## EMS Annual Meeting: European Conference for Applied Meteorology and Climatology 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location</th>
<th>Event</th>
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<tbody>
<tr>
<td>Mon, 09:30-11:00</td>
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<td>Opening</td>
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<td>Mon, 11:30-12:45</td>
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<td>Awards</td>
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<td>Mon, 14:00-16:00</td>
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<td></td>
<td>OSA2.5, OSA2.7, UP2.5, UP1.3 - from 15:00, UP3.4</td>
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<tr>
<td>Mon, 16:30-18:30</td>
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<td></td>
<td>OSA2.5, OSA2.7, ES1.3, OSA1.8/ES1.6, UP3.4</td>
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<td>Mon, 19:00-20:30</td>
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<td>Icebreaker</td>
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<td>Tue, 09:00-09:30</td>
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<td>UP Keynote</td>
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<td>Tue, 10:30-12:30</td>
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<td>Poster Session &amp; refreshment break</td>
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<td>Tue, 13:00-13:45</td>
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<td>WMO Townhall</td>
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<td>OSA3.5, UP1.2, OSA1.9, UP3.1, OSA2.5</td>
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<td>Tue, 16:30-18:30</td>
<td></td>
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<td>UP3.6, OSA3.6, UP3.1, ES1.8</td>
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<td>Tue, 18:30-19:00</td>
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<td>ES Keynote</td>
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<td>Wed, 09:00-09:30</td>
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<td>Poster Session &amp; refreshment break</td>
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<td>Wed, 10:30-12:30</td>
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<td>ES1.1 [9:45 - 13:00], UP1.3, UP1.5, ES2.1, OSA1.1</td>
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<td>Wed, 13:00-13:45</td>
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<td>Townhall/UP1.3</td>
<td>AMS Lecture</td>
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<td>Wed, 14:00-16:00</td>
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<td>OSA3.3, UP1.3, UP1.5, ES2.1, OSA1.2</td>
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<td>Wed, 16:30-18:30</td>
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<td>OSA1.10, UP1.1, UP1.5/UP1.6, UP3.5, OSA3.4</td>
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<td>Wed, 19:00-20:30</td>
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<td>Convenor Reception</td>
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<td>OSA Keynote</td>
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<td>Thu, 10:30-12:30</td>
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<td>Poster Session &amp; refreshment break</td>
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<td>Thu, 14:00-16:00</td>
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<td>OSA1.7, UP3.3, OSA3.7, UP2.3, OSA1.6</td>
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<tr>
<td>Thu, 16:30-18:30</td>
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<td>OSA1.7, UP3.2 - from 15:00, OSA2.3, OSA2.4, ES3.1</td>
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<tr>
<td>Fri, 09:00-10:30</td>
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<td>OSA1.4, ES2.2, OSA3.1, OSA2.4, UP2.1</td>
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<tr>
<td>Fri, 10:30-11:30</td>
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<td>Poster Session &amp; refreshment break</td>
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<td>Fri, 11:30-13:30</td>
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<td>OSA1.4, OSA2.1, OSA3.1, OSA2.4, UP2.1</td>
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<tr>
<td>Fri, 13:45</td>
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<td>Closing Reception</td>
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### Location Details

- **ground floor**
  - E II: 350 seats
  - E I: 350 seats
  - E III: 150 seats
  - E IV: 400 seats
- **second floor**
  - E 238: 80 seats

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The EMS Annual Meeting: European Conference for Applied Meteorology and Climatology 2018 is organized in co-operation with the Copernicus GmbH.

[http://meetings.copernicus.org](http://meetings.copernicus.org)
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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.

Bob Riddaway
EMS President
Zoltán Dunkel
President, Hungarian Meteorological Society (MMT)
Komélia Radics
President, Hungarian Meteorological Service (OMSZ)

Tweet at #emsannual2018
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

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
Bahnhofsalle 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 CO2 emission caused by your travel to Budapest.
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 Matthieu (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
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

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**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**
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
climate.copernicus.eu
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 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.

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.
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@emetsoc.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

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
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 Polarmetric 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
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.

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.
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, RTÉ, 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 focuses 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.

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 Göndöcs, 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 Acquaotta, 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. Acquaotta, 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.

Lívia 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
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 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-oten-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

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.

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

SIM4
Programme and Science Committee EMS2019 (by invitation only)
Tuesday, 4 September 2018, 18:45–19:45
Room 2001

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 E III, 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

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

SIM9
PRIMET AGM (by invitation only)
Tuesday, 4 September 2018, 13:00–16:00
Room E338

SIM10
PRIMET-ECOMET Meeting (by invitation only)
Wednesday, 5 September 2018, 13:15–16:15
Room 2001

SIM11
European Climate Services
Friday, 7 September 2018, 11:00–13:00
Room 2001

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.
Conference programme

About the session programme

Conference hours

Oral and poster sessions times

Monday, 3 September 2018

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<thead>
<tr>
<th>Event</th>
<th>Time</th>
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<tr>
<td>Opening</td>
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<tr>
<td>Awards session</td>
<td>11:30–12:45</td>
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<tr>
<td>Oral block 3</td>
<td>14:00–16:00; note: On Monday OSA2.5 starts at 13:00.</td>
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<tr>
<td>Oral block 4</td>
<td>16:30–18:30</td>
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<td>Plenary lecture</td>
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<td>Keynote lecture</td>
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<tr>
<td>Poster session</td>
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<tr>
<td>Oral block 1</td>
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<tr>
<td>Townhall Meeting (Tue &amp; Wed)</td>
<td>13:00–14:00</td>
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<tr>
<td>Oral block 2</td>
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<td>Poster session</td>
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<td>Oral block 2</td>
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<tr>
<td>Closing reception</td>
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▲ 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.

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<tr>
<th>\ Day PS \</th>
<th>Tuesday 9:30 – 10:30</th>
<th>Wednesday 9:30 – 10:30</th>
<th>Thursday 9:30 – 10:30</th>
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<tbody>
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<tr>
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<td>UP2.1, UP2.3, UP2.4, UP3.2, UP3.3</td>
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**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.
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| OSA3.4 | 60 | 86 |
| OSA3.5 | 40 | 64 |
| OSA3.6 | 43 | 64 |
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## Understanding Weather & Climate Processes (UP)

### UP1 – Atmospheric processes and severe weather

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### UP3 – Climate modelling, analyses and predictions

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</table>
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 Giannetti; 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-conveners: 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 Řezničková
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 | Lívia 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 Pillosu
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

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 Ivancan-Picek; Adina-Eliza Croitoru; Danijel Jug; Vladimir Djurdjevic; Tamás Weidinger; Andrej Ceglar; 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 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.

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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

UP2.2 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
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 | Estíbaliz 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-convener: 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
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-convener:** 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 Unden
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
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<th>Posters Tuesday, 09:30–10:30</th>
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**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**  
ISIpedia, 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 PM2.5 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 Ceglar; 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 SO2 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 Postylyakov  
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 1
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 "Vejret"

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 Tveito  
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 | François 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 CO2 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

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<td>Balázs Szintai</td>
<td>The C-SRNWP Programme of EUMETNET: past, present and future</td>
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<td>16:45–17:00</td>
<td>Chiara Marsigli</td>
<td>The SRNWP-EPS Programme: main outcomes and perspectives</td>
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<td>17:00–17:15</td>
<td>Gerard Murphy</td>
<td>EUMETNET Observations Programmes</td>
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<td>17:15–17:30</td>
<td>Sander Tijm</td>
<td>Communication between forecaster and researcher at KNMI</td>
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<td>17:30–17:45</td>
<td>Alexis Doerenbecher</td>
<td>Impact of additional AMDAR data in the AROME-France model during May 2017</td>
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<td>17:45–18:00</td>
<td>Margarita Choulga</td>
<td>History and actual status of Global Lake Database</td>
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<td>18:00–18:15</td>
<td>Olga Toptunova</td>
<td>Status and progress in Global Lake Database developments</td>
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<td>18:15–18:30</td>
<td>Anke Finnenkoetter</td>
<td>Fifty Shades of Green? - Challenges of Meaningful Data Visualisation for the 300m London Model</td>
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**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

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-conveners:** Francisco J. Doblas-Reyes  
**Poster pitches:** Tue, 12:30, room EII

- **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&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-convener: 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 Boekee
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

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
Homogenity 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 Viloria  
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-convener: 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
provided through Wonderful Copenhagen
Thursday, 09:00–09:30

Keynote Lecture on Operational Systems and Applications (OSA)

Kilometric scale Numerical Weather 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 Krietemeyer
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

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:30–10:45</td>
<td>Stephane Gagnon</td>
<td>Towards the transformation of the forecasting system at Meteorological Service of Canada</td>
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<tr>
<td>10:45–11:00</td>
<td>Yong Wang</td>
<td>Seamless probabilistic analysis and forecasting: from minutes to days ahead</td>
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<tr>
<td>11:00–11:15</td>
<td>Thorsten Simon</td>
<td>Predicting Thunderstorm Intensities</td>
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<td>11:15–11:30</td>
<td>Edouard Goudenhoofdt</td>
<td>Local extreme precipitation warnings for Belgium</td>
</tr>
<tr>
<td>11:30–11:45</td>
<td>Maxime Taillardat</td>
<td>Post-processing of hourly rainfall for hydrological and weather warning-oriented applications</td>
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<tr>
<td>11:45–12:00</td>
<td>Fatima Pillosu</td>
<td>Development of &quot;ecPoint-Rainfall&quot;, a New Post-Processing System for Probabilistic Forecasting of Rainfall Totals at Point-Scale</td>
</tr>
<tr>
<td>12:00–12:15</td>
<td>Jussi Ylhäisi</td>
<td>Use of spatial predictors in clustered model output statistics (MOS) forecasting system</td>
</tr>
<tr>
<td>12:15–12:30</td>
<td>Todd Hutchinson</td>
<td>0-6 hour Weather Forecast Guidance at The Weather Company</td>
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**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**

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:30–10:45</td>
<td>Esteban Rodriguez-Guisado</td>
<td>Empirical model for seasonal forecasting over the Mediterranean</td>
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<tr>
<td>10:45–11:00</td>
<td>Marianna Benassi</td>
<td>ENSO teleconnections over the Euro-Mediterranean region: the role of PDO modulation</td>
</tr>
<tr>
<td>11:00–11:15</td>
<td>Constantin Ardilouze</td>
<td>Investigating the impact of soil moisture on European summer climate in seasonal hindcasts</td>
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**Downscaling techniques**

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<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>11:15–11:30</td>
<td>Silvia Terzago</td>
<td>Stochastic downscaling of precipitation in complex orography</td>
</tr>
</tbody>
</table>
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 Knieringer  
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
Convener: 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 1
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-Benítez
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 | María 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 1

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 Danchovski
Long-term study of urban mixing layer height over Sofia, Bulgaria

P.162 | Sven Brinckmann
A method for correcting and determinig 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-videodiscrometer 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 NO2 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 Fakharizadehshirazi
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
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

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<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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<tbody>
<tr>
<td>11:30–11:45</td>
<td>Gavin Evans</td>
<td>Creating a probabilistic, multi-model post-processing system at the Met Office</td>
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<td>11:45–12:00</td>
<td>Fiona Rust</td>
<td>The use of a topographically aware neighbourhood technique to produce probabilistic forecasts</td>
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<tr>
<td>12:00–12:15</td>
<td>Lucie Rottner</td>
<td>Object-oriented processing of deterministic and ensemble weather forecasts: application to rainfall and convection hazard</td>
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<td>12:15–12:30</td>
<td>Gary Weymouth</td>
<td>New calibrated daily rainfall probability guidance</td>
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<tr>
<td>12:30–12:45</td>
<td>Rossella Ferretti</td>
<td>Toward an operational NWP-ensemble for a hydrological early warning system over small Appennine’s catchments in Central Italy</td>
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<tr>
<td>12:45–13:00</td>
<td>Andrea Montani</td>
<td>Development of user-oriented ensemble products based on COSMO-LEPS: recent upgrades at Arpae-SIMC</td>
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<tr>
<td>13:00–13:15</td>
<td>Martin Sprengel</td>
<td>Characterization of the model error in COSMO-D2-EPS using a flow-dependent partial SDE</td>
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**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

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<tr>
<th>Time</th>
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<tr>
<td>11:30–11:45</td>
<td>Alessandra Lucia Zollo</td>
<td>A weather awareness system supporting detection and forecasting of aviation hazards</td>
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<tr>
<td>11:45–12:00</td>
<td>Noemie Le Carrer</td>
<td>Robust optimisation of cargo loading and ship scheduling in tidal areas</td>
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<tr>
<td>12:00–12:15</td>
<td>Peter Kardos</td>
<td>Applying artificial neural networks in visibility and cloud forecast at Budapest airport</td>
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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 Dorminger, 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  
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

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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 Tegoulias
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**  
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P.76 | Jörg Trentmann  
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P.77 | Clara Arbizu-Barrena  
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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 | Germanno Longhi Beck  
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P.83 | Oleksandra Voronych  
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P.84 | Claire Thomas  
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P.85 | Sofia Simoes  
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P.87 | Francisco Javier Rodriguez-Benitez  
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P.88 | Santiago Gaztelumendi  
The SPADI project

P.89 | Darlene Field  
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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

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### OSA3.7 MEDiterranean Services Chain based On climate PrEdictions (MEDSCOPE)

**Convener:** Silvio Gualdi  
**Co-conveners:** Lauriane Batté, Javier García-Serrano

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<td>Ramona Magno</td>
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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
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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

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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
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Convener: Renato R. Colucci  
Co-conveners: Florence Colleoni, Marc Oliva  
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P.142 | Joong-Bae Ahn  
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P.143 | Ruonan Zhang  
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P.144 | Marc Oliva  
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P.145 | Renato R. Colucci  
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Convener: Javier Garcia-Serrano  
Co-conveners: Paolo Davini, Yannick Peings

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P.180 | Francisco J. Alvarez-García  
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P.186 | Zhiwei Wu
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