and in the Foyer (poster numbers P.159–P.215).

In the detailed programme (pages 25 to 106) poster presentations are listed on the day of the respective Author-in-attendance time (i.e. poster session), in the following order: ES – OSA – UP.

The poster programme is structured into two display times and four poster sessions.

### Display times

Display time 1: Monday 09:30 – Wednesday 12:30

Display time 2: Wednesday 13:30 – Friday 13:30

Presenters are kindly asked to put up their poster as soon as possible within the according Display time in order to enable the conference participants (and the poster award committee) to view their posters at any time within the Display time.

**Poster sessions (Author-in-attendance time)** are all combined with refreshment breaks, with tea, coffee, sweet & salty bites provided.

\ Day PS \	Tuesday 9:30 – 10:30	Wednesday 9:30 – 10:30	Thursday 9:30 – 10:30	Friday 10:30 – 11:30
<b>ES</b>	ES1.3	ES1.2, ES1.5, ES1.8	ES2.1	
<b>OSA</b>	OSA1.8/ES1.6, OSA2.5, OSA2.7	OSA3.5, OSA3.6	OSA1.1, OSA1.2, OSA1.10, OSA3.3, OSA3.4	OSA1.4, OSA1.5, OSA1.6, OSA1.7, OSA2.3, OSA2.4, OSA3.1, OSA3.2, OSA3.7
<b>UP</b>	UP2.2, UP2.5, UP3.4	UP1.2, UP1.3, UP1.4, UP3.1, UP3.6	UP1.1, UP1.5, UP1.6, UP3.5	UP2.1, UP2.3, UP2.4, UP3.2, UP3.3

### Dismantling times

Authors are also asked to take their posters down on Wednesday between 12:30 and 13:00 (Display time 1) and on Friday between 13:30 and 14:00 (Display time 2). Posters that have not been removed within this dismantling time will be removed and disposed of.

### Poster pitches

For most sessions, time for poster pitches is foreseen during the oral programme. For details, please check the programme of your session. Prepare one or two slides for this purpose. You may also be asked ad hoc by the session chair for a summary presentation should a gap occur in the oral programme.

### Outstanding Poster Award

The EMS announces an Outstanding Poster Award to highlight high quality poster presentations by young scientists at the EMS Annual Meetings. Posters registered for this award will be screened.

The selection of the outstanding poster will be based on the following criteria:

#### Communication criteria:

Attractive graphical representation, clear and concise text, intuitive structure.

#### Scientific aspects:

Scientific quality, potential impacts of the results, innovativeness of the approach.

More info at: <https://www.emetsoc.org/awards/award-category/outstanding-poster-award/>

#### Award

The author(s) will receive a certificate and one registration fee waiver for the EMS Annual Meeting 2019 in Copenhagen where the award will be handed over, and the poster will be highlighted on the EMS website as an example of best practice.

The recipient of the award will be announced shortly after the end of the conference.

### Side meetings

Most side meetings take place in the side meeting room 2001 on the second floor. Smaller meetings take place in room E338 on the third floor.

For the side meeting programme please see page 19.

## Session index

### Engagement with Society (ES)

Session	Oral programme page #	Poster programme page #
<b>ES1 – Bringing Benefits to society</b>		
ES1.1	51	
ES1.2	35	63
ES1.3	30	46
ES1.5	36	63
ES1.8	42	63
<b>ES2 – Communication with and within society</b>		
ES2.1	52, 55	84
ES2.2	91	
<b>ES3 – Education &amp; Training</b>		
ES3.1	77	

### Operational Systems and Applications (OSA)

#### OSA1 – Operational systems

OSA1.1	52	84
OSA1.2	55	84
OSA1.4	91, 94	97
OSA1.5	81	97
OSA1.6	73	98
OSA1.7	74, 77	98
OSA1.8/ES1.6	30	47
OSA1.9	39	
OSA1.10	59	85

#### OSA2 – Applications of meteorology

OSA2.1	94	
OSA2.3	78	99
OSA2.4	79, 81, 92, 95	100
OSA2.5	26, 31, 39	47
OSA2.7	27, 32	48

#### OSA3 – Applications of climate research

OSA3.1	92, 95	102
OSA3.2	82	103
OSA3.3	56	86
OSA3.4	60	86
OSA3.5	40	64
OSA3.6	43	64
OSA3.7	74	103

**Understanding Weather & Climate Processes (UP)****UP1 – Atmospheric processes and severe weather**

UP1.1	60		67
UP1.2	40, 43		65
UP1.3	28, 53, 54, 57		87
UP1.4	36		68
UP1.5	54, 58, 61		88
UP1.6	62		89

**UP2 – Interactions within the Earth System**

UP2.1	93, 96		104
UP2.2	37		49
UP2.3	75		104
UP2.4	83		105
UP2.5	28		50

**UP3 – Climate modelling, analyses and predictions**

UP3.1	38, 41, 44		69
UP3.2	80, 83		105
UP3.3	76, 79		106
UP3.4	29, 33		50
UP3.5	62		89
UP3.6	45		71



## Monday, 09:30–11:00

### 09:30–10:00: Opening ceremony

Opening by the EMS President	Bob Riddaway
Welcome address by the President of Hungary	János Áder
Welcome address by the WMO Secretary General	Petteri Taalas
Welcome address by the OMSZ President	Kornélia Radics
Welcome address by the MMT President	Zoltán Dunkel

### 10:00–11:00 Strategic Lectures

#### 10:00–10:30 | Diana Ürge-Vorsatz

Director, Center for Climate Change and Sustainable Energy Policy (3CSEP)

#### 10:30–11:00 | Julia Slingo

Recipient EMS Silver Medal 2017  
The Changing Landscape of Climate Risk

The following refreshment break is sponsored by  
the Harry Otten Foundation



## Monday, 11:30–12:45

### 11:30–12:45: Awards session

Details see page 14.

## Monday, 14:00–16:00

### OSA2.5 Atmospheric effects on humans

**Lecture room:** E II

**Convener:** Andreas Matzarakis

**NOTE THE START AT 13:00**

**13:00–13:15 | Oded Potchter**

Outdoor human thermal perception in various climates: A review of the state of art for approaches, methods and quantifications

**13:15–13:30 | Andreas Matzarakis**

Heat Health Warning System in Germany - Implementation of city issues

**13:30–13:45 | Andreas Matzarakis**

Human thermal comfort modelling in urban micro scale - Application of RayMan and SkyHelios model

**13:45–14:00 | Pninit Cohen**

Human Thermal Perception in Arid Climate: Methods, Location, Gender and Cultural Background Perspective, the case of Beer Sheva, Israel

**14:00–14:15 | Liliana Velea**

Long-term variability in thermal comfort conditions based on the Universal Thermal Climate Index over Romania

**14:15–14:30 | Panagiotis Nastos**

Assessment of human thermal perception with respect to international tourists in Athens, Greece

**14:30–14:45 | Sorin Cheval**

Human-biometeorological comfort assessment in relation to synoptic scale atmospheric circulation in Bucharest and Prague

**14:45–15:00 | Tjasa Pogacar**

Implications of climate change on the manufacturing sector in Slovenia: with particular reference to summer heat

**15:00–15:15 | Negin Nazarian**

Outdoor Thermal Comfort Autonomy: Performance Metrics for Climate-Conscious Urban Design

**15:15–15:30 | Irmela Schlegel**

Application of Test Reference Years basic data for human-biometeorological issues

**15:30–15:45 | Claudia Di Napoli**

Towards a pan-European forecasting system for heatwave-related health hazards (Tromp Foundation Travel Award)

**15:45–16:00: Poster pitches**

**ORAL PROGRAMME OSA2.5 CONTINUES ON MONDAY, 16:30**

**OSA2.7 PannEx: The Water and energy cycles in the Pannonian Basin and their interactions with human activities**

**Lecture room:** E I

**Convener:** Monika Lakatos

**Co-conveners:** Ivan Guettler; Branka Ivancan-Picek; Adina-Eliza Croitoru; Danijel Jug; Vladimir Djurdjevic; Tamás Weidinger; Andrej Ceglar; Joan Cuxart

**14:00–14:15: Poster pitches****14:15–14:30 | Joan Cuxart**

The role of the Pannonian basin internal and peripheral topography in the Atmospheric Boundary Layer structure

**14:30–14:45 | Erzsébet Kristóf**

Evaluation of general circulation models with respect to atmospheric teleconnection systems over the North Atlantic/European region with special focus on the Pannonian Basin

**14:45–15:00 | Timea Kalmar**

Adaptation of RegCM regional climate model for the Pannonian region - the specific effects of different parameterization schemes

**15:00–15:15 | Dejan Stojanovic**

Development of web GIS tool for interactive examination of climate data and provision of climate services

**15:15–15:30 | Branimir Omazić**

Analyses of agroclimatic indices applied to Croatian grapevine growing regions in the present climate

**15:30–15:45 | Tamás Weidinger**

Microclimate measurements in grape vineyards from Beregovo to Zagreb in Pannonian Basin

**15:45–16:00 | Andrej Ceglar**

Recent developments in seasonal climate predictions in Europe: benefits for agricultural sector

**ORAL PROGRAMME OSA2.7 CONTINUES ON MONDAY, 16:30**

### **UP1.3 Understanding and modelling of atmospheric hazards and severe weather phenomena**

**Lecture room:** E IV

**Convener:** Fulvio Stel

**Co-convener:** Dario Giaiotti; Mario Marcello Miglietta; Sante Laviola; Jordi Mazon; Victoria Sinclair

**15:00–15:15: Poster pitches**

**15:15–15:30 | Bogdan Antonescu**

What we know and don't know about the societal and economic impact of severe weather events in Europe

**15:30–15:45 | Jiang Xuegong**

Analysis on the Characteristics of Vertical structure of Sand and Dust in a Dust Storm process

**15:45–16:00 | Zachary Lebo**

Do aerosols matter in the context of deep convective clouds?

**ORAL PROGRAMME UP1.3 CONTINUES ON WEDNESDAY, 10:30**

### **UP2.5 The interconnection between the sun, space weather and the atmosphere**

**Lecture room:** E III

**Convener:** Mauro Messerotti

**Co-convener:** David R. Jackson; Suzy Bingham; Robert Erdelyi

**14:00–14:20 | Eugene Rozanov**

Solar irradiance and energetic particle impacts on the atmosphere: Status and development. (solicited)

**14:20–14:40 | Ilya Usoskin**

Solar particle storms: the worst-case scenario (solicited)

**14:40–15:00 | Kalevi Mursula**

Climate effects of high-speed solar wind streams (solicited)

**15:00–15:15 | Timofei Sukhodolov**

Entire Atmosphere Global model (EAGLE): development, first version and preliminary results

**15:15–15:30 | Mathew Owens**

Modulation of thunderstorm activity by solar activity

**15:30–15:50 | Veronika Barta**

Impact of the Most Intense Solar Events of Solar Cycle 23 on the Lower Ionosphere (solicited)

**15:50–16:00: Poster pitch**

**END OF ORAL PROGRAMME UP2.5**

**UP3.4 Paleoclimatology and historical climatology****Lecture room:** E238**Convener:** Rudolf Brazdil**Co-conveners:** Ricardo García-Herrera; Fidel González-Rouco**14:00–14:15 | Pedro Roldán**

Comparison of simulations and reconstructions of the past hydroclimate

**14:15–14:30 | Sancho Salcedo-Sanz**

A Metaheuristic approach to select Representative Measuring Points for Temperature Field Reconstruction

**14:30–14:45 | Petr Dobrovolny**

Drought variability reconstructed from multiproxy archives for the territory of the Czech Republic since AD 1500

**14:45–15:00 | Andrea Kiss**

Droughts in the (late) medieval Carpathian Basin in an East-Central European context

**15:00–15:15 | Ladislava Řezníčková**

Extreme droughts and their human responses in the Czech Lands in the pre-instrumental period

**15:15–15:30 | Rudolf Brazdil**

Climate variability and changes in the agrarian cycle in the Czech Lands from the 16th century

**15:30–15:45 | Javier Mellado-Cano**

Atmospheric circulation during the Late Maunder Minimum from ships' logbooks

**15:45–16:00 | David Barriopedro**

Euro-Atlantic Atmospheric circulation and variability since 1685

**ORAL PROGRAMME UP3.4 CONTINUES ON MONDAY, 16:30**

## Monday, 16:30–18:30

### ES1.3 Impacts: vulnerability and adaptation to climate change

**Lecture room:** E III

**Convener:** Blaz Kurnik

**16:30–16:45 | Livia Labudová**

Monitoring of drought impacts and the DriDanube project (Tromp Foundation Travel Award)

**16:45–17:00 | Anita Verpe Dyrrdal**

Preparing for heavier rainfall - Norwegian "climate factors"

**17:00–17:15 | Helga Therese Tilley Tajet**

Providing climate indices for construction industry

**17:15–17:30 | Elodie Briche**

SOCLIMPACT: Climate change risk assessment and impact chain analysis for European Islands

**17:30–17:45 | Kevin Ka-Lun Lau**

Mortality risks of different types of extreme hot weather: Implications on the preparedness and response strategy in Hong Kong

**17:45–18:00 | Stephanie Hänsel**

Climate impact assessment for the German federal transport infrastructure

**18:00–18:15: Poster pitches**

**18:15–18:30: European overview and discussion**

**END OF ORAL PROGRAMME ES1.3**

### OSA1.8/ES1.6 Delivery and communication of impact forecasting and impact modelling of weather and natural hazard events

**Lecture room:** E IV

**Convener:** Adriaan Perrels; Rebecca Hemingway; Dee Cotgrove

**Co-conveners:** Tanja Cegnar; Haleh Kootval; Seungbum Kim

**16:30–16:45: Poster pitches**

**Impact forecasting and impact modelling of weather and natural hazard events**

**16:45–17:00 | Ilona Láng**

Classification of Windstorms and Their Impacts on the Electricity Grid System in Finland

**17:00–17:15 | Miloslav Belorid**

Evaluation and calibration of impact-based forecasting system for heatwaves integrated with limited-area ensemble prediction system

**17:15–17:30 | Reidun Gangstø Skaland**

Associations between extreme weather events, water quality and waterborne illnesses in Norway and impacts of climate change



**17:30–17:45 | Fatima Pilloso**

Moving towards Global Flash Flood Impact Forecasts using ECMWF's Medium Range Ensemble and Socio-Economic Information

**17:45–18:00 | Rebecca Hemingway**

Making Impact-Based Information and Advice Impactful

**Delivery and communication of impact based forecasts****18:00–18:15 | Nadine Fleischhut**

Communicating probabilistic weather forecasts to emergency managers

**18:15–18:30 | Rainer Kaltenberger**

Status of Implementation of Impact-oriented Warnings in Europe

**18:30–19:00 | Louis Uccellini**

Keynote Presentation: Building Weather-Ready Nations – The New International Need

**END OF ORAL PROGRAMME OSA1.8/ES1.6****OSA2.5 Atmospheric effects on humans**

**Lecture room:** E II

**Convener:** Andreas Matzarakis

**16:30–16:45 | Fiorella Acquaotta**

Role of climate in the spread of shiga toxin-producing *Escherichia coli* infection among children (EMS Tromp Award Lecture)

**16:45–17:00 | Ales Urban**

The predictability of heat-related mortality in Prague, Czech Republic during summer 2015 - A comparison of various thermal measures

**17:00–17:15 | Irmela Schlegel**

Effects of climate change on seasonal morbidity and mortality on respiratory diseases in Germany

**17:15–17:30 | Coral Salvador**

Health effects on daily mortality of a hydrological extreme: the case of the droughts in Galicia, Spain (Tromp Foundation Travel Award)

**17:30–17:45 | Rosmarie de Wit**

Exploring urban climate change adaptation measures with CLARITY's climate service

**17:45–18:00 | Brigitta Hollosi**

Towards providing high-resolution forecasts to improve the existing heat warning system in urban areas - a case study based on urban climate simulations of Vienna

**18:00–18:15 | Yuxia Ma**

Short-term effects of ambient air pollution on emergency room admissions due to cardiovascular causes in Beijing, China

**18:15–18:30 | Sytse Koopmans**

Quantifying the effect of different urban planning strategies on heat stress in current and future climates in the Netherlands

**ORAL PROGRAMME OSA2.5 CONTINUES ON TUESDAY, 14:00**

**OSA2.7 PannEx: The Water and energy cycles in the Pannonian Basin and their interactions with human activities****Lecture room:** E I**Convener:** Monika Lakatos**Co-conveners:** Ivan Guettler; Branka Ivančan-Picek; Adina-Eliza Croitoru; Danijel Jug; Vladimir Djurdjevic; Tamás Weidinger; Andrej Ceglár; Joan Cuxart**16:30–16:45 | Emiliano Gelati**

Irrigation and crop yield scenarios in the Danube river basin using an integrated agro-hydrologic model

**16:45–17:00 | Rita Pongrácz**

Comparison of hydrological hazards in Serbia and Hungary

**17:00–17:15 | Tamás Szentimrey**

Mathematical methodology for meteorological drought risk assessment

**17:15–17:30 | Zita Bihari**

Algorithm for drought risk calculation in DriDanube project

**17:30–17:45 | Sándor Szalai**

Survey of drought risk estimations in the DriDanube project region

**17:45–18:00 | Amanda Imola Szabó**

Human thermal environment of the Carpathian Basin according to clo index

**18:00–18:15 | Michal Žák**

Urban heat island under various synoptic scale atmospheric circulation in the central and south-eastern Europe - comparison of Prague and Bucharest

**18:15–18:30 | Branislava Lalic**

Internationalization of higher education and introduction of Responsible Research and Innovation (RRI) concept in the framework of H2020 - TWINNING- SERBIA FOR EXCELL

**END OF ORAL PROGRAMME OSA2.7**

**UP3.4 Paleoclimatology and historical climatology****Lecture room:** E238**Convener:** Rudolf Brazdil**Co-convener:** Ricardo García-Herrera; Fidel González-Rouco**16:30–16:45 | Sorin Cheval**

Reconstructing the climate of the 19th century from newspaper information

**16:45–17:00**

abstract withdrawn

**17:00–17:15 | Elin Lundstad**

The first reliable Norwegian climatological time series

**17:15–17:30 | Jianping Duan**

Tree rings reveal weakening of annual temperature cycle over the Tibetan Plateau since the 1870s

**17:30–17:45 | Juan Antonio Cánovas**

On the extraordinary winter flood episode over the North Atlantic Basin in 1936

**17:45–18:00 | Piero Lionello**

Learning about climate change in the Mediterranean region by comparing past and future climates

**18:00–18:30: Poster pitches****END OF ORAL PROGRAMME UP3.4**

# Advances in Science & Research

## Contributions in Applied Meteorology and Climatology

**Managing Editor | Martina Junge**

**Advances in Science and Research (ASR)** is the international journal of the European Meteorological Society (EMS) for contributions in applied meteorology and climatology. ASR publishes original contributions on (a) advances in understanding weather and climate processes and (b) the development of operational systems and applications of meteorology, climatology, and related disciplines. This also includes new challenges and the role of communication, education and training, and engagement with society for the profession and its practices. ASR-CAMC is an open-access journal for contributions presented at the annual meetings of the EMS and other related events.

### **Abstracted/Indexed**

Indexed in ADS and GeoRef

Included in Directory of Open Access Journals (DOAJ)

Long-term e-archived in Portico and CLOCKSS

### **Deadline for submissions: 15 January 2019**

Authors of contributions that have been accepted to one of the EMS Annual Meeting 2018 session topics are invited to submit short conference papers. Details will be sent to the authors by email after the conference.

**Tuesday, 09:00–09:30****Keynote Lecture on Understanding Weather & Climate Processes (UP)****Projecting changes in impacts at 1.5°C vs 2°C global warming: The role of land processes**

By Sonia I. Seneviratne, ETH Zurich

**Tuesday, 09:30–10:30****Poster session & refreshment break:  
For details of the poster programme see page 46–50****Tuesday, 10:30–12:30****ES1.2 Creating value through Open Data****Lecture room:** E III**Convener:** Renate Hagedorn**Co-conveners:** Eduard Rosert; Roope Tervo**10:30–11:00 | Conor Delaney**

Creating Value through Open Data, a Perspective from AWS (solicited)

**11:00–11:15 | Roope Tervo**

Open data distributed on Amazon's cloud service

**11:15–11:30 | Hans Olav Hygen**

Building a value chain through open data and user interaction. Case study of yr.no.

**11:30–11:45 | Andreas Hoy**

User-friendly visualisation of climate time series for the public

**11:45–12:00 | Frank Kaspar**

Interactive open access to climate observations from Germany

**12:00–12:15 | Renate Hagedorn**

First steps towards a valuable Open Data portal for weather information provided by DWD

**12:15–12:30: Discussion****END OF ORAL PROGRAMME ES1.2**

## ES1.5 Creating national and regional climate services in Europe through partnerships

**Lecture room:** E II

**Convener:** Carlo Buontempo

**Co-convener:** Francisco J. Doblas-Reyes

**10:30–10:45 | Elke Keup-Thiel**

Exemplary evaluation of a climate service product

**10:45–11:00 | Andreas Fischer**

The new CH2018 climate change scenarios: an example of an effective climate service in Switzerland

**11:00–11:15 | Gabriella Zsebeházi**

Advancing climate change information system to foster adaptation in Hungary

**11:15–11:30 | Rosmarie de Wit**

Services to protect cultural heritage against climate change: the STORM project

**11:30–11:45 | Alessandro Dell'Aquila**

Turning climate-related information into added value for traditional MEDiterranean Grape, OLive and Durum wheat food systems: the MED-GOLD project

**11:45–12:00 | Janette Bessembinder**

WATer management for road authorities in the face of climate Change: protocol for climate data

**12:00–12:15 | Blanka Bartok**

Solar surface radiation and wind speed projections for use in the energy sector in Europe

**12:15–12:30 | Jaume Ramon**

Intercomparison of wind speeds from multiple reanalyses and an evaluation using tall tower observations

**Poster pitches (5 minutes for 3 posters)**

**END OF ORAL PROGRAMME ES1.5**

## UP1.4 Towards a better understanding of wind gusts: observations, processes, predictions and verification

**Lecture room:** E I

**Convener:** Sabrina Wahl

**Co-convener:** Martin Göber; Irene Suomi; Peter Sheridan

**10:30–10:45 | Helge Knoop**

A generic gust definition and detection method based on wavelet-analysis

**10:45–11:00 | Irene Suomi**

An overview of measuring wind gusts

**11:00–11:15 | Julian Steinheuer**

Estimation of vertical wind gust profiles from regional reanalysis using extreme value theory

**11:15–11:30 | Ronny Petrik**

Quality of the estimation of wind gusts and variability from reanalysis and hindcasts

**11:30–11:45 | Simon Scherrer**

Towards a new wind gust climatology for Switzerland - Challenges and first insights

**11:45–12:00 | Lorenzo Minola**

How well do Regional Climate Models simulate and parametrize surface wind speed and wind gust across Scandinavia? (Young Scientist Travel Award)

**12:00–12:15 | Xiaoli Larsén**

Modelling of the South African extreme wind gust using Brasseur's Method and potential forecasting applications

**12:15–12:30 | Akio Hansen**

Predicting wind gusts by realistic large area LES weather forecast simulations

**END OF ORAL PROGRAMME UP1.4**
**UP.2 Air pollution, weather and climate and their mutual interactions from local / urban to global scales**

**Lecture room:** E238

**Convener:** Leena Järvi

**Co-conveners:** Alexander Baklanov; Vincent-Henri Peuch; Krisztina Labancz; Zita Ferenczi

**10:30–10:45: Poster pitches****10:45–11:00 | Tímea Haszpra**

Investigation of the stretching of pollutant clouds during climate change in an ensemble approach

**11:00–11:15 | Ana Carvalho**

Climate change services at the urban scale: Targeting the air quality over Amsterdam/Rotterdam

**11:15–11:30 | Alexander Cheremisin**

The transfer of the stratospheric aerosol of volcanic origin over Western Siberia in 2008-2017, according to the lidar observation data

**11:30–11:45 | Goran Gašparac**

Regional modelling and assessment of atmospheric particulate matter concentrations at rural background locations in Europe

**11:45–12:00 | Joanna Jędruszkiewicz**

The impact of meteorological conditions on PM10 and PM2.5 concentrations in Poland - assessment of selected machine learning tools in short term forecasting

**12:00–12:15 | Leena Järvi**

Street level pollutant distributions in different meteorological conditions in Helsinki measured using mobile laboratory and a drone

**12:15–12:30 | Peter Huszar**

On the influence of urban canopy forcing on urban aerosol concentrations

**END OF ORAL PROGRAMME UP2.2**

## UP3.1 Climate change detection, assessment of trends, variability and extremes

**Lecture room:** E IV

**Convener:** Albert M.G. Klein Tank

**Co-conveners:** Monika Lakatos; Martine Rebetez

### Analyses of temperature

**10:30–11:00 | Geert Jan van Oldenborgh**

Pathways and pitfalls in extreme event attribution (solicited)

**11:00–11:15 | Robert Rohde**

Temperature Trends, Variability, and Extreme Events in the Berkeley Earth Homogenized Daily Temperature Data Set

**11:15–11:30 | Ali Akbar Sabziparvar**

Analysis of the Temperature Extremes Variability in Different Climates of Iran

**11:30–11:45 | Martine Rebetez**

Unprecedented spring frost event in Switzerland and Germany in April 2017

**11:45–12:00 | Agnieszka Wypych**

Temporal variability of winter temperature extremes in Poland

**12:00–12:15 | Jean-Michel Soubeyroux**

Heat waves analysis over France in present and future climate

**12:15–12:30 | Miriam D'Errico**

Detection and attribution of Southern European cold spells via a statistical Mechanics Approach

**ORAL PROGRAMME UP3.1 CONTINUES ON TUESDAY, 14:00**

## Tuesday, 13:15–13:45

### WMO Townhall Meeting

Strategic Lecture

Climate Change, Disasters and their Impacts: How to mitigate

By Petteri Taalas, WMO Secretary General

Room: E IV



## Tuesday, 14:00–16:00

### OSA1.9 Forecasters' session

**Lecture room:** E III

**Convener:** Antti Mäkelä

**Co-conveners:** Henri Nyman; Christian Csekits; Evelyn Cusack

**14:00–14:15 | Marko Zoldoš**

Experiences in using conditional probability in short-range fog forecasting at Zagreb Airport

**14:15–14:30 | Estibaliz Gascón**

How can we improve freezing rain forecasts using ECMWF ensemble system?

**14:30–14:45 | Ivan Tsonevsky**

Using new Extreme Forecast Index parameters to forecast severe convection

**14:45–15:00 | Gerald Fleming**

The WMO Competency Framework for Weather Forecasters

**15:00–15:15 | Christian Csekits**

The new impact-based severe weather warning system at the Austrian Meteorological Service (ZAMG)

**15:15–15:30 | Jadran Jurković**

Webcams - a diagnostic tool for forecaster

**15:30–15:45 | Ville Siiskonen**

Operational Climate Service as a part of Safety Weather Services at the Finnish Meteorological Institute

**15:45–16:00 | Terhi Laurila**

The predictability of surface wind, temperature and precipitation in weekly scale in Scandinavia

**END OF ORAL PROGRAMME OSA1.9**

### OSA2.5 Atmospheric effects on humans

**Lecture room:** E238

**Convener:** Andreas Matzarakis

**14:00–14:15 | Irena Nimac**

Urban climate of Zagreb (Croatia) - its characteristics and changes (Tromp Foundation Travel Award)

**14:15–14:30 | Tomas Halenka**

Urban effects in weather and climate simulations - Project URBI PRAGENSI

**14:30–14:45 | Csenge Dian**

Urban heat island intensity analyse based on surface and air temperature measurements in Budapest (Tromp Foundation Travel Award)

**14:45–15:00 | Mikhail Varentsov**

Effects of the climate change and city development on summering urban heat island and heat stress indices for Moscow megacity (Tromp Foundation Travel Award)

**15:00–15:15 | Cathy Fricke**

Differences in the intra-urban temperature reactions of similar size cities in distinct climatic regions using Local Climate Zone approach

**15:15–15:30 | Omer Ben-Nun**

Analysis of Urban Heat Island in the Desert City of Beer-Sheva, Israel, Using a Modified Local Climate Zone Classification

**END OF ORAL PROGRAMME OSA2.5**

**OSA3.5 The Copernicus Climate Change Service**

**Lecture room:** E II

**Conveners:** Carlo Buontempo; Dick Dee; Jean-Noel Thepaut

**14:00–14:15 | Jean-Noel Thepaut**

THE COPERNICUS CLIMATE CHANGE SERVICE (C3S): From a Proof-of-Concept to a Fully Operational Service

**14:15–14:30 | Federico Fierli**

The Evaluation and Quality Control of Observational ECVs for the Copernicus Climate Service

**14:30–14:45 | Dragana Bojovic**

From MAGIC to reality: facilitating access to sector-specific climate projection information

**14:45–15:00 | Hilppa Gregow**

What kinds of evaluation and quality control tools are needed for users of climate information? - The DECM project story

**15:00–15:15 | Rasmus Benestad**

A prototype for showing the merits and limitations of multi-model climate ensembles

**15:15–15:30 | Jane Strachan**

Towards the C3S Roadmap for European Climate Projections

**15:30–15:45: Poster pitches**

**END OF ORAL PROGRAMME OSA3.5**

**UP1.2 Atmospheric boundary-layer processes and turbulence**

**Lecture room:** E I

**Conveners:** Sergej Zilitinkevich; Gert-Jan Steeneveld

**Co-convenor:** Bert Holtslag

**14:00–14:15: Poster pitches**

**14:15–14:30 | Igor Esau**

Long-term predictability of local air quality hazards and periods of reduced turbulent mixing in Scandinavia

**14:30–14:45 | Joan Cuxart**

Contribution of the surface heterogeneities to the imbalance of surface energy budget

**14:45–15:00 | Maik Renner**

Estimation of diurnal turbulent heat exchange by the thermodynamic limit of a cold heat engine over contrasting land-cover types

**15:00–15:15 | Iris Manola**

A detailed radar precipitation analysis from hourly to seasonal time scales for the city of Amsterdam, the Netherlands

**15:15–15:30 | Sylvio Freitas**

Experimental investigation of complex terrain effects on wind dynamics within the lower atmosphere

**15:30–15:45 | Carlos Román-Cascón**

Analyzing features and impacts of mountain breezes at three different mountainous sites

**15:45–16:00 | Mireia Udina**

Observations and model simulations of an elevated rotor during a heavy precipitation event in the Eastern Pyrenees (The Cerdanya-2017 field experiment)

**ORAL PROGRAMME UP1.2 CONTINUES ON TUESDAY, 16:30****UP3.1 Climate change detection, assessment of trends, variability and extremes**

**Lecture room:** E IV

**Convener:** Albert M.G. Klein Tank

**Co-conveners:** Monika Lakatos; Martine Rebetez

**14:00–14:15 | Lucie Pokorna**

Elevation-dependent warming in European mountains and its possible causes

**Analyses of snow and sea level****14:15–14:30 | Adria Fontrodona Bach**

Widespread and accelerated decrease of mean and extreme snow depth observed over Europe

**14:30–14:45 | Anna Luomaranta**

Decreasing snow depth accompanied with mixed snowfall trends in Finland in 1961-2014

**14:45–15:00 | Jeremy Rohmer**

Joint evolution of high-percentile and mean sea level: detecting the deviations using century-long tide gauge time series

**Analyses of wind, precipitation, droughts and clouds****15:00–15:15 | Damyan Barantiev**

Climatological study of extreme wind events in a coastal area

**15:15–15:30 | Blanka Bartok**

Current and future risk of wind droughts in Europe

**15:30–15:45 | Rasmus Benestad**

An new reason why we should see more extremely high precipitation amounts

**15:45–16:00 | Miloslav Müller**

Increasing extremeness of precipitation in Central Europe? Comparison between past and recent events

**ORAL PROGRAMME UP3.1 CONTINUES ON TUESDAY, 16:30**

## Tuesday, 16:30–18:30

### ES1.8 Cooperation with weather and climate services in developing and emerging countries

**Lecture room:** E238

**Convener:** Stefanie Gubler

**Co-conveners:** Noëmi Imfeld; Victor Venema; Gerard van der Schrier

**16:30–16:45 | Jane Strachan**

Co-development of national climate services - learning from working together (solicited)

**16:45–17:00 | Mary Power**

WMO Voluntary Cooperation Programme 50 Years on

**17:00–17:15 | Jorge Tamayo**

AEMET International Meteorological Cooperation

**17:15–17:30 | Daniel Funk**

Implementation of the Global Framework of Climate Services (GFCS) at the national level - Experiences from assessing the baseline of Climate Services in developing and emerging countries within the context of the IKI CSI project

**17:30–17:45 | Gerard van der Schrier**

The Indonesian - Dutch collaboration project JCP: never a dull moment.

**17:45–18:00 | Hans Olav Hygen**

Building sustainable development through cooperative capacity building.

**18:00–18:15 | Sara De Ventura**

User-tailored seasonal forecasts for agriculture - creating socio-economic benefit through climate services in the Andes

**18:15–18:30 | Vieri Tarchiani**

Improving agrometeorological services for farmers in Niger

**18:30–18:45 | Neha Mittal**

Time for tea: lessons from co-producing future climate information for tea production in Kenya and Malawi

**18:45–19:00 | Massimiliano Cannata**

Evaluation of Open, Reproducible, Low-cost and Non-conventional Weather monitoring System

**END OF ORAL PROGRAMME ES1.8**

## OSA3.6 Challenges in deriving actionable information from climate model ensembles

**Lecture room:** E III

**Convener:** Andreas Fischer

**Co-conveners:** Martin Widmann; Barbara Früh; Ivonne Anders; Jean-Pierre Céron; Fai Fung

### 16:30–16:45 | Rob van Dorland

KNMI21 Climate scenarios for the Netherlands

### 16:45–17:00 | Kuno Strassmann

Meeting the challenge: generating and disseminating actionable climate information with the new Swiss climate change scenarios CH2018

### 17:00–17:15 | Janette Bessembinder

Translating the Dutch KNMI'14 scenarios into impacts in the Climate Adaptation Atlas

### 17:15–17:30 | Jean-Michel Soubeyroux

DRIAS portal as a national climate service

### 17:30–17:45 | Clementine Dalelane

A pragmatic approach to build a reduced regional climate projection ensemble for Germany using the EURO-CORDEX 8.5 ensemble

### 17:45–18:00 | Renato Bertalanic

Project OPS21: The assessment of the average and extreme meteorological and hydrological conditions in Slovenia over the 21st century

### 18:00–18:15 | Lorenzo Sangelantoni

Evaluating hydrological response to climate change projections over small Appennine's catchments in Central Italy

### 18:15–18:30: Poster pitches

## END OF ORAL PROGRAMME OSA3.6

## UP1.2 Atmospheric boundary-layer processes and turbulence

**Lecture room:** E I

**Conveners:** Sergej Zilitinkevich; Gert-Jan Steeneveld

**Co-conveners:** Bert Holtslag

### 16:30–16:45 | Sergej Zilitinkevich

Revising conventional theory of turbulence in atmospheric surface layer

### 16:45–17:00 | Goran Gašparac

Parameterization of NWP WRF in stable situations

### 17:00–17:15 | Krzysztof Fortuniak

Carbon dioxide and methane turbulent fluxes for mid-European mire - results of 5-year EC measurements in Biebrza National Park

### 17:15–17:30 | Orlin Gueorguiev

PBL vertical profiles in urban and rural air masses over Sofia valley by noon radiosoundings

**17:30–17:45 | Moon-Soo Park**

UMS-Seoul observation-based local circulations in the Seoul Metropolitan Area

**17:45–18:00 | Omar Elguernaoui**

Revisiting the scaling for the afternoon/evening transition of the convective boundary layer

**18:00–18:15 | Michael Johnston**

Environments that support organised shallow island convection

**18:15–18:30 | Marta Kopeć**

Physics of Stratocumulus Top: properties of the Turbulent Inversion Sub-Layer

**18:30–18:45 | Rui Liu**

Wind, temperature and water vapor fields over the oasis - desert ecosystem: measurements and numerical simulations

**18:45–19:00 | Ronny Petrik**

Which model deficits survive in regional reanalysis and which are blown away?

**END OF ORAL PROGRAMME UP1.2****UP3.1 Climate change detection, assessment of trends, variability and extremes**

**Lecture room:** E IV

**Convener:** Albert M.G. Klein Tank

**Co-conveners:** Monika Lakatos; Martine Rebetez

**16:30–16:45 | Jonathan Spinoni**

Global past, present, and future meteorological droughts

**16:45–17:00 | Abdullah Kahraman**

Future severe convective storms in Euro-Mediterranean region based on simulated environmental conditions

**17:00–17:15 | Jason Furtado**

Trends in the Northern Hemisphere Stratospheric Polar Vortex During the 20th and 21st Centuries

**17:15–17:30 | Cheng-Ta Chen**

Quantifying Human Impact to the Rainfall Extremes Associated with Tropical Cyclone

**17:30–17:45 | Jose Antonio Salinas**

Easterly waves and their changes under climate change scenarios in the Caribbean, Central America and Mexico

**17:45–18:00 | Toru Terao**

Upcoming Asian monsoon hydroclimatological research framework under GEWEX

**18:00–18:30: Poster pitches****END OF ORAL PROGRAMME UP3.1**

**UP3.6 Global and regional reanalyses****Lecture room:** E II**Convener:** A. K. Kaiser-Weiss**Co-conveners:** Eric Bazile; Dick Dee**16:30–17:00 | András Horányi**

The new global reanalysis ERA5 (solicited)

**17:00–17:15 | Toshihiko Hirooka**

Intercomparison of Dynamical Fields in the Middle Atmosphere Revealed in Global Reanalyses

**17:15–17:30 | Xinghua Bao**

How accurate are modern reanalyses and are they adequate to detect regional climate trends?

**17:30–17:45 | Per Uden**

European high resolution Regional Reanalyses in UERRA and the Copernicus Climate Change Service (C3S)

**17:45–18:00 | Eric Bazile**

The 55 years UERRA Surface Re-Analysis over Europe at 5.5km.

**18:00–18:15 | Patrick Le Moigne**

Land Surface Hydrology in the European High-resolution Regional Reanalysis UERRA

**18:15–18:30 | A. K. Kaiser-Weiss**

Estimating the value of regional reanalyses from the UERRA inter-comparison

**18:30–18:45 | Christopher Rozoff**

An analog ensemble method for downscaling

**18:45–19:00: Poster pitches****END OF ORAL PROGRAMME UP3.6**

## Posters Tuesday, 09:30–10:30

### ES1.3 Impacts: vulnerability and adaptation to climate change

**Convener:** Blaz Kurnik

**Poster pitches:** Mon, 18:00, room E III

**P.2 | Gabriela Ivaňáková**

Drought monitoring in Slovakia

**P.3 | Andreas Hoy**

Strengthening community resilience against impacts of urban flash floods

**P.4 | Mina Petric**

Impact of climate change on the establishment and seasonal activity of *Aedes albopictus* in Europe

**P.5 | Quentin Lejeune**

ISlpedia, the open climate-impacts encyclopedia: First activities and future milestones

**END OF POSTER PROGRAMME ES1.3**



## OSA1.8/ES1.6 Delivery and communication of impact forecasting and impact modelling of weather and natural hazard events

**Conveners:** Adriaan Perrels; Rebecca Hemingway; Dee Cotgrove

**Co-conveners:** Tanja Cegnar; Haleh Kootval; Seungbum Kim

**Poster pitches:** Mon, 16:30, room E IV

### P.12 | Ricard Ripoll

Using Citizen Science in Meteorological Hazard Events. The snow event in Catalonia 26-28/02/2018

### P.13 | Hannu Valta

Estimating the amount of forest damages in Finland by the maximum wind gust speed

### P.14 | Péter Baár

Evaluation of weather-induced damage reports in Hungary

### P.15 | Ehsan Taghizadeh

Mapping the 2017 Flood over Northwest of Iran Using SMAP and GPM Measurements

### P.16 | Hye Jin Kee

A Study on The Snowfall Threshold Using Cluster Analysis According to Snowfall Damage in Gwangju and Jeonnam Province

### P.17 | Mi Jeong Noh

A Study on The Effect of The Heat Impact Forecast Pilot Project Using Each Regional Threshold Temperature

### P.18 | Sang Hui Choi

Development of localized critical index for impact forecast of heavy rain

### P.19 | Martin Mozny

Information systems for early warnings and wildfire risk management in Czechia

### P.20 | Chaeyeon Yi

Heat-exposure Information for the Hazard Impact Forecasting of Urban Heat-wave

**END OF POSTER PROGRAMME OSA1.8/ES1.6**

## OSA2.5 Atmospheric effects on humans

**Lecture room:** E II

**Convener:** Andreas Matzarakis

**Poster pitches:** Mon, 15:45, E II

### P.21 | Valeri Goldberg

Climate data on local scale as base for the heat-resilient urban development in the cities of Dresden and Erfurt / Germany

### P.22 | Anastasia Bleta

Effects of particulate matter from 2.5µm to 80µm on emergency hospital admissions for respiratory diseases: a time-series analysis in Heraklion, Crete Island, Greece

### P.23 | Martin Novak

A comparison of meteorological and biometeorological characteristics with medical data of emergency medical service in Ústí nad Labem

**P.24 | Péter Csapó**

Measurements of PM<sub>2.5</sub> concentration by bike in the downtown of Budapest, Hungary

**P.25 | Dariusz Graczyk**

Increased mortality during heat waves - not only an issue of large towns.

**P.26 | Yire Shin**

A Study on Statistical Downscaling of UM LDAPS for Urban High-Resolution Temperature Prediction

**P.27 | Hankyung Lee**

Analysis on the cooling effect of vegetation in the Seoul Metropolitan Area by using BioCAS

**P.29 | Pavel Konstantinov**

Summer urban thermal comfort in Russia. Climatology. Predictability. Trends.

**P.30 | Ales Urban**

Trends in heat-related mortality in urban population of the Czech Republic

**P.31 | Yung-Chang Chen**

Modified Physiologically Equivalent Temperature to Realize Evaluations of Humid-cold and Humid-hot Conditions

**P.32 | Biljana Basarin**

Quantification and assessment of heat waves in Novi Sad, Northern Serbia

**P.33 | Abu Taib Mohammed Shahjahan**

Influence of Differential Shading of Urban Wetland on the Urban Cooling Island Effect in Warm-Humid Environment

**P.34 | Csilla Gal**

Mean radiant temperature modeling, a comparative model evaluation

**P.35 | Zed Zulkafli**

Predicting water-related disease occurrences due to weather in the tropics

**END OF POSTER PROGRAMME OSA2.5**

### **OSA2.7 PannEx: The Water and energy cycles in the Pannonian Basin and their interactions with human activities**

**Convener:** Monika Lakatos

**Co-conveners:** Ivan Guettler; Branka Ivancan-Picek; Adina-Eliza Croitoru; Danijel Jug; Vladimir Djurdjevic; Tamás Weidinger; Andrej Cegljar; Joan Cuxart

**Poster pitches:** Mon, 14:00, room E I

**P.36 | Danijel Jug**

Conservation agriculture - possibly the best way to cope with climate change in crop production

**P.37 | Andrea Kircsi**

Monitoring of meteorological drought in Hungary

**P.38 | Željko Večenaj**

A new Micrometeorological Research Facility at the Faculty of Agriculture Experimental Vineyard in Zagreb

**P.39 | Aleksandar Janković**

Future global warming impacts on residential heating and cooling energy demand over part of Pannonian basin and Balkan Peninsula (Young Scientist Travel Award)

**P.40 | Ksenija Zaninovic**

Modelling of future climate potential for the development of Pannonian tourism

**P.41 | Lidija Srnec**

Climate projections for the Pannonian Basin with focus on extreme events

**P.42 | Ivan Guettler**

Nonhydrostatic simulations using regional climate model over the CORDEX FPS Convection region

**P.43 | Lidija Cvitan**

Climate change impact on future heating and cooling needs in Osijek (Croatia)

**P.44 | Adina-Eliza Croitoru**

Frequency and tracks of low pressure centres in Europe over the period 1986-2015

**P.45 | Balázs Szintai**

Biomass and soil moisture simulation and assimilation over Hungary using an offline land surface model with prognostic vegetation

**P.46 | Zorica Podrascanin**

The first attempt of WRF/Chem application in Vojvodina region

**P.47 | Monika Lakatos**

Computation of daily evapotranspiration to support the estimation of the surface energy budget in the Carpathian Region

**END OF POSTER PROGRAMME OSA2.7****UP2.2 Air pollution, weather and climate and their mutual interactions from local / urban to global scales**

**Convener:** Leena Järvi

**Co-conveners:** Alexander Baklanov; Vincent-Henri Peuch; Krisztina Labancz; Zita Ferenczi

**Poster pitches:** Tue, 10:30, room E238

**P.68 | Gangfeng Zhang**

Variability of winter haze over the Beijing-Tianjin-Hebei region tied to wind speed in the lower troposphere and particulate sources

**P.69 | Ivelina Georgieva**

Particulate Matter (PM) air pollution in Bulgaria - analysis of computer simulations results

**P.70 | Carlos Román-Cascón**

How do traffic intensity and turbulence levels affect pollutants concentration in urban traffic hot spots? Analysis from field campaign data in Madrid

**P.71 | Dragana Vujović**

How the cumulonimbus cloud affects redistribution of the SO<sub>2</sub> emitted from a thermal power station?

**P.72 | Margit Pattantyús-Ábrahám**

Verification of long term micro-scale atmospheric dispersion simulation of radionuclide emission

**P.73 | Zoltán Németh**

Multi-year long measurement of urban new aerosol particle formation and its relation to local meteorology

**P.74 | Oleg Postilyakov**

Estimations of impurity emissions from the Moscow metropolis basing on optical remote sensing and in-situ measurements

**END OF POSTER PROGRAMME UP2.2**

**UP2.5 The interconnection between the sun, space weather and the atmosphere**

**Convener:** Mauro Messerotti

**Co-conveners:** David R. Jackson; Suzy Bingham; Robert Erdelyi

**Poster pitches:** Mon, 15:50, room E III

**P.75 | Francisco J. Alvarez-García**

Could ENSO's response to the 11-yr solar forcing be modulated by Atlantic Multidecadal Variability?

**END OF POSTER PROGRAMME UP2.5**

**UP3.4 Paleoclimatology and historical climatology**

**Convener:** Rudolf Brazdil

**Co-conveners:** Ricardo García-Herrera; Fidel González-Rouco

**Poster pitches:** Mon, 18:00, room E238

**P.159 | Lukas Dolak**

Chronology of strong winds in the Czech Lands from AD 1501

**P.160 | Rudolf Brazdil**

Spatiotemporal variability of tornadoes in the Czech Lands, 1801-2017

**P.161 | David Gallego**

Instrumental evidence of an increasing trend of the Australian monsoon strength since the 19th Century

**P.162 | José Leandro Campos**

North and South Atlantic Sea Surface Temperature Anomalies and the South Atlantic and South Indian Convergence Zones Teleconnections in the Last Millennium

**P.163 | Veronika Valler**

Impact of different estimations of the background-error covariance matrix in a climate reconstruction

**P.164 | Jelena Maksic**

Simulation of the Holocene climate over South America and impacts on the vegetation

**END OF POSTER PROGRAMME UP3.4**

**Wednesday, 09:00–09:30****Keynote Lecture on Engagement with Society (ES)****Great Forecast - Poor Outcome**

By Haleh Kootval, Consulting specialist in meteorology and service delivery at the World Bank

**Wednesday, 09:30–10:30**

**Poster session & refreshment break:**  
For details of the poster programme see page 63–71

**Wednesday, 10:30–12:30****ES1.1 The Global Weather Enterprise**

**Lecture room:** E II

**Conveners:** Andrew Eccleston; Willie McCairns

**NOTE THE START AT 09:45**

**9:45 Chair of Session:** Dr Louis Uccellini, Director National Weather Service, USA

**10:00–10:15**

Activities and progress: Dimitar Ivanov, Executive Assistant to Secretary-General WMO

**10:15–10:35:**

Public Sector view: Dr Michael Staudinger, President of ECOMET, Director ZAMG National Weather Service Austria

**10:35–10:55:**

Academic view: Prof Leonard Smith, Director Centre for the Analysis of Time Series, London School of Economics

**10:55–11:15**

Private Sector view: Dennis Schulze, Chair of PRIMET and Chief Meteorology Officer, MeteoGroup

**11:15–12:00:**

Panel discussion

**END OF ORAL PROGRAMME ES1.1**

**ES2.1 Communication and media****Lecture room:** E IV**Convener:** Tanja Cegnar**10:30–10:45 | Tomas Molina**

The evolution of communicating the uncertainty of climate change to society. An study of IPCC synthesis reports

**10:45–11:00 | Mary Voice**

Australian experience with on-line communication tools for probability-based climate products

**11:00–11:30 | Freja Vamborg**

Copernicus Climate Change Service - information products for climate communication (solicited)

**11:30–11:45 | Claire Martin**

Communicating Climate Change: How to avoid a melt down, while noting that this is not a political science!

**11:45–12:00 | Federica Flapp**

Surveying climate change knowledge and perception among the local population: a fruitful low cost experience carried out employing the assets and media of a local weather forecast service

**12:00–12:15 EMS Outreach & Communication Award 2018**

**Online course: Come Rain or Shine**

**12:15–12:30 | Tanja Cegnar**

Does the Commission for Climatology need a communication strategy and why?

**ORAL PROGRAMME ES2.1 CONTINUES ON WEDNESDAY, 14:00**

**OSA1.1 Numerics and physics-dynamics coupling in weather and climate models****Lecture room:** E238**Convener:** Daniel Reinert**Co-convener:** Guy de Morsier**10:30–11:00 | Shian-Jiann Lin**

Breaking the boundaries between the "physics" and "dynamics" development - what can we learn from the nu-FV3 running at the global 3-km resolution (solicited)

**11:00–11:15 | Kevin Reed**

Exploring Physics-Dynamics Coupling in CAM Using Reduced Complexity Frameworks

**11:15–11:30 | Katarina Veljovic**

Accuracy of the jet stream position forecast as a dynamical core test: Cut-cell Eta vs. ECMWF 32-day ensemble results

**11:30–11:45 | Jian-Guo Li**

An efficient multi-resolution grid for global models and coupled systems

**11:45–12:00 | Yefim Kogan**

New efficient method to account for microphysical inhomogeneity in mesoscale models by using 1D variability factor

**12:00–12:15: Poster pitches**

**END OF ORAL PROGRAMME OSA1.1**

## UP1.3 Understanding and modelling of atmospheric hazards and severe weather phenomena

**Lecture room:** E I

**Convener:** Fulvio Stel

**Co-conveners:** Dario Giaiotti; Mario Marcello Miglietta; Sante Laviola; Jordi Mazon; Victoria Sinclair

### 10:30–10:45 | Laura Zubiate

Characterisation of extreme wind speeds in a new high resolution reanalysis dataset for Ireland

### 10:45–11:00 | Tomas Pucik

Long-lived convective windstorms of 2017 and their impacts across Europe

### Heat waves

### 11:00–11:15 | Agnieszka Krzyżewska

Mega-heatwaves in Europe 1960-2017

### 11:15–11:30 | Wei Chen

Anthropogenic impacts on recent decadal change in temperature extremes over China

### 11:30–11:45 |

abstract withdrawn

### Precipitation

### 11:45–12:00 | Yongqing Wang

Diagnostic Analysis on a Heavy Rainfall Associated with the Northeast Cold Vortex and Atmospheric River

### 12:00–12:15 | Qiuxia Wu

Case study on the role of NAO and ENSO in the anomalous precipitation in the southern part of China

### 12:15–12:30 | Jiyeon Jang

Estimation of PBL scheme parameters using the micro-genetic algorithm for heavy rainfall events

**ORAL PROGRAMME UP1.3 CONTINUES ON WEDNESDAY 13:15 WITH SOLICITED PRESENTATION BY ROGER WAKIMOTO: AMS TOWNHALL LECTURE, AND THEREAFTER AT 14:00**

## **UP1.5 Atmospheric measurements: Experiments, instrument networks and long-term measurements using in-situ and remote sensing techniques**

**Lecture room:** E III

**Convener:** Frank Beyrich

**Co-convener:** Fred C. Bosveld; Jens Bange; Domenico Cimini

### **Micrometeorological Measurements and Observation Systems**

**10:30–11:00 | Tamás Weidinger**

Importance of micrometeorological measurement campaigns: challenges and contributions (solicited)

**11:00–11:15 | Bruce Baker**

Climate Observing Systems: Where are we and where do we need to be in the future

**11:15–11:30 | Herman Russchenberg**

The Ruisdael Observatory: The Atmospheric Research Infrastructure in The Netherlands 2018 - 2027

**11:30–11:45 | Cathy Hohenegger**

FESSTVaL: Field Experiment on sub-mesoscale spatio-temporal variability in Lindenberg

**11:45–12:00 | Virginia Ciardini**

Interconnections of the urban heat island with the spatial and temporal micrometeorological variability in Rome

**12:00–12:15 | Bo Li**

Variation characteristics of Nagqu soil moisture at different time scales based on network observation

**12:15–12:30 | Jérémy Bernard**

A semi-empirical model to characterize the error of air temperature measurement induced by the shelter used

**ORAL PROGRAMME UP1.5 CONTINUES ON WEDNESDAY, 14:00**

## **Wednesday, 13:15–13:45**

### **AMS Townhall Lecture Keynote lecture session UP1.3**

#### **The Visual Characteristics of the Tornado Funnel Cloud with the Evolving Debris Cloud using Polarimetric Radar Measurements and High Resolution Photographs**

By Roger Wakimoto, AMS President

Room: E I



## Wednesday, 14:00–16:00

### ES2.1 Communication and media

**Lecture room:** E IV

**Convener:** Tanja Cegnar

**14:00–14:15: Poster pitches**

**14:15–14:30: EMS Broadcast Meteorologist Award 2018 - Evelyn Cusack**

**14:30–14:45 | Michael Sharpe**

The use of Climatology in Forecast Communication

**14:45–15:00 | Jay Trobec**

Evolution of TV weather forecasts in the last thirty years

**15:00–15:15 | Hans Olav Hygen**

The best of two worlds: How to get the effort of science and media to build a strong communication channel for weather forecasts. Case study of yr.no.

**15:15–15:30: EMS TV Weather Forecast Award 2018**

Dunja Mazzocco Drvar, Croatia

**15:30–15:45: The magazine "Vejet"**

**15:45–16:00: Publications overview and discussion**

**END OF ORAL PROGRAMME ES2.1**

### OSA1.2 The Weather Research and Forecasting Model (WRF): development, research and applications

**Lecture room:** E 238

**Convener:** Gert-Jan Steeneveld

**Co-convener:** Hugo Hartmann

**14:00–14:15: Poster pitches**

**14:15–14:30 | Richard Bassett**

To InfiniBand, and beyond? Cloud computing for the WRF model

**14:30–14:45 | Santos José González Rojí**

The effect of 3DVAR data assimilation and Noah land surface model over the Iberian summer surface temperature simulated by WRF

**14:45–15:00 | Jordi Mercader**

The WRFDA and different estimations of the background error: application in Catalonia for high-resolution precipitation nowcasting

**15:00–15:15 | Markel García-Díez**

Added value of a Kalman Filter in urban-scale forecasts in the city of Madrid

**15:15–15:30 | Yasemin Ezber**

Prediction of a winter fog event in Istanbul using WRF Model

**15:30–15:45 | Javier Medina Moya**

Role of aerosols-radiation-cloud interactions on European hydroclimatic extremes

**15:45–16:00 | Konstantinos Tsarpalis**

The synergy of the unbalanced mesoscale circulations and the polar-subtropical jetstreams to severe dust transport phenomena over the Mediterranean

**END OF ORAL PROGRAMME OSA1.2**

**OSA3.3 Spatial climatology**

**Lecture room:** E II

**Convener:** Ole Einar Tveit

**Co-conveners:** Mojca Dolinar; Christoph Frei

**14:00–14:15 | Jörg Trentmann**

Satellite-based climate data record of the surface solar radiation

**14:15–14:30 | Tamás Szentimrey**

New version MISHv2.01 for modelling climate statistical parameters and RMSE

**14:30–14:45 | Cristian Lussana**

TITAN software for the quality control of in-situ observations and its application on amateur weather station data

**14:45–15:00 | Francois Besson**

Daily extreme temperatures spatialisation over France at 1km resolution from 1947 to present, and its use for climate monitoring and heat/cold waves detection

**15:00–15:15 | Alice Crespi**

A new combined interpolation approach for 1981-2010 monthly precipitation climatologies over Norway: joining numerical model output with in-situ observations

**15:15–15:30 | Johann Hiebl**

Daily precipitation grids for Austria since 1961—development and evaluation of a spatial dataset for hydroclimatic monitoring and modelling

**15:30–15:45 | Francesco Isotta**

A centennial climate-consistent spatial analysis of precipitation for the European Alps

**15:45–16:00: Poster pitches**

**END OF ORAL PROGRAMME OSA3.3**

## UP1.3 Understanding and modelling of atmospheric hazards and severe weather phenomena

**Lecture room:** E I

**Convener:** Fulvio Stel

**Co-conveners:** Dario Giaiotti; Mario Marcello Miglietta; Sante Laviola; Jordi Mazon; Victoria Sinclair

**NOTE THE START AT at 13:15**

### 13:15–13:45 | Roger Wakimoto: AMS Townhall Lecture

The Visual Characteristics of the Tornado Funnel Cloud with the Evolving Debris Cloud using Polarimetric Radar Measurements and High Resolution Photographs

### 14:00–14:15 | Dario Giaiotti

Simulating extreme hourly precipitation at the microscale by means of WRF model

### Convective storms and tropical cyclones

### 14:15–14:30 | Mateusz Taszarek

Climatological estimates of days with thunderstorms and severe thunderstorms over Europe

### 14:30–14:45 | Karianne Ødemark

New method for estimating Probable Maximum Precipitation by using a Numerical Weather Prediction model

### 14:45–15:00 | Juha Kilpinen

Experiences of forecasting tropical thunderstorms in Sri Lanka with local and global numerical weather prediction models

### 15:00–15:15 | Damjan Jelic

Hail climatology and lightning jump climatology along northeastern Adriatic region with accompanying weather types

### 15:15–15:30 | Abdullah Kahraman

An observational and numerical study of the extreme 27 July 2017 hailstorm in Istanbul

### 15:30–15:45 | Young Kwon

Impact of horizontal and vertical resolutions on the structure and intensity of simulated typhoons

### 15:45–16:00 | Liguang Wu

Simulation of Eyewall Vorticity Maxima in the Tropical Cyclone Boundary Layer

**END OF ORAL PROGRAMME UP1.3**

## **UP1.5 Atmospheric measurements: Experiments, instrument networks and long-term measurements using in-situ and remote sensing techniques**

**Lecture room:** E III

**Convener:** Frank Beyrich

**Co-conveners:** Fred C. Bosveld; Jens Bange; Domenico Cimini

### **Remote Sensing and Innovative in-situ Techniques**

**14:00–14:30 | Alexander Haefele**

The potential of surface based remote sensing to fill the observational gap in the lower troposphere (solicited)

**14:30–14:45 | Sven-Erik Gryning**

Cloud cover climatology in the High Arctic investigated by a ceilometer

**14:45–15:00 | Praveen Pandey**

A comparative study of cloud and aerosol properties from satellite observations and ground-based measurements conducted over a coastal station of Ireland

**15:00–15:15 | Giulia Carella**

Non parametric statistical downscaling of satellite measurements at different scales: linking observations from a lidar and a passive microwave sounder

**15:15–15:30 | Arjan Droste**

Crowdsourcing the urban wind climate from private weather stations

**15:30–15:45 | Yann Büchau**

Environmental influences on a network of low-cost CO<sub>2</sub> sensors

**15:45–16:00 | Merhala Thurai**

Raindrop Shapes and Fall Velocities in "Turbulent Times"

**ORAL PROGRAMME UP1.5 CONTINUES ON WEDNESDAY, 16:30**

**Wednesday, 16:30–18:30****OSA1.10 Challenges in High Resolution Short Range NWP at European level including forecaster-developer cooperation**

**Lecture room:** E II

**Convener:** Balázs Szintai

**Co-conveners:** Chiara Marsigli; Emily Gleeson

**16:30–16:45 | Balázs Szintai**

The C-SRNWP Programme of EUMETNET: past, present and future

**16:45–17:00 | Chiara Marsigli**

The SRNWP-EPS Programme: main outcomes and perspectives

**17:00–17:15 | Gerard Murphy**

EUMETNET Observations Programmes

**17:15–17:30 | Sander Tijm**

Communication between forecaster and researcher at KNMI

**17:30–17:45 | Alexis Doerenbecher**

Impact of additional AMDAR data in the AROME-France model during May 2017

**17:45–18:00 | Margarita Choulga**

History and actual status of Global Lake Database

**18:00–18:15 | Olga Toptunova**

Status and progress in Global Lake Database developments

**18:15–18:30 | Anke Finnenkoetter**

Fifty Shades of Green? - Challenges of Meaningful Data Visualisation for the 300m London Model

**END OF ORAL PROGRAMME OSA1.10**

### OSA3.4 Climate change in mountainous areas

**Lecture room:** E238

**Convener:** Sándor Szalai

**Co-conveners:** Idoia Arauzo; Juan Terrádez Mas

**16:30–16:45 | Cristina Vegas Cañas**

An Assessment of Long-Term Temperature Variability in the Sierra de Guadarrama (Spain)

**16:45–17:00 | Roberto Serrano-Notivoli**

A new daily quality-controlled data base for the Pyrenees, 1950-2015

**17:00–17:15 | Francisco Pugnaire**

Warming effects on growth and facilitation in an alpine cushion species

**17:15–17:30 | Adam Kertesz**

Analysis of Soil, Land-use and Climate Characteristics on Selected Forms of Landscape Degradation in Hungary

**17:30–17:45 | Sándor Szalai**

Climate change adaptation activities in the frame of Carpathian Convention

**17:45–18:00: Poster pitches**

**END OF ORAL PROGRAMME OSA3.4**

### UP1.1 Atmospheric dynamics and predictability

**Lecture room:** E I

**Convener:** Sebastian Schemm

**Co-conveners:** Christian M. Grams; Alessandro Dell'Aquila; Christian Franzke; Michael Riemer

**Introduction (Sebastian Schemm, Michael Riemer)**

**16:30–16:45: Poster pitches**

**16:45–17:00 | Clemens Spensberger**

Beyond Warm and Cold: An Objective Classification for Maritime Mid-Latitude Fronts (solicited)

**17:00–17:15 | Matthew Priestley**

How important is serial clustering in seasonal losses from severe windstorms in Europe? (solicited)

**17:15–17:30 | Agusti Jansa**

Permanent and changing factors in extreme Mediterranean precipitation events

**17:30–17:45 | Matti Kämäräinen**

Statistical seasonal forecasts of cyclone numbers in Europe

**17:45–18:00 | Enrico Di Muzio**

Predictability of Medicanes in the ECMWF ensemble forecast system

**18:00–18:15 | Paolo Ghinassi**

Identifying Rossby Wave packets using Local Finite Amplitude Wave Activity

**18:15–18:30 | Koki Iwao**

Climatological structure and behavior of planetary waves and mean flows in the middle atmosphere during the Northern Hemisphere winter

**END OF ORAL PROGRAMME UP1.1****UP1.5 Atmospheric measurements: Experiments, instrument networks and long-term measurements using in-situ and remote sensing techniques**

**Lecture room:** E III

**Convener:** Frank Beyrich

**Co-conveners:** Fred C. Bosveld; Jens Bange; Domenico Cimini

**Airborne Measurements****16:30–16:45 | Burkhard Wrenger**

Application of Wind Measurements by Multicopter RPAS

**16:45–17:00 | Martin Schön**

In-situ airborne wind measurements in complex terrain for comparison with wind simulations

**17:00–17:15 | Kjell zum Berge**

Using airborne measurements to investigate the impact of mast structures on its sonic measurements

**17:15–17:30 | Evert I. F. de Bruijn**

New insights from an experimental hot-air balloon flight for measuring low level winds in the surroundings of Cabauw.

**17:30–17:45 | Sang-Wook Lee**

Dual Thermistor Radiosondes for Compensation of Solar Radiation Effects on the Temperature Measurement in Upper Air

**17:45–18:00: Poster pitches****END OF ORAL PROGRAMME UP1.5****ORAL PROGRAMME OF UP1.6 CONTINUES IN THIS ROOM**

**UP1.6 Progress in measurement technology - new sensors, instruments, and systems (Manufacturers' session)****Lecture room:** E III**Convener:** Fred C. Bosveld**Co-conveners:** Frank Beyrich; Marc Korevaar**18:00–18:15 | Marc Korevaar**

SUV, the new series of Smart UV radiometers

**18:15–18:30 | Ivan Bogoev**

Novel Non-Contact Integrated Air Thermometer Hygrometer Anemometer with Rapid Response

**END OF ORAL PROGRAMME UP1.6****UP3.5 Climate modelling****Lecture room:** E IV**Convener:** A. K. Kaiser-Weiss**Co-conveners:** Barbara Chimani; Frank Beyrich**16:30–16:45 | Jan Stryhal**

Atmospheric circulation patterns and teleconnections over southern South America in CMIP5 GCMs

**16:45–17:00 | Constantin Ardilouze**

Reduction of climate model precipitation bias over continents in summer: method and impact on seasonal prediction skill

**17:00–17:15 | Muhammad Azhar Ehsan**

Interannual variability and predictability assessment of JJA surface air temperature over the Arabian Peninsula in North American Multimodel Ensemble.

**17:15–17:30 | Christopher Castellano**

Severe Thunderstorm Evaluation and Predictability in Climate Models (STEPCLIM)

**17:30–17:45 | Stephen Outten**

Extreme Wind Assessment over Europe in Regional Climate Models

**17:45–18:00 | Jorge Navarro**

Sensitivity of WRF simulated wind to land surface schemes and model-data comparison

**18:00–18:15 | Andrew Ciavarella**

Upgrade of the Met Office HadGEM3-A based attribution system, and a new validation framework for probabilistic event attribution

**18:15–18:30: Poster pitches****END OF ORAL PROGRAMME UP3.5**



## Posters Wednesday, 09:30–10:30

### ES1.2 Creating value through Open Data

**Convener:** Renate Hagedorn

**Co-conveners:** Eduard Rosert, Roope Tervo

**P.1 | Victor Venema**

Taking back control of scientific publishing

**END OF POSTER PROGRAMME ES1.2**

### ES1.5 Creating national and regional climate services in Europe through partnerships

**Convener:** Carlo Buontempo

**Co-convener:** Francisco J. Doblas-Reyes

**Poster pitches:** Tue, 12:30, room E11

**P.6 | Marta Terrado**

The societal benefits of Earth System Modelling for climate services

**P.7 | Ilari Lehtonen**

Experimental 6-week snow cover and soil frost outlooks

**P.8 | Ari Venäläinen**

Climate and meteorological data for forestry

**END OF POSTER PROGRAMME ES1.5**

### ES1.8 Cooperation with weather and climate services in developing and emerging countries

**Convener:** Stefanie Gubler

**Co-conveners:** Noëmi Imfeld, Victor Venema, Gerard van der Schrier

**A close-up on the Climandes project**

**P.9 | Stefanie Gubler**

Developing and providing high quality climate information for the agricultural sector

**P.10 | Stefanie Gubler**

Improving climate services through capacity development

**P.11 | Moritz Flubacher**

Developing user-centric climate services for more resilient agricultural communities in Peru

**END OF POSTER PROGRAMME ES1.8**

**OSA3.5 The Copernicus Climate Change Service****Conveners:** Carlo Buontempo, Dick Dee, Jean-Noel Thepaut**Poster pitches:** Tue, 15:30, room E II**P.48 | Eva Plavcová**

Future projections of heat waves and cold spells and their links to atmospheric circulation in EURO-CORDEX RCMs

**P.49 | Simon Noone**

The Copernicus Climate Change Service Global Land and Marine Observations Database

**P.50 | Chiara Cagnazzo**

A new C3S Global Shipping Service

**P.51 | Else van den Besselaar**

Recent developments of ECA&amp;D and E-OBS

**END OF POSTER PROGRAMME OSA3.5****OSA3.6 Challenges in deriving actionable information from climate model ensembles****Convener:** Andreas Fischer**Co-conveners:** Martin Widmann, Barbara Früh, Ivonne Anders, Jean-Pierre Céron, Fai Fung**Poster pitches:** Tue, 18:15, room E III**P.55 | Heike Huebener**

Co-Producing climate change information for policy and administration in the project ReKliEs-De

**P.56 | Katharina Bülow**

User tailored results of a regional climate model ensemble to plan adaption to the changing climate in Germany

**P.57 | Ole Bøssing Christensen**

The need for flexible selection of climate simulation sub-ensembles for impact assessment in a climate service

**P.58 | Sven Kotlarski**

Spatial artefacts in distributed bias-adjusted climate scenarios

**P.59 | Ana Casanueva**

Climate change projections of heat stress in Europe and impacts on labour productivity

**P.60 | Peter Szabo**

Sources of uncertainties: added value of the evolution of climate model simulations over Central Europe?

**P.61 | Stefan Krähenmann**

Multivariate BIAS adjustment and statistical downscaling of climate variables

**P.62 | Martin Dubrovsky**

Spatial Compound Event Spells in Present and Future Climates - Weather Generator vs. Regional Climate Models

**P.63 | Beatrix Bán**

Assessment of future precipitation change in ALADIN-Climate using various scenarios

**P.64 | Renato Bertalanic**

Projected changes of temperature and temperature related extremes for Slovenia over the 21st century

**P.65 | Anže Medved**

Projected changes of precipitation and extreme precipitation events for Slovenia over the 21st century

**P.66 | Theresa Schellander-Gorgas**

Validation of the high-resolution gridded observation data sets of ÖKS15

**P.67 | Katrin Sedlmeier**

Setting up a prototype seasonal forecast in Peru with a focus on agriculture.

**END OF POSTER PROGRAMME OSA3.6****UP1.2 Atmospheric boundary-layer processes and turbulence**

**Conveners:** Sergej Zilitinkevich, Gert-Jan Steeneveld

**Co-convenor:** Bert Holtslag

**Poster pitches:** Tue, 14:00, room E I

**P.76 | Niing Zhang**

A Micro-scale Model for Urban Wind Field and Air Pollutant Dispersion Simulation

**P.77 | Andrey Skorokhod**

Atmospheric temperature inversions and their influence on atmospheric composition in Moscow

**P.78 | Monika Lisowska**

Assessment of selected methods for estimating wind speed in a foothill landscape (using the example of Ciężkowice, southern Poland)

**P.79 | Dorinel Visoiu**

The study of the inflight data from the sailplane flights to determine a better forecast of the Atmospheric Boundary Layer used for soaring

**P.80 | Judith Boeke**

Convective cloud cover above cities of contrasting morphology

**P.81 | Jung-Hoon Chae**

Determination of mixing-layer, stable-layer, and residual-layer heights with the use of radiosonde observations

**P.82 | Jae-Sik Min**

Determination of mixing-layer, stable-layer, and residual-layer from surface-based remote sensing instruments

**P.83 | Igor Petenko**

Diurnal behaviour of turbulence in the summer PBL at Dome C: Sodar and In-situ Observations

**P.84 | Igor Petenko**

Low-level Jets, Turbulence and Waves in the Tyrrhenian Coastal Zone as Shown by Sodar

**P.85 | Florica Toanca**

Investigation of the Planetary Boundary Layer using Ceilometer and Microwave Radiometer

**P.86 | Monika Hajto**

The spatial patterns of satellite-derived land surface temperature and modelled air temperature in the summer night in Krakow, Poland

**P.87 | Rita Szabolcsné Virág**

Surface layer simulations with WRF single-column model in stable nocturnal conditions

**P.88 | Linbo Wei**

Numerical Simulation of a Persistent Wintertime Inversion over Salt Lake City

**P.89 | Gert-Jan Steeneveld**

Observing the Dutch Urban Climate with the Amsterdam Atmospheric Monitoring Supersite

**P.90 | Maksim Iakunin**

Using Meso-NH atmospheric model to study the lake breeze at a large reservoir

**P.91 | Gilberto Fisch**

The Atmospheric Boundary Layer heights in central Amazonia during the experiment GoAmazon 2014/5.

**P.92 | Ewa Łupikasza**

Air temperature inversions in the boundary layer of the atmosphere in Sosnowiec (Southern Poland)

**END OF POSTER PROGRAMME UP1.2**

## UP1.3 Understanding and modelling of atmospheric hazards and severe weather phenomena

**Convener:** Fulvio Stel

**Co-conveners:** Dario Giaiotti, Mario Marcello Miglietta, Sante Laviola, Jordi Mazon, Victoria Sinclair

**Poster pitches:** Mon, 15:00, room E IV

### P.105 | Seung Yeon Lee

High resolution simulation of a tornadic convective storm in South Korea; a case study of the Goyang tornado on 10 June 2014

### P.106 | Shaowen Shou

Numerical Simulation and Diagnostic Analysis of a Severe Convective Storm Process with Tornado

### P.107 | Farnaz Pourasghar

Verification of the WRF Model for Simulating Heavy Precipitation in North West of Iran

### P.108 | Xin-Min Zeng

A simulation of a high-temperature event using different land surface schemes

### P.109 | Sojung Park

Numerical analyses and simulations of the easterly-related weather phenomena on the east coast of Korea

### P.110 | Onur Hakan Doğan

Ensemble-Based Simulations of Extreme Precipitation Enhanced by Warmer Sea Surface Temperatures over the Black Sea

### P.111 | Yixuan Shou

On the initiation of a warm sector rainstorm near the central urban area of the Pearl River Metropolitan Region

### P.112 | Katarzyna Grabowska

Thunderstorm days during periods with hot and heat weather in Warsaw, Budapest and Naples

### P.113 | Damjan Jelic

New perspectives and applications of lightning jump

### P.114 | Katarzyna Grabowska

Sounding-derived parameters associated with tornadoes in Poland depending on their genesis

### P.115 | Hyeonjin Shin

Characteristics of Typhoon Forecasts from KIM3.0

### P.116 | Len Shaffrey

Understanding current and future wind and wave risks: The WINDSURFER project

### P.117 | Haruka Miura

Prediction possibility of a strong local-wind "Hijikawa-arashi" found in Ozu City, Japan using the horizontal pressure gradient data

### P.118 | Juraj Holec

Assessment of urban heat island changes in Bratislava between years 1998 and 2016 using MUKLIMO model

**P.119 | Simona Andrei**

On the relationship between mineral dust transport and hail properties in deep convective clouds

**P.120 | Róbert Kvak**

Characteristics of deep convection initiation environments in the Western Carpathians using satellite and radar observations

**P.121 | Marek Kašpar**

Effect of extreme precipitation event properties on the forecast skill

**P.122 | Joseba Egaña**

A study of Meteorological conditions during the historical August 1983 Basque Country floods.

**P.123 | Joseba Egaña**

A study of an intense and persistent precipitation event in Basque Country: the 11 January 2018 case.

**P.124 | Octavian Paul Bugeac**

Various aviation hazards, one common tracker: Tropopause Folding for Clear Air Turbulence and Volcanic Ash plume

**P.125 | Santiago Gaztelumendi**

A study of a generalized snow event in Basque Country: the 11 January 2018 case.

**P.126 | Marcelo Zamuriano**

Atmospheric Circulation Influence on Dry Periods over the Central Andes

**END OF POSTER PROGRAMME UP1.3****UP1.4 Towards a better understanding of wind gusts: observations, processes, predictions and verification**

**Convener:** Sabrina Wahl

**Co-conveners:** Martin Göber, Irene Suomi, Peter Sheridan

**P.127 | Alexandra Craciun**

Bias correction of wind speed forecast in the ALARO model

**P.128 | Na He**

Statistical Characteristics of Gust Fronts and Thunderstorm Initiation Associated with Gust Fronts in the Beijing Area

**END OF POSTER PROGRAMME UP1.4**

**UP3.1 Climate change detection, assessment of trends, variability and extremes****Convener:** Albert M.G. Klein Tank**Co-conveners:** Monika Lakatos, Martine Rebetez**Poster pitches:** Tue, 18:00, room E IV**P.129 | Hans Van De Vyver**

Qualitative climatological features of observed intense precipitation extremes over Western and Northern Europe

**P.130 | Lucia Hermida**

Extreme values of precipitation leading to floods in the river Lee catchment: towards climate change attribution

**P.131 | Ondrej Lhotka**

Conditioning stochastic weather generator on atmospheric circulation - preliminary assessment

**P.132 | Timea Jakuschné Kocsis**

Homogeneity test and non-parametric analysis of tendencies in precipitation time series of Keszthely, West-Hungary

**P.133 | Fraser Lott**

Event attribution for all audiences - a web portal concept

**P.134 | Adam Pasik**

Comparison of 48hour rainfall distributions leading up to significant flooding events in the Munster Blackwater (Ireland) catchment.

**P.135 | Monica Santos**

Precipitation dynamics in mainland Portugal: trends and future changes

**P.136 | André Fonseca**

Assessment of future water resources availability under climate change scenarios in Portugal

**P.137 | Joong-Bae Ahn**

Amplification of heat stress in South Korea due to global warming Based on Multi-RCM Ensemble Projections

**P.138 | Tomáš Krauskopf**

Temperature trends in Europe: Comparison of different data sources

**P.139 | Justine Ringard**

Recent trends in climate variability and extremes at local scale: A case of Paris region

**P.140 | Monika Kucerova**

Relationships between trends of daily temperature range, cloudiness, and sunshine in Europe

**P.141 | Jozef Pecho**

Analyses of spatial and temporal distribution of thunderstorms in Slovakia using lightning-detection data

**P.142 | Jiří Mikšovský**

Wind speeds over the Czech Republic: spatiotemporal variability and its large-scale climate drivers

**P.143 | Zhaodi Guo**

Study on teleconnection and memory effects of climate change on vegetation activities in the Qinghai-Tibet Plateau

**P.144 | Simon Scherrer**

Effects of sunshine duration and large-scale flow on the evolution of minimum and maximum temperature in Switzerland since 1884

**P.145 | Anna Valeriánová**

Change in duration of growing season in the period of 1951-2010 in the Czech Republic

**P.146 | Agnieszka Sulikowska**

How does the definition of a temperature extreme affect the results? (the example for Europe)

**P.147 | Lenka Crhová**

Abnormally cold and warm temperature events in spring and autumn seasons during 1961-2018 in the Czech Republic

**P.148 | Jonathan Spinoni**

Where will arid areas enlarge or reduce in a global warming future?

**P.149 | Pavel Fasko**

Trends in heavy precipitation in Slovakia over 1951-2017

**P.150 | Matilde García-Valdecasas Ojeda**

Analyzing the future megadrought risk in the Iberian Peninsula

**P.151 | Mauro Boccolari**

Sea ice extent annual extremes analysis in the Arctic regions

**P.152 | Emilio Romero**

Evaluation of different drought indices using data from future climate simulations in the Iberian Peninsula

**P.153 | Francisco J. Exposito-Gonzalez**

Are changing the marine boundary layer properties over the Atlantic Ocean?

**P.154 | Marius-Victor Birsan**

Wind speed variability over Romania since AD 1961 in connection with atmospheric circulation

**P.155 | Agnieszka Wypych**

Moisture regions in Europe

**P.156 | Marius-Victor Birsan**

Centennial climatic changes in Romania from observational data

**P.157 | Ramón Vilorio**

Analysis of Trends in Surface Air Temperature and Indices of Temperature in Castilla y León

**P.158 | Jevon Keane-Brennan**

Climate change attribution: extreme weather events and their impacts from the perspective of the stakeholder (EUPHEME)

**END OF POSTER PROGRAMME UP3.1**



**UP3.6 Global and regional reanalyses****Conveners:** A. K. Kaiser-Weiss**Co-conveners:** Eric Bazile, Dick Dee**Poster pitches:** Tue, 18:45, room E II**P.165 | Noëmi Imfeld**

Summertime precipitation deficits in the Peruvian highlands for station data, reanalyses and model simulations

**P.166 | Antoine Verrelle**

Performance evaluation of the mescan precipitation reanalysis system in mountainous areas during winter.

**P.167 | Zuzana Rulfova**

Evaluation of precipitation in ERA-Interim reanalysis using observations from the Czech Republic (1982-2016)

**P.168 | Deborah Niermann**

Wind speed and global radiation from the regional reanalysis COSMO-REA6 for applications in the energy sector

**P.169 | Platon Patlakas**

Regional climatology and climate trends in the Arabian Peninsula based on observational and modeling analysis

**P.170 | Vladimir Platonov**

Creation of high-resolution regional climate archive for Russian Arctic: strategy and methodology

**P.171 | Tamás Mona**

Stable oxygen and hydrogen isotopes in precipitation comparison between an isotope-incorporated AGCM simulation and measured data for Europe

**P.172 | Fahad Al Senafi**

Estimates of the net heat fluxes over the Northern Arabian Gulf

**P.173 | Sytse Koopmans**

Data assimilation of urban weather observations in WRF to model the urban climate of Amsterdam

**P.174 | Miao Zhang**

Analysis and correction of the difference between the ascending and descending orbits of the FY-3C microwave imager

**P.175 | Chih-wen Hung**

Impact of the Intraseasonal Oscillation on the Taiwan Climate

**P.176 | Emily Gleeson**

Met Éireann high resolution reanalysis for Ireland

**P.177 | Harald Schyberg**

The Arctic Regional Reanalysis of the Copernicus Climate Change Service

**END OF POSTER PROGRAMME UP3.6**

# EMS ANNUAL MEETING 2019

European Conference for  
Applied Meteorology and Climatology



9 – 13 September 2019  
Technical University of Denmark,  
Lyngby Campus  
Copenhagen, Denmark

photo by Jacob Schjørring & Simon Lau  
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**Thursday, 09:00–09:30****Keynote Lecture on Operational Systems and Applications (OSA)****Kilometric scale Numerical Weather Prediction  
of severe and localized precipitation events**

By Tiziana Paccagnella, Director Hydro Meteo Climate Service of ARPAE

**Thursday, 09:30–10:30****Poster session & refreshment break:  
For details of the poster programme see page 84–90****Thursday, 10:30–12:30****OSA1.6 Meteorological observations from GNSS and Copernicus satellites****Lecture room:** E238**Convener:** Jonathan Jones**Co-convener:** Guergana Guerova**10:30–10:45 | Ana Cláudia Parracho**

Global IWV trends and variability in atmospheric reanalyses and GPS observations

**10:45–11:00 | Daniel Landskron**

Employing data from Numerical Weather Models in Space Geodesy

**11:00–11:15 | Andreas Kriemeyer**

Using low-cost GNSS receivers to densify existing GNSS water-vapor monitoring networks

**11:15–11:30 | Krasimir Stoev**

Use of GNSS tropospheric products to study the foehn in Sofia

**11:30–11:45 | Grzegorz Nykiel**

Derecho in Poland on August 11, 2017 - monitoring of the severe weather event using dense network of GNSS receivers

**11:45–12:00 | Stefan Georgiev**

Study of thunder and hail storms in Bulgaria using GNSS water vapour products

**12:00–12:15: Poster pitches****END OF ORAL PROGRAMME OSA1.6**

**OSA1.7 Forecasting, nowcasting and warning systems****Lecture room:** E II**Conveners:** Timothy Hewson; Yong Wang**Co-conveners:** Bernhard Reichert; Fulvio Stel**10:30–10:45 | Stephane Gagnon**

Towards the transformation of the forecasting system at Meteorological Service of Canada

**10:45–11:00 | Yong Wang**

Seamless probabilistic analysis and forecasting: from minutes to days ahead

**11:00–11:15 | Thorsten Simon**

Predicting Thunderstorm Intensities

**11:15–11:30 | Edouard Goudenhoofd**

Local extreme precipitation warnings for Belgium

**11:30–11:45 | Maxime Taillardat**

Post-processing of hourly rainfall for hydrological and weather warning-oriented applications

**11:45–12:00 | Fatima Pillosu**

Development of "ecPoint-Rainfall", a New Post-Processing System for Probabilistic Forecasting of Rainfall Totals at Point-Scale

**12:00–12:15 | Jussi Ylhäisi**

Use of spatial predictors in clustered model output statistics (MOS) forecasting system

**12:15–12:30 | Todd Hutchinson**

0-6 hour Weather Forecast Guidance at The Weather Company

**ORAL PROGRAMME OSA1.7 CONTINUES ON THURSDAY, 14:00****OSA3.7 MEDiterranean Services Chain based On climate PrEdictions (MEDSCOPE)****Lecture room:** E III**Convener:** Silvio Gualdi**Co-conveners:** Lauriane Batté; Javier Garcia-Serrano**Sources of predictability****10:30–10:45 | Esteban Rodríguez-Guisado**

Empirical model for seasonal forecasting over the Mediterranean

**10:45–11:00 | Marianna Benassi**

ENSO teleconnections over the Euro-Mediterranean region: the role of PDO modulation

**11:00–11:15 | Constantin Ardilouze**

Investigating the impact of soil moisture on European summer climate in seasonal hindcasts

**Downscaling techniques****11:15–11:30 | Silvia Terzago**

Stochastic downscaling of precipitation in complex orography

**11:30–11:45 | Paola Marson**

A process - informed statistical framework for the spatial distribution and intensity of orographic precipitation

**Climate services****11:45–12:00 | Inmaculada Abia**

Web-based toolbox for water decision making in Spanish reservoirs

**12:00–12:15 | Alessandro Dell'Aquila**

Voices from the field: climate prediction requirements in the agricultural sector from the MED-GOLD initiative

**12:15–12:30 | Kristina Fröhlich**

Using seasonal forecasts for a climate service for the power sector in the CLIM2POWER Project

**END OF ORAL PROGRAMME OSA3.7****UP2.3 Cloud-aerosol-radiation interactions**

**Lecture room:** E IV

**Convener:** Emily Gleeson

**Co-conveners:** Laura Rontu; Kristian Pagh Nielsen

**10:30–11:00 | Kristian Pagh Nielsen**

Keynote talk: Current issues in atmospheric radiative processes (solicited)

**11:00–11:15 | Laura Rontu**

Renewal of aerosol climatology for HARMONIE-AROME radiation parametrizations

**11:15–11:30 | Rae Seol Park**

Consistency between the cloud and radiation processes in a numerical forecasting model

**11:30–11:45 | Conor Sweeney**

An Evaluation of Integrated Cloud Condensate in the HARMONIE-AROME NWP Model

**11:45–12:00 | Erik Gregow**

Using satellite-observed clouds to improve the short-term cloud and solar radiation forecasts in the HARMONIE NWP

**12:00–12:15: Poster pitches****END OF ORAL PROGRAMME UP2.3**

### UP3.3 Synoptic climatology

**Lecture room:** E I

**Conveners:** Radan Huth; Rasmus Benestad

**10:30–11:00 | Piero Lionello**

The characteristics of cyclones in the Mediterranean region and their link to precipitation and sea level anomalies (solicited)

**11:00–11:15 | Michael Hofstätter**

Clearing up the mystique of Vb-cyclones (solicited)

**11:15–11:30 | Gregor Skok**

Analysis of mid-latitude cyclonic system precipitation using satellite-derived precipitation measurements

**11:30–11:45 | Jan Stryhal**

Atmospheric circulation patterns and teleconnections over southern South America in reanalyses

**11:45–12:00 | Andreina Belušić**

The relationship between wind and pressure fields over the broader Adriatic Region in CORDEX Climate Change Scenarios (Young Scientist Travel Award)

**12:00–12:15 | Vladimír Piskala**

The atmospheric circulation changes over the Northern Hemisphere during the 20th Century

**12:15–12:30 | Etor E. Lucio-Eceiza**

Multidecadal Surface Seasonal Wind Variability Over Northeastern North America Via Statistical Downscaling: Methodological Sensitivity

**ORAL PROGRAMME UP3.3 CONTINUES ON THURSDAY, 14:00**

## Thursday, 14:00–16:00

### ES3.1 Education and training: at schools, for the public, for stakeholders and professionals

**Lecture room:** E238

**Convener:** Tomas Halenka

**Co-convener:** Heikki Tuomenvirta

**14:00–14:15 | Anna Ghelli**

From face-to-face teaching to blended learning - eLearning at the European Centre for Medium-range Weather Forecast (ECMWF)

**14:15–14:30 | Gabriella Szépszó**

Using the ECMWF OpenIFS model and state-of-the-art training techniques in meteorological education

**14:30–14:45 | Barbara Chimani**

Guideline on climate data for climate impact research and stakeholders

**14:45–15:00 | Antti Mäkelä**

Co-designing and training of easy-to-use www-applications for examining climate projections

**15:00–15:15 | Jordi Mazon**

Climate testimonies: a educational project for recovering the climatic memory

**15:15–15:30 | Andrea Király**

Atmospheric eddies in Science Centers - Connection between secondary school teaching and informal learning

**15:30–15:45 | Antti Mäkelä**

Bringing meteorology to summer Science Camp in Finland

**15:45–16:00 | Mária Pető**

How to build a mini meteorological station for your school? - a project with a citizen science perspective

#### END OF ORAL PROGRAMME ES3.1

### OSA1.7 Forecasting, nowcasting and warning systems

**Lecture room:** E II

**Conveners:** Timothy Hewson; Yong Wang

**Co-conveners:** Bernhard Reichert; Fulvio Stel

**14:00–14:15 | Ken Mylne**

Multi-model Ensemble Forecasting of Exceptional Winter Weather

**14:15–14:30 | Jonas Bhend**

Comparative verification of wind forecasts in complex topography

**14:30–14:45 | Iris Odak Plenkovic**

Deterministic post-processing of the wind speed numerical weather prediction

**14:45–15:00 | Michael Sharpe**

Verification of Relative-Extreme Events

**15:00–15:15 | Lidia Bressan**

Validation of Adriac, the new coupled wave-ocean forecasting system for the Adriatic Sea of Arpae-SIMC

**15:15–15:30 | Philipp Kneringer**

Probabilistic Low-Visibility Nowcasting and the Benefit from Ceilometer Backscatter Profiles

**15:30–15:45 | Daniel Klaus**

Efforts to develop a quantitative definition of cloud base height for aviation

**15:45–16:00: Poster pitches**

**END OF ORAL PROGRAMME OSA1.7**

## **OSA2.3 Agricultural meteorology & phenology**

**Lecture room:** E III

**Convener:** Keith Lambkin

**Co-conveners:** Josef Eitzinger; Sándor Szalai

**14:00–14:15 | Anne Gobin**

Crop phenology using satellite and sensor imagery, weather data and modelling methods

### **Regional Climate Change**

**14:15–14:30 | Josef Eitzinger**

Agroclimatic conditions of past and future in Austria

**14:30–14:45 | João Andrade Santos**

Climate change threats and adaptation in Portuguese viticulture

**14:45–15:00 | Branimir Omazić,**

Agroclimatic characteristics in the future climate over the Croatian Territory

### **Support Tools**

**15:00–15:15 | Pierluigi Calanca**

Toward a Decision Support System for the Management of Grasslands and Pastures under Climate Change

**15:15–15:30 | Ana Firanj Sremac**

Seasonal prediction of agroclimatic indices in Serbia and Austria

**15:30–15:45 | Milos Lompar**

Gap filling in weather data time series - air temperature

**15:45–16:00: Poster pitches**

**END OF ORAL PROGRAMME OSA2.3**



**OSA2.4 Energy meteorology****Lecture room:** E IV**Convener:** Sven-Erik Gryning**Co-conveners:** Ekaterina Batchvarova; Marion Schroedter-Homscheidt; Yves-Marie Saint-Drenan**14:00–14:15 | Ina Neher**

Impact of atmospheric aerosols on solar energy production - Dust outbreak in West Africa

**14:15–14:30 | Pascal Kuhn**

Benchmarking cloud height and cloud motion measurements

**14:30–14:45 | Olivier Atlan**

Tracking fog dissipation processes through trends in satellite observations

**14:45–15:00 | Nicolas Ferlay**

Analysis of the direct and diffuse partitions of solar irradiance measured in the North of France, and comparison with their estimations from satellite.

**15:00–15:15 | Mathilde Marchand**

Assessment of CAMS Radiation Service and HelioClim-3 satellite-derived databases against ground-based measurements in The Netherlands

**15:15–15:30 | Claire Thomas**

Preliminary results of the new method Heliosat-5 Interim for the assessment of the solar radiation at surface from geostationary meteorological satellites

**15:30–15:45 | Manajit Sengupta**

Fast Broadband and Spectral Models for Satellite Applications to Solar Energy

**15:45–16:00 | Mireille Lefèvre**

Exploring the use of variogram in the validation of the CAMS Radiation Service

**ORAL PROGRAMME OSA2.4 CONTINUES ON THURSDAY, 16:30****UP3.3 Synoptic climatology****Lecture room:** E I**Conveners:** Radan Huth; Rasmus Benestad**14:00–14:15 | Hadas Saaroni**

'Environment to Climate' approach in synoptic climatology research: the example of a new synoptic classification based on climatic stress index (solicited)

**14:15–14:30 | Salvador Gil-Guirado**

Synoptic patterns associated to Western Mediterranean basin coastal floods since 1960

**14:30–14:45 | Radan Huth**

AO, BO, CO, ...? How to recognize a real teleconnection pattern from a fake

**END OF ORAL PROGRAMME UP3.3****ORAL PROGRAMME OF UP3.2 CONTINUES IN THIS ROOM**

## **UP3.2 Mid-latitude atmospheric teleconnection dynamics**

**Lecture room:** E I

**Conveners:** Javier Garcia-Serrano

**Co-conveners:** Paolo Davini; Yannick Peings

**15:00–15:15 | Susanna Corti**

Decadal variability of weather regimes and teleconnections in reanalyses and century long hindcasts (solicited)

**15:15–15:30 | Timo Vihma**

Arctic and mid-latitude teleconnections affecting European winter weather

**15:30–15:45 | Paolo Ruggieri**

Polar-Midlatitude teleconnections in a simple climate

**15:45–16:00 | James Overland**

Toward Resolving the Arctic/Midlatitude Weather Linkage Controversy

**ORAL PROGRAMME UP3.2 CONTINUES ON THURSDAY, 16:30**

## Thursday, 16:30–18:30

### OSA1.5 Forecast verification

**Lecture room:** E II

**Convener:** Marion Mittermaier

**Co-conveners:** Manfred Dorninger; Anna Ghelli

**16:30–16:45 | Zied Ben Bouallegue**

On the impact of observation uncertainty on ensemble verification results

**16:45–17:00 | Gabriella Csima**

Catchment-based precipitation and river flow ensemble forecast skill in the presence of observation uncertainty

**17:00–17:15 | Maxime Taillardat**

Verification of extreme events for ensemble forecasts using proper scoring rules and extreme value theory

**17:15–17:30 | Gregor Skok**

Preliminary analysis of binary distance metrics used for verification of precipitation forecasts

**17:30–17:45 | Lovro Kalin**

Warnings verification at the Meteorological and Hydrological Service of Croatia

**17:45–18:00 | Lauriane Batté**

Verification of Arctic sea ice seasonal predictive capacity in initialized re-forecasts with the CNRM-CM6-1 GCM

**18:00–18:15 | Deryn Griffiths**

Flip-Flop Index: Quantifying Revision Stability for Fixed Event Forecasts

**18:15–18:30: Poster introductions (1 min each)**

**END OF ORAL PROGRAMME OSA1.5**

### OSA2.4 Energy meteorology

**Lecture room:** E IV

**Convener:** Sven-Erik Gryning

**Co-conveners:** Ekaterina Batchvarova; Marion Schroedter-Homscheidt; Yves-Marie Saint-Drenan

**16:30–16:45 | David Pozo-Vazquez**

Analysis of the influence of synoptic weather pattern on the solar resources intraday variability in the Southern Iberian Peninsula

**16:45–17:00 | Francisco Javier Rodriguez-Benitez**

Comparing sky-camera vs satellite solar radiation nowcasts

**17:00–17:15 | Anna Dittmann**

High resolution irradiance measurement network for validation and optimization of sky imager based forecasts

**17:15–17:30 | Stefan Pfenninger**

Renewables.Ninja - A model for the global output of weather-dependent renewable energy sources

**17:30–17:45 | Andreas Roepnack**

Improved Weather Forecasts for Energy Operations - the German Research Project Gridcast

**17:45–18:00 | Garrett Good**

Forecasting cloud motion and substation solar power using Taylor-approximated vector fields

**18:00–18:30: Poster pitches**

**ORAL PROGRAMME OSA2.4 CONTINUES ON FRIDAY, 09:00**

**OSA3.2 Combining in-situ and satellite observations for understanding climate change and its impacts**

**Lecture room:** E III

**Convener:** Janette Bessembinder

**Co-conveners:** Darren Ghent; Isabel Trigo; Paul Van Der Linden

**16:30–17:00 | Xuelong Chen**

A seamless global land evapotranspiration with thermal remote sensing energy balance method

**17:00–17:15 | Marloes Gutenstein-Penning de Vries**

A global precipitation observation data set at daily resolution for the evaluation of decadal predictions

**17:15–17:30 | Maik Renner**

Using spatial variations of surface radiation to constrain the global temperature sensitivity

**17:30–18:00 | Nick Rayner**

The EUSTACE project: delivering global, daily information on surface air temperature

**18:00–18:15 | Karen Veal**

Assessing the EUSTACE estimates of air temperature from satellite and their uncertainties: selection of reference data and validation results.

**18:15–18:30: Poster pitches**

**END OF ORAL PROGRAMME OSA3.2**

## UP2.4 The cryosphere and its interactions with meteorology and the climate system

**Lecture room:** E238

**Convener:** Renato R. Colucci

**Co-conveners:** Florence Colleoni; Marc Oliva

### Introduction

**16:30–16:45: Poster pitches**

**16:45–17:00 | Yufeng Dai**

Simulated lake-effect precipitation over the Tibetan Plateau: a case study at Nam Co Lake

**17:00–17:15 | Luis Gimeno**

Concurrent patterns of changes in the moisture transport for precipitation with Arctic sea ice melting

**17:15–17:45 | Diana Francis**

Poleward transport of African dust and its impact on Greenland Ice melt (solicited)

**17:45–18:00 | Arianna Peron**

Meteorological and topographical control in polycyclic aromatic hydrocarbons and heavy metals deposition over alpine glaciers

**18:00–18:15 | Andrea Securo**

Meteorological control on summer mass balance evolution in a stato-dynamic ice cave by means of ground based SfM

**18:15–18:25: discussion**

**END OF ORAL PROGRAMME UP2.4**

## UP3.2 Mid-latitude atmospheric teleconnection dynamics

**Lecture room:** E I

**Convener:** Javier Garcia-Serrano

**Co-conveners:** Paolo Davini; Yannick Peings

### From the Tropics...

**16:30–16:45 | Ileana Bladé**

Shedding light on the intraseasonal variations of the winter ENSO teleconnection in the Northern Hemisphere

**16:45–17:00 | Ivana Herceg Bulic**

Wintertime ENSO teleconnection with spring European climate

**17:00–17:15 | Maialen Martija-Diez**

El Niño influence on summer climate in Western Europe

**17:15–17:30 | Jason Furtado**

The Combined Influence of the MJO and the Stratospheric Polar Vortex on Northern Hemisphere Winter Weather Patterns

**END OF ORAL PROGRAMME UP3.2**

## Posters Thursday, 09:30–10:30

### ES2.1 Communication and media

**Convener:** Tanja Cegnar

**P.1 | Maialen Martija-Diez**

Analysis of hashtags in Twitter accounts of National Weather Services

**END OF POSTER PROGRAMME ES2.1**

### OSA1.1 Numerics and physics-dynamics coupling in weather and climate models

**Convener:** Daniel Reinert

**Co-conveners:** Guy de Morsier

**Poster pitches:** Wed, 12:00, room E238

**P.2 | In-Jin Choi**

Diurnal cycle of precipitation in the Korean Integrated Model (KIM) v3.1

**P.3 | Sanghee Jun**

Classification of KMA GDAPS systematic errors in near surface temperature forecasts

**P.4 | Daniel Reinert**

Towards a consistent treatment of cloudy air in ICON

### OSA1.2 The Weather Research and Forecasting Model (WRF): development, research and applications

**Convener:** Gert-Jan Steeneveld

**Co-conveners:** Hugo Hartmann

**Poster pitches:** Wed, 14:00, room E238

**P.5 | Júlia Göndöcs**

Regional dynamical downscaling with WRF model for the estimation of potential changes in urban heat island intensity in Budapest (Young Scientist Travel Award)

**P.6 | Evgenia Egova**

Modelling the Impact of Urbanization on Local Meteorological Conditions of the Sofia valley, Bulgaria

**P.7 | Nato Kutaladze**

WRF data assimilation application for Caucasus region

**P.8 | Evgeni Vladimirov**

Radar data assimilation impact on short-term forecasts for the Sofia region

**P.9 | Ákos János Varga**

Sensitivity study of the WRF model for regional climate modeling of the Carpathian Basin region

**P.10 | Juan Perez**

Sensitivity study of Boundary layer cloud modelling using WRF

**P.11 | Albano Gonzalez**

Evaluation and projection of temperature and precipitation extremes in Canary Islands

**P.12 | Attila Kovács**

The dependence of ozone concentration on model schemes of WRF-Chem (v3.6)

**P.13 | Alexandra Berényi**

Modeling challenges in the alpine region of the Atacama Desert

**P.14 | Markos Mylonas Dirdiris**

Ensemble forecasting and analysis of "Cleopatra" medicane by using AR-WRF model

**P.15 | Miguel Saavedra**

Impacts of topography and Land Use change on the air surface temperature and precipitation over the Central Andes of Peru

**P.16 | David Meyer**

WRF-CMake and GIS4WRF: Useful Additions to a Modeller's Toolbox?

**P.17 | Juan P. Diaz**

High-resolution climate projections of temperature and precipitation in an orographic complex Archipelago: case of the Canary Islands

**P.18 | Emir Toker**

Performance of WRF In simulating the hail event over Istanbul on 27 July 2017

**P.19 | Ivan Ristic**

Cloud parameterization and cloud prediction scheme in WRF numerical weather model

**P.20 | Tomas Halenka**

Urban canopy effects in weather forecasting with WRF

**END OF POSTER PROGRAMME OSA1.2****OSA1.10 Challenges in High Resolution Short Range NWP at European level including forecaster-developer cooperation**

**Convener:** Balázs Szintai

**Co-conveners:** Chiara Marsigli, Emily Gleeson

**P.51 | Alena Trojáková**

Observation Preprocessing System for RC LACE (OPLACE)

**P.52 | Martin Bellus**

Aladin LAEF

**END OF POSTER PROGRAMME OSA1.10**

**OSA3.3 Spatial climatology****Convener:** Ole Einar Tveito**Co-conveners:** Mojca Dolinar, Christoph Frei**Poster pitches:** Wed, 15:45, room E II**P.105 | Mikko Laapas**

10-year return levels of maximum wind speeds in current and projected future climate of Finland under frozen and unfrozen soil conditions

**P.106 | Alice Crespi**

From monthly climatologies to daily gridded fields over Fennoscandia: a consistent chain of statistical models for precipitation

**P.107 | Simona Höpp**

Developing a gridded global radiation dataset for Germany

**P.108 | Johannes Damster**

Decadal trends of high-intensity precipitation events and relation to atmospheric circulation in central Germany

**P.109 | Hanna Ojrzyńska**

The influence of sequences of air circulation types on air temperature diversity over the Sudety Mountains

**P.110 | Petr Skalak**

Impact of regional station density on different versions of the E-OBS gridded dataset

**P.111 | Ole Einar Tveito**

NGCD - A new operational gridded climate dataset for Fennoscandia

**P.112 | Jörg Trentmann**

EUMETSAT Climate Monitoring SAF: Providing high quality Climate Data Records for GCOS ECV's

**P.113 | Christoph Frei**

Beyond optimal estimation: An ensemble spatial precipitation analysis and its application for area-mean extremes in Switzerland

**P.114 | Lilla Hoffmann**

Comparison of different interpolation methods for Hungarian climatological data

**END OF POSTER PROGRAMME OSA3.3****OSA3.4 Climate change in mountainous areas****Convener:** Sándor Szalai**Co-conveners:** Idoia Arauzo, Juan Terrádez Mas**Poster pitches:** Wed, 17:45, room E238**P.115 | Michael Begert**

Climate monitoring in a high-mountain country - Long-term area-mean temperature series for Switzerland and three major sub-regions ranging back to 1864

**P.116 | Cristina Vegas Cañas**

GuMNet - The Guadarrama Monitoring Network initiative (Spain)



**P.117 | Olicard Ludovic**

Monitoring snowbed vegetation in the Pyrenees: FLORAPYR Interreg project

**P.118 | Balázs Nagy**

Ground temperature monitoring of the Earth's highest mountain desert: thermal regime and ground ice on the Ojos del Salado (6893 m)

**P.119 | Daniel Germain**

Impacts of Climate Change on Mountain Geosystems in Eastern Canada: Multiscale and Multidisciplinary Approach

**P.120 | Noëmi Imfeld**

Trends and variability of climate indices for the agricultural sector in the southern Peruvian highlands

**P.121 | Daniel Germain**

Local and regional rainfall thresholds for landsliding in the Serra do Mar, Brazil: statistical and environmental analyses.

**P.122 | Carolina Garmenedia**

Climate variability and water management in the Cantabrian Range (N Spain)

**P.123 | Maria Antonia Jimenez**

Influence of a valley exit jet on the nocturnal atmospheric boundary-layer at the foothills of the Pyrenees

**P.124 | Daniel Martínez-Villagrasa**

The Cerdanya Cold Pool programme (CCP1x): an integrated study on cold-air pooling and drainage flows in the largest Pyrenean valley

**END OF POSTER PROGRAMME OSA3.4****UP1.1 Atmospheric dynamics and predictability**

**Convener:** Sebastian Schemm

**Co-conveners:** Christian M. Grams, Alessandro Dell'Aquila, Christian Franzke, Michael Riemer

**Poster pitches:** Wed, 16:30, room E I

**P.146 | Yafei Wang**

Impact of ENSO on the thermal condition over the Tibetan Plateau

**P.147 | Lun Li**

Genesis of Southwest Vortices and its relation to Tibetan Plateau Vortices

**P.148 | Meda Daniela Andrei**

Comparison between thermal and dynamic tropopause in severe weather events

**P.149 | Woo-Seop Lee**

The effects of the Arctic warming on the Mid-latitude winter temperature anomalies

**P.151 | Ki-Byung Kim**

Evaluation of Seasonal Simulation Results Using KIM (Korean Integrated Model)

**P.152 | Clemens Spensberger**

How do fronts of differing types arise?

**P.153 | Hiroaki Naoe**

Influences of the Quasi-Biennial Oscillation (QBO) on the Northern Hemisphere winter stratosphere in QBOi experiments

**P.154 | Peter Krizan**

Comparison of longitudinal dependence of geopotential height and temperature from the selected reanalysis.

**P.155 | Ruiqiang Ding**

The impact of South Pacific extratropical forcing on ENSO and comparisons with the North Pacific

**P.156 | Joseph Biello**

Using OIFS to assess the intraseasonal multiscale model of tropical dynamics

**P.157 | Lei Song**

Relative Contributions of Synoptic and Intraseasonal Variations to Strong Cold Events over Eastern China

**END OF POSTER PROGRAMME UP1.1**

### **UP1.5 Atmospheric measurements: Experiments, instrument networks and long-term measurements using in-situ and remote sensing techniques**

**Convener:** Frank Beyrich

**Co-conveners:** Fred C. Bosveld, Jens Bange, Domenico Cimini

**Poster pitches:** Wed, 17:45, room E III

**P.159 | Rui Salgado**

The ALOP Experiment

**P.160 | Gilberto Fisch**

Analysis of the atmospheric flow in a coastal area in northeast Brazil using in situ (windtower) and remote sensing (SODAR) wind data

**P.161 | Ventsislav Danchevski**

Long-term study of urban mixing layer height over Sofia, Bulgaria

**P.162 | Sven Brinckmann**

A method for correcting and determining uncertainties of measurements by the EE-33 humidity sensor for climate reference measurements in Germany

**P.163 | András Zénó Gyöngyösi**

Temperature, humidity and wind measurements using small quadrotor UAS platform

**P.164 | Moein Mohammadi**

Measurements of precipitation size distribution in selected rain events of Warsaw with shadowgraph imaging technique

**P.165 | Zuzana Chladova**

Processing of 2D-videodisdrorometer data for rainfall kinetic energy formulation

**P.166 | Eileen Päschke**

Doppler Lidar Scanning Strategies for Wind and Turbulence Measurements

**P.167 | Bernd Stiller**

An attempt to synthesize tower, sodar, lidar and radar wind measurements into a composite wind profile

**P.168 | Bikhtiyar Ameen**

Validation of Hourly Global Horizontal Irradiance for two Satellite-Derived Database over nine Stations in two Climate Regions in Iraq

**P.169 | Yuko Takeyama**

Long-term validations of annual wind speeds by microwave scatterometers around Japan

**P.170 | Minsoo Kang**

Mapping of road sections vulnerable to ice in Seoul city using a Mobile Road Weather Vehicle

**P.171 | Oleg Postylyakov**

First experiments on high-resolution mapping of tropospheric NO<sub>2</sub> using GSA hyperspectral imager on board Resurs-P satellite

**P.172 | Bruce Baker**

NOAA/OAR Boundary Layer Research using small Unmanned Aircraft Systems (UAS)

**P.173 | Alexander Rautenberg**

The new iteration of the Multi-purpose Airborne Sensor Carrier MASC-3

**P.174 | Mikhail Varentsov**

Quad-copter as a tool for meteorological measurements in atmospheric boundary layer

**END OF POSTER PROGRAMME UP1.5****UP1.6 Progress in measurement technology - new sensors, instruments, and systems (Manufacturers' session)**

**Convener:** Fred C. Bosveld

**Co-conveners:** Frank Beyrich, Marc Korevaar

**P.175 | Ljubov Liman**

Result of estimation of the weather radars dual-polarization products in the hail events cases.

**P.176 | Marc Korevaar**

Independent field test of the solar monitoring system RaZON+

**END OF POSTER PROGRAMME UP1.6****UP3.5 Climate modelling**

**Convener:** A. K. Kaiser-Weiss

**Co-conveners:** Barbara Chimani, Frank Beyrich

**Poster pitches:** Wed, 18:15, room E IV

**P.199 | Shiquan Wan**

A New method for Parameter Estimation in Nonlinear Dynamical equations

**P.200 | Dragan Latinovic**

The onset of the rainy season in Western-Central Brazil simulated by Global Eta Framework model

**P.201 | Patricio Yeste Donaire**

Comparison of the Performance of two Land-Surface Models in Southern Spain

**P.202 | Elham Fakhrazadehshirazi**

Comparison of soil moisture retrievals from the European Space Agency's (ESA) and the regional climate model COSMO-CLM (Case study: Iran)

**P.203 | Ondrej Lhotka**

Spatial differences in meteorological factors associated with hot days in EURO-CORDEX regional climate models

**P.204 | Wenping He**

Simulating evaluation and projection of the climate zones over China by CMIP5 models

**P.205 | Tatiana Matveeva**

The seasonal relationship between intraseasonal tropical variability and ENSO in CMIP5

**P.206 | Iracema Cavalcanti**

Climate variability simulated by the Brazilian Atmospheric Model (BAM-v0)

**P.207 | Sarah Ivusic**

Evaluation of regional climate model ALADIN mean and extreme daily precipitation over Croatia

**P.208 | Ilari Lehtonen**

Tendency towards more extreme precipitation climate in the CMIP5 models

**P.209 | Vladimir Platonov**

Extreme wind speed analysis: a new approach to observational high-resolution modelling data (Young Scientist Travel Award)

**P.210 | Bert Van Schaeybroeck**

Using the urban signature for downscaling the climate in different European cities

**P.211 | Csaba Zsolt Torma**

Bias adjustment of EURO-CORDEX and Med-CORDEX simulations over the Carpathian Region using the high resolution gridded observational database: CARPATCLIM

**P.212 | Frank Kreienkamp**

A Cooperation between the National Weather Services of Germany and Austria based on the Empirical-Statistical Downscaling method EPISODES and its Goals

**P.213 | Christoph Matulla**

Vulnerability of Central Europe's transport infrastructure to climate driven changes in rutting and landslide events

**P.214 | Christoph Matulla**

Establishment of a long-term lake-surface temperature dataset within the European Alps extending back to 1880 and climate change driven scenarios until 2100 - Reconstructions and Projections derived at twelve lakes located within the complex topography of Austria

**P.215 | Sebastian Lehner**

Detection and Attribution of anthropogenic Climate Impacts on Phenological Phases

**END OF POSTER PROGRAMME UP3.5**

**Friday, 09:00–10:30****ES2.2 Communication of science**

**Lecture room:** E I

**Convener:** Gerald Fleming

**Co-conveners:** Nina Kukkurainen

**09:00–09:30 | Peter Stott**

Climate Stories: A creative collaboration between climate scientists, artists and the general public

**09:30–09:45 | Els Aarts**

The use of storytelling for communication about climate scenarios in the Netherlands

**09:45–10:00 | Antti Lipponen**

How one tweet lead me to evening news?

**10:00–10:15 | Tony Wardle**

Sudden Stratospheric Warming and the "Beast from the East"; managing the message.

**10:15–10:30 | Tanja Cegnar**

WMO Commission for Climatology providing policy relevant information

**END OF ORAL PROGRAMME ES2.2**

**OSA1.4 Probabilistic and ensemble forecasting from short to seasonal time scales**

**Lecture room:** E II

**Convener:** Andrea Montani

**Co-conveners:** Jan Barkmeijer; Fernando Prates

**09:00–09:30 | Albert Soret**

Climate services for clean energy: the S2S4E project (solicited)

**09:30–09:45 | Ivan Tsonevsky**

Forecasting severe weather in the medium and extended ranges

**09:45–10:00 | Albert Ossó**

Observational evidence of European summer weather patterns predictable from spring

**10:00–10:15 | Estíbaliz Gascón**

Calibration of ECMWF precipitation forecasts in a dual resolution ensemble

**10:15–10:30: Poster pitches**

**ORAL PROGRAMME OSA1.4 CONTINUES ON FRIDAY, 11:30**

**OSA2.4 Energy meteorology****Lecture room:** E IV**Convener:** Sven-Erik Gryning**Co-conveners:** Ekaterina Batchvarova; Marion Schroedter-Homscheidt; Yves-Marie Saint-Drenan**09:00–09:15 | Andreas Platis**

In-situ evidence of the far-field from offshore wind farms

**09:15–09:30 | Alfredo Peña**

Optimizing scanning lidars for turbulence measurements

**09:30–09:45 | Björn Witha**

The NEWA probabilistic wind atlas: Providing uncertainty information based on a multi-physics ensemble

**09:45–10:00 | Stefano Alessandrini**

Improving the Analog Ensemble Wind and Solar Power Forecasts for Rare Events

**10:00–10:15 | Jennie Molinder**

Uncertainty quantification for wind turbine icing forecasts using deterministic sampling

**10:15–10:30: Poster pitches****ORAL PROGRAMME OSA2.4 CONTINUES ON FRIDAY, 11:30****OSA3.1 Climate monitoring: data rescue, management, quality and homogenization****Lecture room:** E III**Convener:** Manola Brunet-India**Co-conveners:** Victor Venema; Ingeborg Auer; Dan Hollis; John Kennedy**Data Rescue****09:00–09:15 | Marc J. Prohom**

ARTYDOC, a new digital archive of meteorological documentation

**09:15–09:30 | Mary Curley**

Rescuing Ireland's climate and rainfall data

**09:30–09:45 | Peter Siegmund**

The Copernicus C3S and WMO I-DARE climate data rescue portals

**Quality Control & Homogenisation****09:45–10:00 | Alice Baronetti**

Assessment of snow data recorded by two independent meteorological networks in New Brunswick, Canada

**10:00–10:15 | Tamás Szentimrey**

New version MASHv4.01 for joint homogenization of mean and standard deviation

**10:15–10:40: Poster pitches****ORAL PROGRAMME OSA3.1 CONTINUES ON FRIDAY, 11:30**

**UP2.1 Ocean - atmosphere interactions and coastal processes****Lecture room:** E238**Conveners:** Sandro Carniel; Mario Marcello Miglietta**Co-conveners:** Joanna Staneva; Antonio Ricchi; Matjaz Licer**09:00–09:15: Poster pitches****09:15–09:45 | Georgios Varlas**

Implementation of a two-way coupled atmosphere-ocean wave modeling system for assessing air-sea interaction (solicited: Young Scientist Award Lecture)

**09:45–10:00 | Natacha Fery**

Extreme surge level identification and evaluation along the German North Sea coast based on atmospheric components

**10:00–10:15 | Anne Wiese**

Wave-atmospheric modelling, satellite and in-situ observations in the southern North Sea: the impact of two-way coupling on the lower atmosphere

**10:15–10:30 | Jianting Du**

The Impact of Wind-Wave Coupling on the Coastal Wind and Wave Simulations During Storms

**ORAL PROGRAMME UP2.1 CONTINUES ON FRIDAY, 11:30****Friday, 10:30–11:30****Poster session & refreshment break:****For details of the poster programme see page 97–106**

## Friday, 11:30–13:30

### OSA1.4 Probabilistic and ensemble forecasting from short to seasonal time scales

**Lecture room:** E II

**Convener:** Andrea Montani

**Co-conveners:** Jan Barkmeijer; Fernando Prates

**11:30–11:45 | Gavin Evans**

Creating a probabilistic, multi-model post-processing system at the Met Office

**11:45–12:00 | Fiona Rust**

The use of a topographically aware neighbourhood technique to produce probabilistic forecasts

**12:00–12:15 | Lucie Rottner**

Object-oriented processing of deterministic and ensemble weather forecasts: application to rainfall and convection hazard

**12:15–12:30 | Gary Weymouth**

New calibrated daily rainfall probability guidance

**12:30–12:45 | Rossella Ferretti**

Toward an operational NWP-ensemble for a hydrological early warning system over small Appennine's catchments in Central Italy

**12:45–13:00 | Andrea Montani**

Development of user-oriented ensemble products based on COSMO-LEPS: recent upgrades at Arpa-SIMC

**13:00–13:15 | Martin Sprengel**

Characterization of the model error in COSMO-D2-EPS using a flow-dependent partial SDE

**13:15–13:30 | Chung-Chieh Wang**

Application of Time-Lagged Cloud-Resolving Ensemble Quantitative Precipitation Forecasts in Taiwan for Typhoon Morakot (2009)

#### END OF ORAL PROGRAMME OSA1.4

### OSA2.1 Reducing weather risks to transport: air, sea and land

**Lecture room:** E I

**Convener:** Fraser Ralston

**Co-convener:** Christine Le Bot

**11:30–11:45 | Alessandra Lucia Zollo**

A weather awareness system supporting detection and forecasting of aviation hazards

**11:45–12:00 | Noemie Le Carrer**

Robust optimisation of cargo loading and ship scheduling in tidal areas

**12:00–12:15 | Peter Kardos**

Applying artificial neural networks in visibility and cloud forecast at Budapest airport



**12:15–12:30 | Karoliina Hämäläinen**

Verification of atmospheric icing model against new type of ground based remote-sensing observations.

**12:30–12:45 | Janne Ylläsjärvi**

Special meteorological forecasting services for Helsinki Airport in high-impact snowfall events

**12:45–13:15: Panel discussion with audience participation involving topics concerned with road/airport transport winter hazards****END OF ORAL PROGRAMME OSA2.1****OSA2.4 Energy meteorology**

**Lecture room:** E IV

**Convener:** Sven-Erik Gryning

**Co-conveners:** Ekaterina Batchvarova; Marion Schroedter-Homscheidt; Yves-Marie Saint-Drenan

**11:30–11:45 | Lukas Strauss**

Can we predict icing of structures and wind turbines reliably using high-resolution ensemble forecasts?

**11:45–12:00 | Dominik Kortschak**

The value of intraday forecasts in Austria

**12:00–12:15 | Sven-Erik Gryning**

Investigation on the ability of a numerical model to simulate the changes in wind speed and direction ahead of time in a marine environment

**12:15–12:30 | Christopher Frank**

Wind energy: Can we use regional reanalyses for yield reports?

**12:30–12:45 | Joseph C. Y. Lee**

Evaluating the Methodologies of Assessing Long-Term Variability of Wind Speed

**12:45–13:00 | Paula Gonzalez**

Persistent low wind events over the UK and their drivers

**END OF ORAL PROGRAMME OSA2.4****OSA3.1 Climate monitoring: data rescue, management, quality and homogenization**

**Lecture room:** E III

**Convener:** Manola Brunet-India

**Co-conveners:** Victor Venema; Ingeborg Auer; Dan Hollis; John Kennedy

**11:30–11:45 | José A. Guijarro**

Homogenization of daily Essential Climatic Variables with Climatol 3.1 within the INDECIS project

**11:45–12:00 | Antonello Squintu**

Homogenization of the ECA&D temperature dataset

**12:00–12:15 | Nuria Perez**

First Steps towards a Benchmarking Experiment in Quality Control and Homogenization of Observed Data

**12:15–12:30 | Beatrix Izsak**

Efficient use of the results of the previous homogenization in the regular updates

**12:30–12:45 | Lisa Hannak**

Effects of changing the observing instrument for daily sunshine duration on the homogeneity of time series

**12:45–13:00 | Cristina Rojas-Labanda**

Wind Surface European Database (WiSED): Compilation, Quality Control and previous analyses.

**Climate Variability****13:00–13:15 | Veronica Manara**

Variability and trends of the frequency of "very good" visibility days (higher than 10km) in Italy (1951-2017)

**END OF ORAL PROGRAMME OSA3.1****UP2.1 Ocean - atmosphere interactions and coastal processes**

**Lecture room:** E238

**Conveners:** Sandro Carniel; Mario Marcello Miglietta

**Co-conveners:** Joanna Staneva; Antonio Ricchi; Matjaz Licer

**11:30–11:45 | Fei Zheng**

Applications of Data Assimilation on the Seasonal-Decadal Prediction of Coupled Models in IAP

**11:45–12:00 | Davide Bonaldo**

Disentangling atmosphere-ocean feedbacks during a strong wind jet event

**12:00–12:15 | Irene Suomi**

Boundary layer structure over an Arctic fjord based on research aircraft measurements

**12:15–12:30 | Simon Josey**

Atlantic Cold Anomalies: Causes and Consequences for European Climate

**12:30–12:45 | Angel Martinez-Ferrer**

Longshore currents and rip currents: Modelization towards an operative forecast.

**12:45–13:00 | Angela Pomaro**

Local measurements and model wave data: complementary elements for large-scale climate assessment

**13:00–13:15 | Juan Manuel Castillo Sanchez**

Ocean-wave coupling in the UKC4 regional coupled prediction system

**13:15–13:30 | Francesco Ferrari**

Aerosol-related applications of a coupled weather and chemical transport modelling system: the case study of Vernazza, Cinque Terre, 25 October 2011

**END OF ORAL PROGRAMME UP2.1**

## Posters Friday, 10:30–11:30

### OSA1.4 Probabilistic and ensemble forecasting from short to seasonal time scales

**Convener:** Andrea Montani

**Co-conveners:** Jan Barkmeijer, Fernando Prates

**Poster pitches:** Fri, 10:15, room E II

**P.21 | Hae-Jeong Kim**

On the possibility of the practical use of APCC's BSISO information

**P.22 | Giacomo Pincini**

Performance of different ensemble systems for cases of high-impact weather over Italy

**P.23 | Dóra Cséke**

Predictability of precipitation type based on ECMWF ensemble forecasts

**P.24 | Laura Baker**

An intercomparison of skill and over/underconfidence of the wintertime North Atlantic Oscillation in multi-model seasonal forecasts

**P.25 | Laura Baker**

Improved seasonal prediction of UK regional precipitation using atmospheric circulation

**P.26 | Samuel Monhart**

Bias correction and verification of a sub-seasonal prediction system against ground observations in Europe and its potential for hydropower optimization

**P.27 | Maxime Taillardat**

Operational machine learning post-processed ensemble forecast system in France

**P.28 | Joni-Pekka Pietikäinen**

Evaluating the extended-range ice cover forecast over the Northern Baltic Sea

**P.29 | Tobias Heppelmann**

The representation of model error in the global ensemble prediction system ICON-EPS

### END OF POSTER PROGRAMME OSA1.4

### OSA1.5 Forecast verification

**Convener:** Marion Mittermaier

**Co-conveners:** Manfred Dorninger, Anna Ghelli

**Poster pitches:** Thu, 18:15, room E II

**P.30 | Michael Sharpe**

TAF assessment using a score that penalises forecast uncertainty

**P.31 | Jadran Jurković**

CLIPER as a Reference Forecast in Verifying Visibility and Low Ceiling in TAF and TREND

**P.32 | Deryn Griffiths**

Assessing Extreme Forecasts Using Relative Economic Value Curves - A Technique for Single-Value Forecasts

**P.33 | Jose Roberto Motta Garcia**

A user-oriented web-based tool for comparing multi-model weather forecasting evaluations

**P.34 | Sang-Hoon Yeon**

A qualitative evaluation methodology of forecast skill of KIM (Korean Integrated Model) by a weather forecaster

**P.35 | Marion Mittermaier**

Understanding the characteristics of the Fractions Skill Score: The limiting case and implications for aggregation

**P.36 | Simon Kloiber**

Quantifying observation uncertainty on verification measures - A MesoVICT example

**P.37 | Sandra Rivadeneira**

Verification of the numeric forecast of precipitation in Peru using a High Resolution Mesoscale Model

**END OF POSTER PROGRAMME OSA1.5****OSA1.6 Meteorological observations from GNSS and Copernicus satellites**

**Convener:** Jonathan Jones

**Co-convener:** Guergana Guerova

**Poster pitches:** Thu, 12:00, room E238

**P.38 | Tsvetelina Dimitrova**

Bulgarian Integrated NowCasting tool (BINCA)

**P.39 | Guergana Guerova**

GNSS water vapour products for the BeRTISS service in Bulgaria

**P.40 | Jonathan Jones**

Operational GNSS systems and products at the UK Met Office

**P.41 | Jonathan Jones**

E-GVAP, status and future

**END OF POSTER PROGRAMME OSA1.6****OSA1.7 Forecasting, nowcasting and warning systems**

**Conveners:** Timothy Hewson, Yong Wang

**Co-conveners:** Bernhard Reichert, Fulvio Stel

**Poster pitches:** Thu, 15:45, room E II

**P.42 | Bernhard Reichert**

Improving Decision Support Systems for the Operational Weather and Warning Services at DWD

**P.43 | Ulrich Blahak**

Development of a new seamless integrated forecasting system (SINFONY) at DWD

**P.44 | Roohollah Azad**

Rapid Refresh Nowcasting with the Harmonie-Arome model

**P.45 | Vinko Šoljan**

Is Convection Nowcast good enough to mitigate problems in Air Traffic Management?

**P.46 | Ioannis Tegoulas**

Storm motion prediction: Incorporating new methods in everyday forecasts

**P.47 | Fatima Pillosu**

Operational Use of "ecPoint-Rainfall", a New Probabilistic Product for Rainfall Forecasts at Point-Scale

**P.48 | Andre Simon**

Probabilistic forecasting of freezing rain and wet snow in Hungary

**P.49 | Vicent Altava-Ortiz**

Drought characteristics in Catalonia: a spatio-temporal analysis

**P.50 | Petr Stepanek**

Drought Prediction System for Central Europe and Its Validation

**END OF POSTER PROGRAMME OSA1.7****OSA2.3 Agricultural meteorology & phenology**

**Convener:** Keith Lambkin

**Co-conveners:** Josef Eitzinger, Sándor Szalai

**Poster pitches:** Thu, 15:45, room E III

**P.55 | Martin Mozny**

The impact of extreme weather events on hops in Czechia

**P.56 | Fabiani Bender**

Crop management strategies to mitigate climate change impacts on maize yield in Brazil

**P.57 | Jong Ahn Chun**

Prediction of Full Blooming Dates of Major Peach Cultivars (*Prunus persica*) using the DVR and Chill Day Models

**P.58 | Josef Eitzinger**

Impact of climate scenario uncertainties on agrometeorological models

**P.59 | Yukitaka Ohashi**

Numerical simulations on winter cold damage to citrus fruits by using the WRF model.

**P.60 | Keith Lambkin**

Airborne Animal Disease Atmospheric Dispersion System

**P.61 | Liudmila Krivenok**

Short-term eddy covariance measurements of greenhouse gas fluxes: the experience of calculation with the fetch parameter application and comparison with chamber method

**END OF POSTER PROGRAMME OSA2.3**

## OSA2.4 Energy meteorology

**Convener:** Sven-Erik Gryning

**Co-conveners:** Ekaterina Batchvarova, Marion Schroedter-Homscheidt, Yves-Marie Saint-Drenan

**Poster pitches:** Thu, 18:00 and Fri, 10:15, room E IV

### P.62 | Lan Shi

Interpretation and Application of Numerical Prediction Model in Wind Power Prediction Based on the Application Control of turbines' wind speed for the wind farm

### P.63 | Diogo Ramos

Wind profile at tropical coastal boundary layer based on wind tower and SODAR measurements

### P.64 | Peter C. Kalverla

Characterization of anomalous wind events in in-situ observations and in the ERA5 reanalysis over the North Sea.

### P.65 | Eric Tromeur

Coupled Mesoscale-Microscale Models for Wind Energy Assessment over Complex Indian sites

### P.66 | Paula Gonzalez

Exploring the added value of sub-6-hourly wind data from GCMs for energy applications

### P.67 | Mamadou Dione

Short term forecasting of wind turbine production with Machine Learning methods: direct approach and integrated approach.

### P.68 | Paula Gonzalez

Influence of changes in large-scale circulation on surface wind projections for wind power over Europe

### P.69 | Masamichi Ohba

Climate change impact on the wind energy resources in Japan corresponding with weather pattern changes

### P.70 | Karoliina Hämäläinen

Statistical calibration of weather parameters essential to renewable energy production.

### P.71 | Astrid Ziemann

Low-level jets and their possible impact on wind climatology at hub heights of wind turbines

### P.72 | Simon Kloiber

Estimating the economic value of icing forecasts on wind turbines

### P.73 | Juan Pedro Montavez

Variability of combined wind-plus-solar power production in Europe under climate change conditions.

### P.74 | Myria Tarayana Hutagalung

Correlations in space and time of renewable generation and their impact on the power system

### P.75 | Francisco J. Alvarez-García

Selection of wind farm placements oriented towards intermittency-mitigation: an assessment of two different methodologies in the Iberian Peninsula.

**P.76 | Jörg Trentmann**

Climatological variability of solar and wind energy in Germany based on high resolution climate data records

**P.77 | Clara Arbizu-Barrena**

Exploring alternatives for the improvement of the CIADCast short-term solar radiation hybrid forecasting method

**P.78 | Youngmi Lee**

Real time solar irradiance forecasting using NWP and machine learning for renewable energy management

**P.79 | Antonio Gimenez-Garrote**

Proposal of roadmaps for gradual integration of new solar PV and wind capacity in the Spanish power system based on Mean-Variance Portfolio optimization techniques

**P.80 | Diallo Mouhamet**

Comparing WRF, AROME IFS AND GFS Irradiance Forecasts in French Guiana

**P.81 | Ronny Petrik**

Sensitivity of incoming radiation statistics in regional hindcasts

**P.82 | Germano Longhi Beck**

Installation and Validation of multiple Skycameras for Solar Forecasting

**P.83 | Oleksandra Voronych**

Solar PV Nowcasting based on multiple Skycamera Observations

**P.84 | Claire Thomas**

Comparison and quality assessment of five different methods for the estimation of PAR from satellite imagery - Application to the monitoring of raspberry harvest to maximize farmers' profit in Southern UK

**P.85 | Sofia Simoes**

CLIM2POWER Project - Translating Climate Data into Energy Supply Adaptation Guidance

**P.86 | Ivan R. Gelpi**

Numerical and statistical short term weather forecast in the context of SPADI project.

**P.87 | Francisco Javier Rodriguez-Benitez**

Evaluation of a short-term solar radiation ensemble forecasting system in the Iberian Peninsula

**P.88 | Santiago Gaztelumendi**

The SPADI project

**P.89 | Darlene Field**

Determining the Effects of Weather and Particulate Matter on the Performance of PV Technologies in Barbados

**P.90 | Ioannis Vamvakas**

Solar resource for combined CSP-PV plants across the MENA region

**END OF POSTER PROGRAMME OSA2.4**

## **OSA3.1 Climate monitoring: data rescue, management, quality and homogenization**

**Convener:** Manola Brunet-India

**Co-conveners:** Victor Venema, Ingeborg Auer, Dan Hollis, John Kennedy

**Poster pitches:** Fri, 13:00, room E III

**P.91 | Veronica Manara**

Surface solar radiation variability and trends over the Piedmont region (northwest Italy) for the 1990-2016 period

**P.92 | Ricard Ripoll**

Wooden and plastic screen intercomparison for temperature measurements in a Mediterranean climate

**P.93 | Annarosa Quarello**

Homogenization of GNSS IWV time series

**P.94 | Petr Stepanek**

New data quality control tools for operational use in ProClimDB software

**P.95 | Hela Irha**

Comparison of ceilometer and visually observed cloud base height data

**P.96 | Victor Venema**

The error worlds of the global benchmarks for the International Surface Temperature Initiative (ISTI)

**P.97 | Cesar Azorin-Molina**

A new approach to homogenize daily peak wind gusts: an application to the Australian series

**P.98 | Jaume Ramon**

Building a quality controlled and homogenized database of wind observations from existing tall towers

**P.99 | Barbara Chimani**

Current status of Data Rescue Activities

**P.100 | Alba Gilabert Gallart**

Parallel measurements at the Ebro Observatory to assess the differences between the automatic weather station and manual air temperature measurements

**END OF POSTER PROGRAMME OSA3.1**



## OSA3.2 Combining in-situ and satellite observations for understanding climate change and its impacts

**Convener:** Janette Bessembinder

**Co-conveners:** Darren Ghent, Isabel Trigo, Paul Van Der Linden

**Poster pitches:** Thu, 18:15, room E III

### P.101 | Vicente García-Santos

On the surface energy balance closure in heterogeneous terrain using remote sensing data

### P.102 | Hans Ressler

Detection of phenological occurrence dates from space with Sentinel-2 and MODIS

### P.103 | Camille Le Coz

Precipitation morphing: TAHMO-adjusted satellite products over the Volta Basin region

### P.104 | Stefan Bronnimann

Heatwaves and Cold Spells in the SATSTACE Daily Global Temperature Data Set

**END OF POSTER PROGRAMME OSA3.2**

## OSA3.7 MEDiterranean Services Chain based On climate PrEdictions (MEDSCOPE)

**Convener:** Silvio Gualdi

**Co-conveners:** Lauriane Batté, Javier Garcia-Serrano

### P.125 | Paolo Ruggieri

The sensitivity of Mediterranean winter to Siberian snow cover variability

### P.126 | Carmen Alvarez-Castro

Dynamical proxies as a tool for Mediterranean Seasonal Forecast

### P.127 | Lauriane Batté

The Météo-France contribution to the ERA4CS-MEDSCOPE project: plans and preliminary results

### P.128 | Federico Fabiano

Selection of a sub-ensemble of ensemble members for climate predictions according to user-needs

### P.129 | Eroteida Sánchez-García

Improved seasonal prediction of winter precipitation over Iberia through optimal estimation of NAO pattern and ensemble weighting

### P.130 | Silvia Terzago

SNOWPACK model simulations in complex orography: sensitivity to the accuracy of the meteorological forcing

### P.131 | Ramona Magno

Seasonal forecasts for an effective drought climate service

**END OF POSTER PROGRAMME OSA3.7**

## UP2.1 Ocean - atmosphere interactions and coastal processes

**Conveners:** Sandro Carniel, Mario Marcello Miglietta  
**Co-conveners:** Joanna Staneva, Antonio Ricchi, Matjaz Licer  
**Poster pitches:** Fri, 09:00, room E238

### P.132 | Matjaz Licer

Combined Numerical and Machine Learning Approach to Ensemble Storm Surge modeling in the Northern Adriatic

### P.133 | Joanna Staneva

A North Sea-Baltic Sea regional models: coupling of ocean and atmosphere a through a dynamic wave interface

### P.134 | Antonio Ricchi

Dynamics and wind-wave interaction of a Bora wind jet: a very high resolution simulation using WRF model

### P.135 | Victoria Rivas

Assessment of spatio-temporal distribution of coastal damages during the winter season 2013-14 in northern Spain

### P.136 | Antoni Grau

Description of the sea-land temperature difference during sea-breeze events in the island of Mallorca

### P.137 | Emily Gleeson

Teleconnections and Extreme Ocean States in the Northeast Atlantic Ocean

### P.138 | Toru Terao

Micro scale wind pattern over the Hinase archipelago under the Typhoon attack and its impact on surface tidal current

**END OF POSTER PROGRAMME UP2.1**

## UP2.3 Cloud-aerosol-radiation interactions

**Convener:** Emily Gleeson  
**Co-conveners:** Laura Rontu, Kristian Pagh Nielsen  
**Poster pitches:** Thu, 12:15, room E IV

### P.139 | Emily Gleeson

HARMONIE-AROME Radiation Experiments and Developments

**END OF POSTER PROGRAMME UP2.3**

## UP2.4 The cryosphere and its interactions with meteorology and the climate system

**Convener:** Renato R. Colucci

**Co-conveners:** Florence Colleoni, Marc Oliva

**Poster pitches:** Thu, 16:60, room E238

### P.141 | Raquel Nieto

Anomalies of evaporation over the oceanic moisture sources of Atmospheric Rivers reaching the Arctic

### P.142 | Joong-Bae Ahn

Impact of snow cover in western and central China on the Northern Hemisphere Wintertime Blocking Frequency

### P.143 | Ruonan Zhang

Relationship between the interannual variations of Arctic sea ice and summer Eurasian teleconnection and associated influence on summer precipitation over China

### P.144 | Marc Oliva

Geomorphological processes in the Lenin peak (Pamir range, Kyrgyzstan)

### P.145 | Renato R. Colucci

Resilience of small glaciers to global warming due to increased winter precipitation in the southeastern Alps

## END OF POSTER PROGRAMME UP2.4

## UP3.2 Mid-latitude atmospheric teleconnection dynamics

**Convener:** Javier Garcia-Serrano

**Co-conveners:** Paolo Davini, Yannick Peings

### P.177 | Lucie Pokorna

An annual cycle of the circulation variability modes dominating over the Euro-atlantic sector

### P.178 | Giulio Betti

The impact of Sudden Stratospheric Warming and Stratospheric Cooling events on atmospheric circulation during high/low solar activity

### P.179 | Victor Mayta

Convectively coupled Kelvin waves over tropical South America region during austral autumn

### P.180 | Francisco J. Alvarez-García

Modulation of the NAO influence on winter European rainfall by North American and Pacific factors

### P.181 | Daniel Topal

Characteristics of the Arctic Oscillation and related teleconnection phenomena under climate change in the snapshot attractor picture

### P.182 | Shuanglin Li

Simulated AMO's Influence on Eurasian nonuniform warming since mid-1990s

### P.183 | Helber Gomes

Life cycle assessment of easterly wave disturbances on tropical south Atlantic and their impact over northeast Brazil

**P.184 | Li Tao**

Causes of Interannual and Interdecadal Variations of the Summertime Pacific-Japan-Like Pattern over East Asia

**P.185 | Froila M. Palmeiro**

Sudden stratospheric warming variability in EC-EARTH

**P.186 | Zhiwei Wu**

Can the Tibetan Plateau Snow Cover influence the interannual variations of Eurasian Heat Wave Frequency?

**END OF POSTER PROGRAMME UP3.2****UP3.3 Synoptic climatology**

**Conveners:** Radan Huth, Rasmus Benestad

**P.187 | Li Tao**

Improvement of Genesis Potential Index for Western North Pacific Tropical Cyclones

**P.188 | Wan-Ru Huang**

Impact of Boreal Summer Intraseasonal Oscillations on Warm Season Diurnal Convection Activity in Taiwan

**P.189 | Tianguai Xiao**

Study on the relationship between the EAP Teleconnection Pattern and AO/NAO in the northern hemisphere in summer and its influence on the persistent precipitation in China

**P.190 | Masamichi Ohba**

Differences in climate change impacts between weather patterns and its impact on spatially heterogeneous changes in future extreme rainfall

**P.191 | Ewa Bednorz**

Atmospheric forcing of coastal upwelling in the southern Baltic Sea basin

**P.192 | Annika Brieber**

Statistical analysis of very high-resolution precipitation data and relation to atmospheric circulation in central Germany

**P.193 | Nuria Perez**

Atmospheric Conditions at the onset of Extremely Large Wildfires in Mediterranean Europe

**P.194 | Iliana Polychroni**

Combined extreme climate indices related to atmospheric circulation over the Mediterranean region.

**P.195 | Martí Bonshoms**

Automatic upper level circulation type classification applied to precipitation in the Outer Tropical Andes of Perú

**P.196 | Jan Stryhal**

How do self-organizing maps relate to modes of circulation?

**P.197 | Martin Hynčica**

Intercomparison of circulation modes among five reanalyses

**P.198 | Lucian Sfică**

Recent cloud cover changes driven by atmospheric circulation in Europe

## Author &amp; convener index

- Aarts, Els 91  
 Acquotta, Fiorella 31  
 Ahn, Joong-Bae 69, 105  
 Al Senafi, Fahad 71  
 Alessandrini, Stefano 92  
 Altava, Vicent 99  
 Alvarez-Castro, Carmen 103  
 Alvarez-García, Francisco J. 50, 100, 105  
 Ameen, Bikhtiyar 89  
 Anders, Ivonne 43, 64  
 Andrei, Meda Daniela 87  
 Andrei, Simona 68  
 Antonescu, Bogdan 28  
 Arbizu-Barrera, Clara 101  
 Ardilouze, Constantin 62, 74  
 Atlan, Olivier 79  
 Azad, Roohollah 98  
 Azorin-Molina, Cesar 102  
 Baár, Péter 47  
 Baker, Bruce 54, 89  
 Baker, Laura 97  
 Bán, Beatrix 64  
 Bange, Jens 54, 58, 61, 88  
 Bao, Xinghua 45  
 Barantiev, Damyán 41  
 Baronetti, Alice 92  
 Barriopedro, David 29  
 Barta, Veronika 28  
 Bartok, Blanka 36, 41  
 Basarin, Biljana 48  
 Bassett, Richard 55  
 Batchvarova, Ekaterina 79, 81, 92, 95, 100  
 Batté, Lauriane 74, 81, 103  
 Bazile, Eric 45, 71  
 Bednorz, Ewa 106  
 Begert, Michael 86  
 Bellus, Martin 85  
 Belorid, Miloslav 30  
 Benassi, Marianna 74  
 Bender, Fabiani 99  
 Benestad, Rasmus 40, 41, 76, 79, 106  
 Ben-Nun, Omer 40  
 Berényi, Alexandra 85  
 Bernard, Jérémy 54  
 Bertalanic, Renato 43, 65  
 Bessembinder, Janette 36, 43, 82, 103  
 Besson, Francois 56  
 Betti, Giulio 105  
 Beyrich, Frank 54, 58, 61, 62, 88, 89  
 Bhend, Jonas 77  
 Biello, Joseph 88  
 Bihar, Zita 32  
 Birsan, Marius-Victor 70  
 Bladé, Ileana 83  
 Blahak, Ulrich 98  
 Bleta, Anastasia 47  
 Boccolari, Mauro 70  
 Boekee, Judith 65  
 Bogoev, Ivan 62  
 Bojovic, Dragana 40  
 Bonaldo, Davide 96  
 Bonshoms, Martí 106  
 Bosveld, Fred C. 54, 58, 61, 62, 88, 89  
 Bouallegue, Zied Ben 81  
 Brazdil, Rudolf 29, 33, 50  
 Bressan, Lidia 78  
 Briche, Elodie 30  
 Briber, Annika 106  
 Brinckmann, Sven 88  
 Brunet, Manola 92, 95, 102  
 Büchau, Yann 58  
 Bülow, Katharina 64  
 Buontempo, Carlo 36, 40, 63, 64  
 Cagnazzo, Chiara 64  
 Calanca, Pierluigi 78  
 Campos, José Leandro 50  
 Cannata, Massimiliano 42  
 Carella, Giulia 58  
 Carniel, Sandro 93, 96, 104  
 Casanueva, Ana 64  
 Castellano, Christopher 62  
 Castillo Sanchez, Juan Manuel 96  
 Cavalcanti, Iracema 90  
 Ceglar, Andrej 27, 32, 48  
 Cegnar, Tanja 30, 47, 52, 55, 84, 91  
 Chae, Jung-Hoon 65  
 Chen, Cheng-Ta 44  
 Chen, Wei 53  
 Chen, Xuelong 82  
 Chen, Yung-Chang 48  
 Cheremisin, Alexander 37  
 Cheval, Sorin 26, 33  
 Chimani, Barbara 62, 77, 89, 102  
 Chladova, Zuzana 88  
 Choi, In-Jin 84  
 Choi, Sang Hui 47  
 Choulga, Margarita 59  
 Christensen, Ole Bøssing 64  
 Chun, Jong Ahn 99  
 Ciardini, Virginia 54  
 Ciavarella, Andrew 62  
 Cohen, Pninit 26  
 Colucci, Renato R. 83, 105  
 Corti, Susanna 80  
 Craciun, Alexandra 68  
 Crespi, Alice 56, 86  
 Crhová, Lenka 70  
 Croitoru, Adina-Eliza 27, 32, 48, 49  
 Csapó, Péter 48  
 Csekits, Christian 39  
 Csima, Gabriella 81  
 Curley, Mary 92  
 Cuxart, Joan 27, 32, 40, 48  
 Cvitan, Lidija 49  
 D'Errico, Miriam 38  
 Dai, Yufeng 83  
 Dalelane, Clementine 43  
 Damster, Johannes 86  
 Danchovski, Ventsislav 88  
 de Bruijn, Evert I. F. 61  
 de Wit, Rosmarie 31, 36  
 Dee, Dick 40, 45, 64, 71  
 Delaney, Conor 35  
 Dell'Aquila, Alessandro 36, 60, 75, 87  
 Di Muzio, Enrico 60  
 Di Napoli, Claudia 26  
 Dian, Csenge 39  
 Diaz, Juan P. 85  
 Dimitrova, Tsvetelina 98  
 Ding, Ruiqiang 88  
 Dione, Mamadou 100  
 Dittmann, Anna 81  
 Djurdjevic, Vladimir 27, 32, 48  
 Doblaz-Reyes, Francisco J. 36, 63  
 Dobrovolny, Petr 29  
 Doerenbecher, Alexis 59  
 Doğan, Onur Hakan 67  
 Dolak, Lukas 50  
 Dolinar, Mojca 56, 86  
 Dorninger, Manfred 81, 97  
 Droste, Arjan 58  
 Du, Jianting 93  
 Duan, Jianping 33  
 Dyrddal, Anita Verpe 30  
 Egaña, Joseba 68

- Egova, Evgenia 84  
 Ehsan, Muhammad  
   Azhar 62  
 Eitzinger, Josef 78, 99  
 Elguernaoui, Omar 44  
 Evans, Gavin 94  
 Exposito-Gonzalez,  
 Francisco J. 70  
 Ezber, Yasemin 55  
 Fakharizadehshirazi,  
 Elham 90  
 Fabiano, Federico 103  
 Fasko, Pavel 70  
 Ferlay, Nicolas 79  
 Ferrari, Francesco 96  
 Ferretti, Rossella 94  
 Fery, Natacha 93  
 Field, Darlene 101  
 Fierli, Federico 40  
 Finnenkoetter, Anke 59  
 Firanj Sremac, Ana 78  
 Fisch, Gilberto 66, 88  
 Fischer, Andreas 36, 43,  
   64  
 Flapp, Federica 52  
 Fleischhut, Nadine 31  
 Fleming, Gerald 39, 91  
 Fonseca, André 69  
 Fontrodona Bach,  
   Adria 41  
 Fortuniak, Krzysztof 43  
 Francis, Diana 83  
 Frank, Christopher 95  
 Frei, Christoph 56, 86  
 Freitas, Sylvio 41  
 Fricke, Cathy 40  
 Früh, Barbara 43, 64  
 Funk, Daniel 42  
 Furtado, Jason 44, 83  
 Gagnon, Stephane 74  
 Gal, Csilla 48  
 Gallego, David 50  
 García-Díez, Markel 55  
 García-Herrera, Ricardo  
   29, 33, 50  
 García-Santos, Vicente  
   103  
 Garcia-Serrano, Javier  
   74, 80, 83, 103, 105  
 García-Valdecasas  
 Ojeda, Matilde 70  
 Gascón, Estibaliz 39, 91  
 Gašparac, Goran 37, 43  
 Gaztelumendi, Santiago  
   68, 101  
 Gelati, Emiliano 32  
 Gelpi, Ivan R. 101  
 Georgiev, Stefan 73  
 Georgieva, Ivelina 49  
 Germain, Daniel 87  
 Ghelli, Anna 77, 81, 97  
 Ghent, Darren 82, 103  
 Ghinassi, Paolo 61  
 Giaiotti, Dario 28, 53, 57,  
   67  
 Gilabert Gallart, Alba 102  
 Gil-Guirado, Salvador 79  
 Gimenez-Garrote,  
 Antonio 101  
 Gimeno, Luis 83  
 Gleeson, Emily 59, 71,  
   75, 85, 104  
 Göber, Martin 36, 68  
 Gobin, Anne 78  
 Goldberg, Valeri 47  
 Gomes, Helber 105  
 Göndöcs, Júlia 84  
 González Rojí, Santos  
   José 55  
 Gonzalez, Albano 85  
 González-Rouco, Fidel  
   29, 33, 50  
 Good, Garrett 82  
 Goudenhoofd, Edouard  
   74  
 Grabowska, Katarzyna 67  
 Graczyk, Dariusz 48  
 Grau, Antoni 104  
 Gregow, Erik 75  
 Gregow, Hilppa 40  
 Griffiths, Deryn 81, 97  
 Gryning, Sven-Erik 58,  
   79, 81, 92, 95, 100  
 Gualdi, Silvio 74, 103  
 Gubler, Stefanie 42, 63  
 Gueorguiev, Orlin 43  
 Guerova, Guergana 73,  
   98  
 Guettler, Ivan 27, 32, 48,  
   49  
 Guijarro, José A. 95  
 Guo, Zhaodi 69  
 Gutenstein-Penning de  
 Vries, Marloes 82  
 Gyöngyösi, András  
   Zénó 88  
 Haefele, Alexander 58  
 Hagedorn, Renate 35, 63  
 Halenka, Tomas 39, 77,  
   85  
 Hämäläinen, Karoliina 95,  
   100  
 Hannak, Lisa 96  
 Hänsel, Stephanie 30  
 Hansen, Akio 37  
 Haszpra, Tímea 37  
 He, Na 68  
 He, Wenping 90  
 Hemingway, Rebecca 30,  
   31, 47  
 Heppelmann, Tobias 97  
 Herceg Bulic, Ivana 83  
 Hermida, Lucia 69  
 Hiebl, Johann 56  
 Hirooka, Toshihiko 45  
 Hoffmann, Lilla 86  
 Hofstätter, Michael 76  
 Hohenegger, Cathy 54  
 Holec, Juraj 67  
 Hollosi, Brigitta 31  
 Holtslag, Bert 40, 43, 65  
 Höpp, Simona 86  
 Horányi, András 45  
 Hoy, Andreas 35, 46  
 Huang, Wan-Ru 106  
 Huebener, Heike 64  
 Hung, Chih-wen 71  
 Huszar, Peter 37  
 Hutchinson, Todd 74  
 Huth, Radan 76, 79, 106  
 Hygen, Hans Olav 35, 42,  
   55  
 Hygen, Hans x103  
 Hynčica, Martin 106  
 Iakunina, Maksim 66  
 Imfeld, Noémi 42, 63, 71,  
   87  
 Irha, Hela 102  
 Isotta, Francesco 56  
 Ivaňáková, Gabriela 46  
 Ivusic, Sarah 90  
 Iwao, Koki 61  
 Jakuschné Kocsis, Tímea  
   69  
 Jang, Jiyeon 53  
 Janković, Aleksandar 49  
 Jansa, Agusti 60  
 Järvi, Leena 37, 49  
 Jelic, Damjan 57, 67  
 Johnston, Michael 44  
 Jones, Jonathan 73, 98  
 Josey, Simon 96  
 Jug, Danijel 27, 32, 48  
 Jun, Sanghee 84  
 Jurković, Jadran 39, 97  
 Kahraman, Abdullah 44,  
   57  
 Kalin, Lovro 81  
 Kaltenberger, Rainer 31  
 Kämäräinen, Matti 60  
 Kang, Minsoo 89  
 Kardos, Peter 94  
 Kaspar, Frank 35  
 Keane-Brennan, Jevon 70  
 Kee, Hye Jin 47  
 Kennedy, John 92, 95,  
   102

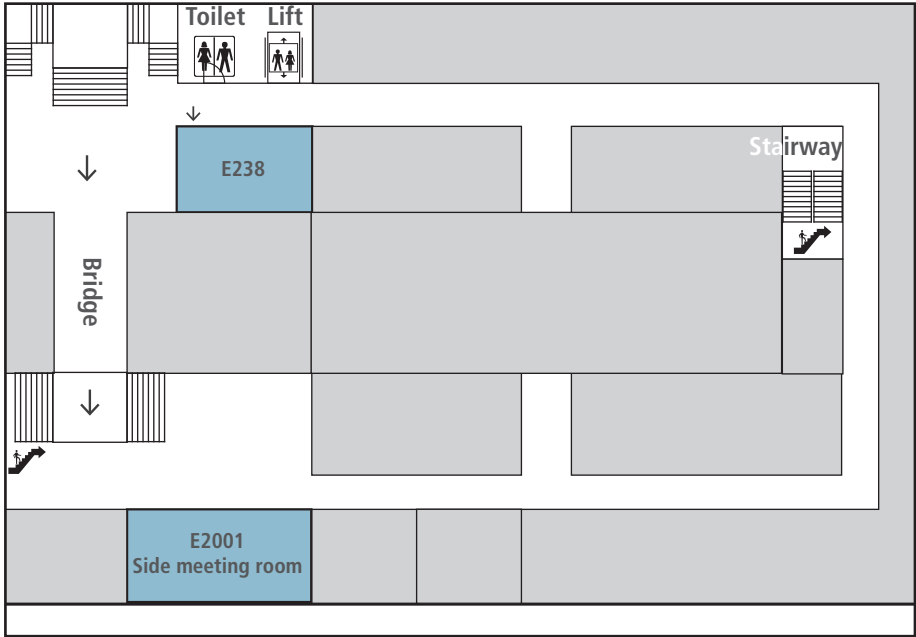
- Kertesz, Adam 60  
 Keup-Thiel, Elke 36  
 Kilpinen, Juha 57  
 Kim, Hae-Jeong 27  
 Király, Andrea 77  
 Kircsi, Andrea 48  
 Kiss, Andrea 29  
 Klaus, Daniel 78  
 Kloiber, Simon 98, 100  
 Kneringer, Philipp 78  
 Knoop, Helge 36  
 Kogan, Yefim 52  
 Konstantinov, Pavel 48  
 Koopmans, Sytse 31, 71  
 Kootval, Haleh 30, 47, 51  
 Kopeć, Marta 44  
 Korevaar, Marc 62, 89  
 Kortschak, Dominik 95  
 Kotlarski, Sven 64  
 Kovács, Attila 85  
 Krähenmann, Stefan 64  
 Krauskopf, Tomáš 69  
 Kreienkamp, Frank 90  
 Krietemeyer, Andreas 73  
 Kristóf, Erzsébet 27  
 Krivenok, Liudmila 99  
 Krizan, Peter 88  
 Krzyżewska, Agnieszka 53  
 Kucerova, Monika 69  
 Kuhn, Pascal 79  
 Kutaladze, Nato 84  
 Kvak, Róbert 68  
 Kwon, Young 57  
 Laapas, Mikko 86  
 Labudová, Livia 30  
 Lalic, Branislava 32  
 Lambkin, Keith 78, 99  
 Landskron, Daniel 73  
 Láng, Ilona 30  
 Larsén, Xiaoli 37  
 Latinovic, Dragan 89  
 Lau, Kevin Ka-Lun 30  
 Laurila, Terhi 39  
 Le Carrer, Noemie 94  
 Le Carrer, Oded 26  
 Le Coz, Camille 103  
 Le Moigne, Patrick 45  
 Lebo, Zachary 28  
 Lee, Hankyung 48  
 Lee, Joseph C. Y. 95  
 Lee, Sang-Wook 61  
 Lee, Seung Yeon 67  
 Lee, Woo-Seop 87  
 Lehner, Sebastian 90  
 Lehtonen, Ilari 63, 90  
 Lejeune, Quentin 46  
 Lhotka, Ondrej 69, 90  
 Li, Bo 54  
 Li, Jian-Guo 52  
 Li, Lun 87  
 Li, Shuanglin 105  
 Licer, Matjaz 93, 96, 104  
 Liman, Ljubov 89  
 Lin, Shian-Jiann 52  
 Lionello, Piero 33, 76  
 Lipponen, Antti 91  
 Lisowska, Monika 65  
 Liu, Rui 44  
 Lompar, Milos 78  
 Longhi Beck, Germano 101  
 Lott, Fraser 69  
 Lucio-Eceiza, Etor E. 76  
 Ludovic, Olicard 87  
 Lundstad, Elin 33  
 Luomaranta, Anna 41  
 Łupikasza, Ewa 66  
 Lussana, Cristian 56  
 Ma, Yuxia 31  
 Magno, Ramona 103  
 Mäkelä, Antti 39, 77  
 Maksic, Jelena 50  
 Manara, Veronica 96, 102  
 Manola, Iris 41  
 Marchand, Mathilde 79  
 Marsigli, Chiara 59, 85  
 Marson, Paola 75  
 Martija-Diez, Maialen 83, 84  
 Martinez-Ferrer, Angel 96  
 Martínez-Villagrasa, Daniel 87  
 Matulla, Christoph 90  
 Matveeva, Tatiana 90  
 Matzarakis, Andreas 26, 31, 39, 47  
 Mayta, Victor 105  
 Mazon, Jordi 28, 53, 57, 67, 77  
 Medina, Javier 56  
 Mellado-Cano, Javier 29  
 Mercader, Jordi 55  
 Meyer, David 85  
 Miglietta, Mario Marcello 28, 53, 57, 67, 93, 96, 104  
 Mikšovský, Jiří 69  
 Min, Jae-Sik 65  
 Minola, Lorenzo 37  
 Mittal, Neha 42  
 Mittermaier, Marion 81, 97, 98  
 Miura, Haruka 67  
 Mohammadi, Moein 88  
 Molina, Tomas 52  
 Molinder, Jennie 92  
 Mona, Tamás 71  
 Monhart, Samuel 97  
 Montani, Andrea 91, 94, 97  
 Montavez, Juan Pedro 100  
 Moritz Flubacher, 63  
 Motta Garcia, Jose Roberto 98  
 Mouhamet, Diallo 101  
 Mozny, Martin 47, 99  
 Müller, Miloslav 41  
 Murphy, Gerard 59  
 Mursula, Kalevi 28  
 Mylne, Ken 77  
 Nagy, Balázs 87  
 Naoe, Hiroaki 88  
 Nastos, Panagiotis 26  
 Navarro, Jorge 62  
 Nazarian, Negin 26  
 Neher, Ina 79  
 Németh, Zoltán 50  
 Nielsen, Kristian Pagh 75, 104  
 Niermann, Deborah 71  
 Nieto, Raquel 105  
 Nimac, Irena 39  
 Noh, Mi Jeong 47  
 Noone, Simon 64  
 Nykiel, Grzegorz 73  
 Odak Plenkovic, Iris 77  
 Ødemark, Karianne 57  
 Ohashi, Yukitaka 99  
 Ohba, Masamichi 100, 106  
 Ojrzyńska, Hanna 86  
 Oliva, Marc 83, 105  
 Outten, Stephen 62  
 Overland, James 80  
 Owens, Mathew 28  
 Paccagnella, Tiziana 73  
 Palmeiro, Froila M. 106  
 Pandey, Praveen 58  
 Park, Moon-Soo 44  
 Park, Rae Seol 75  
 Park, Sojung 67  
 Päschrke, Eileen 88  
 Pasik, Adam 69  
 Patlakas, Platon 71  
 Pattantyús-Ábrahám, Margit 49  
 Pecho, Jozef 69  
 Peña, Alfredo 92  
 Perez, Juan 84  
 Peron, Arianna 83  
 Petenko, Igor 65  
 Pető, Mária 77  
 Petric, Mina 46  
 Petrik, Ronny 36, 44, 101  
 Pfenninger, Stefan 82

- Pietikäinen, Joni-Pekka 97
- Pillosu, Fatima 31, 74, 99
- Pincini, Giacomo 97
- Piskala, Vladimír 76
- Platis, Andreas 92
- Platonov, Vladimir 71, 90
- Plavcová, Eva 64
- Podrascanin, Zorica 49
- Pogacar, Tjasa 26
- Pomaro, Angela 96
- Pongrácz, Rita 32
- Postlyakov, Oleg 50, 89
- Pourasghar, Farnaz 67
- Power, Mary 42
- Pozo-Vazquez, David 81
- Priestley, Matthew 60
- Prohom, Marc J. 92
- Pucik, Tomas 53
- Pugnaire, Francisco 60
- Quarello, Annarosa 102
- Ramon, Jaume 36, 102
- Ramos, Diogo 100
- Rautenberg, Alexander 89
- Rayner, Nick 82
- Rebetez, Martine 38, 41, 44, 69
- Reed, Kevin 52
- Reichert, Bernhard 74, 77, 98
- Reinert, Daniel 52, 84
- Renner, Maik 40, 82
- Ricchi, Antonio 93, 96, 104
- Riemer, Michael 60, 87
- Ringard, Justine 69
- Ripoll, Ricard 47, 102
- Ristic, Ivan 85
- Rivadeneira, Sandra 98
- Rivas, Victoria 104
- Rodriguez-Benitez, Francisco Javier 81
- Rodríguez-Guisado, Esteban 74
- Roepnack, Andreas 82
- Rohde, Robert 38
- Rohmer, Jeremy 41
- Rojas-Labanda, Cristina 96
- Roldán, Pedro 29
- Román-Cascón, Carlos 41, 49
- Romero, Emilio 70
- Rontu, Laura 75, 104
- Rosert, Eduard 35, 63
- Rottner, Lucie 94
- Rožanov, Eugene 28
- Rozoff, Christopher 45
- Ruggieri, Paolo 80, 103
- Rulfova, Zuzana 71
- Russchenberg, Herman 54
- Rust, Fiona 94
- Saaroni, Hadas 79
- Saavedra, Miguel 85
- Sabziparvar, Ali Akbar 38
- Saint-Drenan, Yves-Marie 79, 81, 92, 95, 100
- Salcedo-Sanz, Sancho 29
- Salgado, Rui 88
- Salinas, Jose Antonio 44
- Salvador, Coral 31
- Sánchez-García, Eroteida 103
- Sangelantoni, Lorenzo 43
- Santos, João Andrade 78
- Santos, Monica 69
- Schellander-Gorgas, Theresa 65
- Scherrer, Simon 37, 70
- Schlegel, Irmela 26, 31
- Schön, Martin 61
- Schroedter-Homscheidt, Marion 79, 81, 92, 95, 100
- Schyberg, Harald 71
- Securo, Andrea 83
- Sedlmeier, Katrin 65
- Sengupta, Manajit 79
- Serrano-Notivoli, Roberto 60
- Sficcà, Lucian 106
- Shaffrey, Len 67
- Shahjahan, Abu Taib Mohammed 48
- Sharpe, Michael 55, 78, 97
- Shi, Lan 100
- Shin, Hyeonjin 67
- Shin, Igor 40
- Shin, Yire 48
- Shou, Shaowen 67
- Shou, Yixuan 67
- Siegmund, Peter 92
- Siiskonen, Ville 39
- Simoës, Sofia 101
- Simon, Thorsten 74
- Sinclair, Victoria 28, 53, 57
- Skalak, Petr 86
- Skaland, Reidun Gangstø 30
- Skok, Gregor 76, 81
- Skorokhod, Andrey 65
- Slingo, Julia 25
- Šoljan, Vinko 99
- Song, Lei 88
- Soret, Albert 91
- Soubeyroux, Jean-Michel 38, 43
- Spensberger, Clemens 60, 87
- Spinoni, Jonathan 44, 70
- Sprengel, Martin 94
- Squintu, Antonello 95
- Srnic, Lidija 49
- Staneva, Joanna 93, 96, 104
- Staudinger, Michael 51
- Steenefeld, Gert-Jan 40, 43, 55, 65, 66, 84
- Steinheuer, Julian 36
- Stepanek, Petr 99, 102
- Stiller, Bernd 88
- Stoiev, Krasimir 73
- Stojanovic, Dejan 27
- Stott, Peter 91
- Strachan, Jane 40, 42
- Strassmann, Kuno 43
- Strauss, Lukas 95
- Stryhal, Jan 62, 76, 106
- Sukhodolov, Timofei 28
- Sulikowska, Agnieszka 70
- Suomi, Irene 36, 68, 96
- Sweeney, Conor 75
- Szalai, Sándor 32, 60, 78, 86, 99
- Szentimrey, Tamás 32, 56, 92
- Szépszó, Gabriella 77
- Szintai, Balázs 49, 59, 85
- Taghizadeh, Ehsan 47
- Taillardat, Maxime 74, 81, 97
- Tajet, Helga Therese Tilley 30
- Takeyama, Yuko 89
- Tamayo, Jorge 42
- Tao, Li 106
- Tarchiani, Vieri 42
- Taszarek, Mateusz 57
- Tegoulas, Ioannis 99
- Terao, Toru 44, 104
- Terrado, Marta 63
- Tervo, Roope 35, 63
- Terzaggo, Silvia 74, 103
- Thepaut, Jean-Noel 40, 64
- Thomas, Claire 79, 101
- Thurai, Merhala 58
- Tijm, Sander 59
- Toanca, Florica 65
- Toker, Emir 85
- Toptunova, Olga 59
- Torma, Csaba Zsolt 90

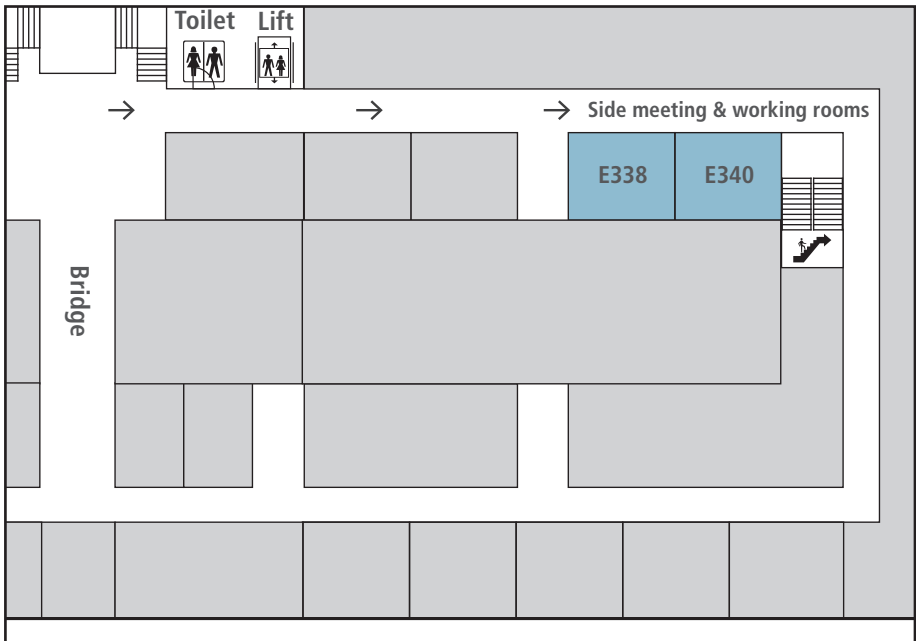


- Trentmann, Jörg 56, 86, 101  
 Trigo, Isabel 82, 103  
 Trobec, Jay 55  
 Trojáčková, Alena 85  
 Tromeur, Eric 100  
 Tsarpalis, Konstantinos 56  
 Tsonevsky, Ivan 39, 91  
 Tveito, Ole Einar 56, 86  
 Uccellini, Louis 31  
 Udina, Mireia 41  
 Unden, Per 45  
 Urban, Ales 31, 48  
 Usoskin, Ilya 28  
 Valeriánová, Anna 70  
 Valler, Veronika 50  
 Valta, Hannu 47  
 Vamborg, Freja 52  
 Vamvakas, Ioannis 101  
 van den Besselaar, Else 64  
 van der Schrier, Gerard 42, 63  
 van Dorland, Rob 43  
 van Oldenborgh, Geert Jan 38  
 Van Schaeybroeck, Bert 90  
 Varentsov, Mikhail 39, 89  
 Varga, Ákos János 84  
 Varlas, Georgios 93  
 Veal, Karen 82  
 Večenaj, Željko 48  
 Vegas Cañas, Cristina 60, 86  
 Velea, Liliana 26  
 Veljovic, Katarina 52  
 Venäläinen, Ari 63  
 Venema, Victor 42, 63, 92, 95, 102  
 Verrelle, Antoine 71  
 Vihma, Timo 80  
 Viloría, Ramón 70  
 Virág, Rita Szabolcsné 66  
 Visoiu, Dorinel 65  
 Vladimirov, Evgeni 84  
 Voice, Mary 52  
 Voronich, Oleksandra 101  
 Vujović, Dragana 49  
 Wahl, Sabrina 36, 68  
 Wakimoto, Roger 54, 57  
 Wan, Shiquan 89  
 Wang, Chung-Chieh 94  
 Wang, Yafei 87  
 Wang, Yong 74, 77, 98  
 Wang, Yongqing 53  
 Wardle, Tony 91  
 Wei, Linbo 66  
 Weidinger, Tamás 27, 32, 48, 54  
 Weymouth, Gary 94  
 Wiese, Anne 93  
 Witha, Björn 92  
 Wrenger, Burkhard 61  
 Wu, Liguang 57  
 Wu, Qiuxia 53  
 Wu, Zhiwei 106  
 Wypych, Agnieszka 38, 70  
 Xiao, Tianguai 106  
 Xuegong, Jiang 28  
 Yeon, Sang-Hoon 98  
 Yeste Donaire, Patricio 89  
 Yi, Chaeyeon 47  
 Ylhäisi, Jussi 74  
 Ylläsjärvi, Janne 95  
 Žák, Michal 32  
 Zamuriano, Marcelo 68  
 Zaninovic, Ksenija 49  
 Zeng, Xin-Min 67  
 Zhang, Gangfeng 49  
 Zhang, Miao 71  
 Zhang, Niing 65  
 Zhang, Ruonan 105  
 Zheng, Fei 96  
 Ziemann, Astrid 100  
 Zilitinkevich, Sergej 40, 43, 65  
 Zoldoš, Marko 39  
 Zollo, Alessandra Lucia 94  
 Zsebeházi, Gabriella 36  
 Zubiate, Laura 53  
 Zulkafli, Zed 48  
 zum Berge, Kjell 61

# Second floor



# Third floor





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