



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 (ICPAC)
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 <ul style="list-style-type: none"> • 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 Agenda

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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)
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, Zurich-Airport, Switzerland)
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)
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 (ECWMF)
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)
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 and University of Vienna)
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

Amy McGovern (University of Oklahoma)

[Presentation slides](#)
[Video recording](#)

Friday Agenda

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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 (BSC)
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](#)
