



Annual Seminar 2025

Programme

Monday Agenda

Agenda time displays according to the selected time zone.

The selected timezone is Europe/London

10:30 to 11:45	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	
11:45 to 12:00	Practicalities	Magdalena Alonso Balmaseda (ECMWF)
12:00 to 12:10	Opening	Florence Rabier (ECMWF)
12:10 to 12:40	On the need to constrain Earth System models using observations	Detlef Stammer (University of Hamburg)
12:40 to 13:00	ECMWF strategy and research directions	Andy Brown (ECMWF)
13:00 to 13:30	Forecasting tools for enhanced Decision making in Eastern Africa	Masilin Gudoshava (IGAD Climate Prediction and Applications Centre)
13:30 to 14:00	Coffee break	
	Plenary continued Chair: Antje Weisheimer, co-chair: Linus Magnusson	
14:00 to 14:30	Advancing Weather and Climate Forecasting for Our Changing World	Gilbert Brunet (Former employee of ECCO, BoM and Met Office)
14:30 to 15:00	Sub-seasonal Prediction: Advances, Challenges and Opportunities	Frederic Vitart (ECMWF)
15:00 to 15:30	ENSO as a meeting point between weather and climate forecasting	Magdalena Alonso Balmaseda (ECMWF)

15:30 to 16:00

Machine learning as game changer in forecasting: an overview of approaches and applications

Matthew Chantry (ECMWF)

16:00 to 18:30

Drinks reception

Federal Ministry for Digital and Transport (BMDV)
Robert-Schuman-Platz 1
53175 Bonn

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	Peter Dueben (ECMWF)
08:30 to 09:00	Advancing km-scale models underpinning the Destination Earth Digital Twins	Benoît Vannière (ECMWF)
09:00 to 09:30	AI for Climate Modeling: Present and Future	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 eddy ocean models and AI	Alistair Adcroft (Princeton University / NOAA-GFDL)
10:30 to 11:00	Improving the monitoring of vegetation and drought by land surface models through the assimilation of satellite data	Jean-Christophe Calvet (Meteo-France)
11:00 to 11:30	Towards Regional High-Resolution Weather Forecasting with Machine Learning	Ivar Seierstad (MET Norway)

11:30 to 13:00	Lunch and posters	
	Theme 1 continued Chair: Massimo Bonavita, co-chair: Katrin Lonitz	
13:00 to 13:30	Data Assimilation Methodology for Numerical Weather Prediction: A review of significant advancements and prospects for the future	Daryl Kleist (NOAA/NWS/NCEP/Environmental Modeling Center)
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	Patricia de Rosnay (ECMWF)
14:00 to 14:30	The ERA6 Reanalysis	Bill Bell (ECMWF)
14:30 to 15:00	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	Hao Zuo (ECMWF)
15:30 to 16:00	Observations: The Noisy Revolution	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	Matthieu Chevallier (ECMWF)
08:30 to 09:00	Services across time scales and components at MeteoSwiss	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	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	Erik Kolstad (NORCE Norwegian Research Centre)
10:30 to 11:00	Understanding, predicting and communicating high impact weather events across Africa	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	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	Sarah Jones (Deutscher Wetterdienst)
13:30 to 14:00	The evolution of climate services and future challenges	Chris Hewitt (World Meteorological Organization)
14:00 to 14:30	The outlines of IPCC AR7, and challenges for physical sciences	Robert Vautard (IPSL)
14:30 to 15:00	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	Dorota Jarosinska (WHO European Centre for Environment and Health)
15:30 to 16:00	How to better serve the society	Francois Wakenhut (European Commission)
16:00 to 16:30	TBC	
16:30 to 17:00		Martin Adams (European Environment Agency)

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?	Linus Magnusson (ECMWF)
08:30 to 09:00	Tropical-extratropical teleconnections: the role of midlatitude synoptic systems	Julian Quinting (Karlsruhe Institute of Technology)
09:00 to 09:30	The role of the stratosphere in extended-range prediction	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	Chris Roberts (ECWMF)
10:30 to 11:00	Some outcomes of extreme event attribution	Pascal Yiou (LSCE, IPSL, France)
11:00 to 11:30	Frontiers in subseasonal to decadal prediction: A WCRP perspective	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	Martin Leutbecher (ECMWF)
13:30 to 14:00	Evaluating seasonal forecast improvements over the past two decades	Christopher O'Reilly (University of Reading)
14:00 to 14:30	Machine-learned weather forecasting with AIFS	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	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	Michael Mayer (ECMWF)
16:00 to 16:30	Making the impact of climate change on weather and environmental extremes more tangible using storylines	Thomas Jung (AWI)
16:30 to 17:00	Understanding and Evaluating Trust in AI forecasts	Amy McGovern (University of Oklahoma)

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	Tim Stockdale (ECMWF)
08:30 to 09:00	Production and use of decadal climate predictions	Francisco Doblas-Reyes
09:00 to 09:30	Quantifying trends in extreme weather risk using operational ensemble forecasting systems	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	Greg Hakim (University of Washington)
10:30 to 11:30	Panel discussion Panellists: <ul style="list-style-type: none">• Masilin Gudoshava (IPAC)• Angela Benedetti (ECMWF)• Peter Dueben (ECMWF)• Tim Palmer (University of Oxford)• Greg Hakim (University of Washington)	