ECMWF

Annual Seminar 2025

Programme

Monday
Agenda

Agenda time displays according to the selected time zone.

The selected timezone is Europe/London

10:30 to 11:40	**Arrival and registration** Gustav-Stresemann-Institut (GSI) Europäische Tagungs- und Bildungsstätte Bonn Langer Grabenweg 68 53175 Bonn-Bad Godesberg	
	Plenary: Setting the scene Chair: Magdalena Alonso-Balmaseda, co-chair: Frederic Vitart	
11:40 to 11:50	**Practicalities**	Leonie Beck
11:50 to 12:00	**Opening**	Florence Rabier (ECMWF)
12:00 to 12:30	**On the need to constrain Earth System models using observations** Presentation slides Video recording	Detlef Stammer (University of Hamburg)
12:30 to 12:45	**ECMWF strategy and research directions** Presentation slides Video recording	Andy Brown (ECMWF)
12:45 to 13:15	**Forecasting tools for enhanced Decision making in Eastern Africa** Presentation slides Video recording	Masilin Gudoshava (IGAD Climate Prediction and Applications Centre)
13:15 to 13:45	**Advancing Weather and Climate Forecasting for Our Changing World** Presentation slides Video recording	Gilbert Brunet (Former employee of ECCC/BoM and Met Office)
13:45 to 14:15	**Sub-seasonal Prediction: Advances, Challenges and Opportunities** Presentation slides Video recording	Frederic Vitart (ECMWF)
14:15 to 14:35	**Coffee break**	

	Plenary continued Chair: Antje Weisheimer, co-chair: Linus Magnusson	
14:35 to 15:05	**ENSO as a meeting point between weather and climate forecasting** Presentation slides Video recording	Magdalena Alonso Balmaseda (ECMWF)
15:05 to 15:35	**Machine learning as game changer in forecasting: an overview of approaches and applications** Presentation slides Video recording	Matthew Chantry (ECMWF)
	Drinks reception Federal Ministry for Digital and Transport (BMDV) Robert-Schuman-Platz 1 53175 Bonn	
16:00 to 16:30	**Welcome drinks**	
16:30 to 16:35	**Opening and welcome by moderator**	Steffen Müller (BMDV)
16:35 to 17:00	**Welcome speeches** • Katya Dörner, Mayor of the City of Bonn • Gertrud Husch, Director-General for Digital Connectivity at BMDV • Sarah Jones, President DWD • Florence Rabier, ECMWF Director-General	
17:00 to 18:00	**Canapés and drinks**	

Tuesday
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07:30 to 08:00	**Arrival and registration** Gustav-Stresemann-Institut (GSI) Europäische Tagungs- und Bildungsstätte Bonn Langer Grabenweg 68 53175 Bonn-Bad Godesberg	
	Theme 1: Evolving models and data assimilation capabilities Chair: Nils Wedi, co-chair: Tobias Becker	
08:00 to 08:30	**The future of Earth system modelling** Presentation slides Video recording	Peter Dueben (ECMWF)
08:30 to 09:00	**Advancing km-scale models underpinning the Destination Earth Digital Twins** Presentation slides Video recording	Benoît Vannière (ECMWF)
09:00 to 09:30	**AI for Climate Modeling: Present and Future** Presentation slides Video recording	Christopher Bretherton (Allen Institute for Artificial Intelligence (Ai2))
09:30 to 10:00	**Coffee break**	
	Theme 1 continued Chair: Sarah Keeley, co-chair: Xabier Pedruzo	
10:00 to 10:30	**Ocean heat uptake in the era of eddying ocean models and AI** Presentation slides Video recording	Alistair Adcroft (Princeton University)
10:30 to 11:00	**Improving the monitoring of vegetation and drought by land surface models through the assimilation of satellite data** Presentation slides Video recording	Jean-Christophe Calvet (Meteo-France)

11:00 to 11:30	**Towards Regional High-Resolution Weather Forecasting with Machine Learning** Presentation slides Video recording	Jørn Kristiansen (MET Norway)
11:30 to 13:30	**Lunch and posters**	
	Theme 1 continued Chair: Massimo Bonavita, co-chair: Katrin Lonitz	
13:30 to 14:00	**Progress and prospects on coupled data assimilation, for exploitation of interface observations and in support of climate monitoring and weather prediction** Presentation slides Video recording	Patricia de Rosnay (ECMWF)
14:00 to 14:30	**The ERA6 Reanalysis** Presentation slides Video recording	Bill Bell (ECMWF)
14:30 to 15:00	**Group photo and coffee break**	
	Theme 1 continued Chair: Patricia de Rosnay, co-chair: Paul Poli	
15:00 to 15:30	**ECMWF's next ensemble reanalysis system for ocean and sea-ice: ORAS6** Presentation slides Video recording	Hao Zuo (ECMWF)
15:30 to 16:00	**Observations: The Noisy Revolution** Presentation slides Video recording	Tony McNally (ECMWF)

Wednesday Agenda

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07:30 to 08:00	**Arrival and registration** Federal Ministry for Digital and Transport (BMDV) Robert-Schuman-Platz 1 53175 Bonn	
	Theme 2: Serving a future society Chair: Estibaliz Gascon, co-chair: Eduardo Penabad	
08:00 to 08:30	**Services across time scales and Earth system component – an ECMWF perspective** Presentation slides Video recording	Matthieu Chevallier (ECMWF)
08:30 to 09:00	**Services across time scales and components at MeteoSwiss** Presentation slides Video recording	Christian M. Grams (Federal Office of Meteorology and Climatology, MeteoSwiss)
09:00 to 09:30	**Challenges in transforming traditional weather services to the changing needs of society** Presentation slides Video recording	Renate Hagedorn (DWD)
09:30 to 10:00	**Coffee break**	
	Theme 2 continued Chair: Anca Brookshaw, co-chair: Sebastian Milinski	
10:00 to 10:30	**Great potential for S2S applications and services: examples from Europe and Africa** Presentation slides Video recording	Erik Kolstad (NORCE Norwegian Research Centre)

10:30 to 11:00	**Understanding, predicting and communicating high impact weather events across Africa** Presentation slides Video recording	Linda Hirons (National Centre for Atmospheric Science (NCAS), Department of Meteorology, University of Reading)
11:00 to 11:30	**The Destination Earth Digital Twin for Climate Change Adaptation** Presentation slides Video recording	Sebastian Milinski (ECMWF)
11:30 to 13:00	**Lunch and posters**	
	Theme 2 continued Chair: Carlo Buontempo, co-chair: Chiara Cagnazzo	
13:00 to 13:30	**Climate services at a national level and its coordination with Copernicus: the example of Germany** Presentation slides Video recording	Sarah Jones (Deutscher Wetterdienst)
13:30 to 14:00	**The evolution of climate services and future challenges** Presentation slides Video recording	Chris Hewitt (World Meteorological Organization)
14:00 to 14:30	**Beyond weather: serving society through CAMS and C3S** Presentation slides Video recording	Carlo Buontempo (ECMWF) Laurence Rouil (ECMWF)
14:30 to 15:00	**Group photo and coffee break**	
	Theme 2 continued Chair: Laurence Rouil, co-chair: Richard Engelen	
15:00 to 15:30	**Protecting public health through addressing air pollution and climate action** Presentation slides Video recording	Dorota Jarosinska (WHO European Centre for Environment and Health)
15:30 to 16:00	**EU clean air policy : opportunities for enhanced cooperation with CAMS** Presentation slides Video recording	Francois Wakenhut (European Commission)

16:00 to 16:30	**Providing environmental knowledge to our future society – the role of the European Environment Agency** [Presentation slides](#) [Video recording](#)	Ian Marnane (European Environment Agency)
16:30 to 17:00	**The outlines of IPCC AR7, and challenges for physical sciences** [Presentation slides](#) [Video recording](#)	Robert Vautard (IPSL)

Thursday Agenda

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07:30 to 08:00	**Arrival and registration** Federal Ministry for Digital and Transport (BMDV) Robert-Schuman-Platz 1 53175 Bonn	
	Theme 3: Changing sources of predictability across time scales Chair: Chris Roberts, co-chair: Tim Stockdale	
08:00 to 08:30	**Perspectives on medium-range predictability – Why does a forecast go wrong?** Presentation slides Video recording	Linus Magnusson (ECMWF)
08:30 to 09:00	**Tropical-extratropical teleconnections: the role of midlatitude synoptic systems** Presentation slides Video recording	Julian Quinting (Karlsruhe Institute of Technology)
09:00 to 09:30	**The role of the stratosphere in extended-range prediction** Presentation slides Video recording	Daniela Domeisen (University of Lausanne / ETH Zurich)
09:30 to 10:00	**Coffee break**	
	Theme 3 continued Chair: Steffen Tietsche, co-chair: Matthias Aengenheyster	
10:00 to 10:30	**The role of the ocean in predictability at different lead times** Presentation slides Video recording	Chris Roberts (ECMWF)
10:30 to 11:00	**Some outcomes of extreme event attribution** Presentation slides Video recording	Pascal Yiou (LSCE, IPSL, France)

11:00 to 11:30	**Frontiers in subseasonal to decadal prediction: A WCRP perspective** Presentation slides Video recording	Bill Merryfield (ECCC/CCCma)
11:30 to 13:00	**Lunch and posters**	
	Theme 3 continued Chair: Frederic Vitart, co-chair: Bianca Mezzina	
13:00 to 13:30	**Ensemble forecasting and the representation of uncertainties** Presentation slides Video recording	Martin Leutbecher (ECMWF)
13:30 to 14:00	**Evaluating seasonal forecast improvements over the past two decades** Presentation slides Video recording	Christopher O'Reilly (University of Reading)
14:00 to 14:30	**Machine-learned weather forecasting with AIFS** **Virtual presentation** Presentation slides Video recording	Simon Lang (ECMWF)
14:30 to 15:00	**Coffee break**	
	Theme 3 continued Chair: Mariana Clare, co-chair: Jacob Schloer	
15:00 to 15:30	**Seasonal forecasts in a changing climate** Presentation slides Video recording	Antje Weisheimer (ECMWF and University of Oxford)
15:30 to 16:00	**Tropical Pacific trends in seasonal hindcasts and implications for predictions of the 2020-2022 triple-dip La Niña** Presentation slides Video recording	Michael Mayer (ECMWF)
16:00 to 16:30	**Making the impact of climate change on weather and environmental extremes more tangible using storylines** Presentation slides Video recording	Thomas Jung (AWI)

| 16:30 to 17:00 | **Understanding and Evaluating Trust in AI forecasts**
Virtual presentation

[Presentation slides](#)
[Video recording](#) | Amy McGovern (University of Oklahoma) |

Friday
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07:30 to 08:00	**Arrival and registration** Gustav-Stresemann-Institut (GSI) Europäische Tagungs- und Bildungsstätte Bonn Langer Grabenweg 68 53175 Bonn-Bad Godesberg	
	Plenary: Scoping the future of forecasting Chair: Linus Magnusson, co-chair: Daniel Befort	
08:00 to 08:30	**Seasonal forecasting: models, reanalyses, forcings** Presentation slides Video recording	Tim Stockdale (ECMWF)
08:30 to 09:00	**Production and use of decadal climate predictions** Presentation slides Video recording	Francisco Doblas-Reyes
09:00 to 09:30	**Quantifying trends in extreme weather risk using operational ensemble forecasting systems** Presentation slides Video recording	Myles Allen (University of Oxford)
09:30 to 10:00	**Coffee break**	
	Plenary continued Moderators: Magdalena Balmaseda, Antje Weisheimer Rapporteur: Frederic Vitart, Linus Magnusson	
10:00 to 10:30	**Exploring the Limit of Predictability with Machine Learning Models** Presentation slides Video recording	Greg Hakim (University of Washington)

10:30 to 11:30 **Panel discussion**
Panellists:
• Masilin Gudoshava (IPAC)
• Angela Benedetti (ECMWF)
• Peter Dueben (ECMWF)
• Tim Palmer (University of Oxford)
• Greg Hakim (University of Washington)

Video recording