



Annual Seminar 2025

Programme

Monday Agenda

Agenda time displays according to the selected time zone.

The selected timezone is Europe/London

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| 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

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| 14:35 to 15:05 | ENSO as a meeting point between weather and climate forecasting Presentation slides Video recording | Magdalena A. 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) |

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| 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 |

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 (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) |

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| 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) |

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| 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 (ECMWF) |
| 10:30 to 11:00 | Some outcomes of extreme event attribution Presentation slides Video recording | Pascal Yiou (LSCE, IPSL, France) |

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| 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 |
| 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](#)
