



# **Workshop on data assimilation: initial conditions and beyond**

**Programme**

# Wednesday Agenda

Agenda time displays according to the selected time zone.

**The selected timezone is Europe/London**

	<b>Registration and welcome</b> Gustav-Stresemann-Institut (GSI) Europäische Tagungs- und Bildungsstätte Bonn Langer Grabenweg 68 53175 Bonn-Bad Godesberg	
07:30 to 08:00	<b>Registration</b>	
08:00 to 08:10	<b>Welcome</b>	Florence Rabier (ECMWF)
	<b>Session 1: Algorithms, Observations, Predictability</b> Chairs: Elias Holm and Marcin Chrust	
08:10 to 08:40	<b>Data Assimilation: Initial conditions and beyond</b>	Massimo Bonavita (ECMWF)
08:40 to 09:10	<b>On the role of the tropics in global predictability</b>	Nedjeljka Zagar (University of Hamburg)
09:10 to 09:40	<b>Towards higher spatial and temporal resolution data assimilation in ECMWF IFS</b>	Emiliano Orlandi Ziga Zaplotnik
09:40 to 10:00	<b>Coffee break</b>	
10:00 to 10:30	<b>Data assimilation developments at DWD</b>	Christina Köpken-Watts (DWD)
10:30 to 11:00	<b>New error covariances &amp; DA formulations at Météo-France with OOPS</b>	Loïk Berre (Météo-France)
11:00 to 11:30	<b>HIRLAM data assimilation: current status and vision</b>	Roger Randriamampianina (Norwegian Meteorological Institute)
11:30 to 12:00	<b>Developments in Data Assimilation and use of Observations at the Met Office</b>	David Simonin (UK Met Office)

12:00 to 13:00	<b>Lunch break</b>	
	<b>Session 1 continued: Algorithms, Observations, Predictability</b> Chairs: Sebastien Massart and Alban Farchi	
13:00 to 13:30	<b>Exploiting synergies in Composition and NWP data assimilation</b>	Antje Inness (ECMWF)
13:30 to 14:00	<b>Coupling Earth System Components in Data Assimilation: Advantages and Key Challenges</b>	Philip Browne (ECMWF)
14:00 to 14:30	<b>Group photo and coffee break</b>	
14:30 to 15:00	<b>Present and future observational landscape in Numerical Weather Prediction</b>	Angela Benedetti
15:00 to 15:30	<b>Observation uncertainty and information content</b>	Sarah Dance (University of Reading)
15:30 to 16:00	<b>Predictability constraints on medium-range weather prediction</b>	George Craig (Ludwig-Maximilians-Universität München (LMU))
16:30 to 18:30	<b>Poster session</b>	

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07:30 to 08:00	<b>Arrival and registration</b> Gustav-Stresemann-Institut (GSI) Europäische Tagungs- und Bildungsstätte Bonn Langer Grabenweg 68 53175 Bonn-Bad Godesberg	
	<b>Session 2: Hybrid Data Assimilation - Machine Learning</b> Chairs: Ziga Zaplotnik and Emiliano Orlandi	
08:00 to 08:30	<b>Machine learning for data assimilation</b>	Marc Bocquet (CEREA, École des Ponts and EDF R&D)
08:30 to 09:00	<b>Development of an offline and online hybrid model for the Integrated Forecasting System</b>	Alban Farchi (ECMWF) Marcin Chrust (ECMWF)
09:00 to 09:30	<b>DWD's vision of a fully data-driven data assimilation approach</b>	Jan Keller (Deutscher Wetterdienst)
09:30 to 10:00	<b>Coffee break</b>	
10:00 to 10:30	<b>Hybrid data assimilation and machine learning</b>	Alan Geer (ECMWF)
10:30 to 11:00	<b>Machine Learning for Data Assimilation at Météo-France</b>	Vincent Chabot (Météo France)
11:00 to 11:30	<b>Harmonizing Knowledge: Machine Learning Meets Data Assimilation</b>	Tijana Janjic (MIDS, KU Eichstaett-Ingolstadt)
11:30 to 12:00	<b>Harnessing machine learning for high resolution data assimilation</b>	Tomas Landelius (SMHI)
12:00 to 13:00	<b>Lunch break</b>	
	<b>Session 2 continued: Hybrid Data Assimilation - Machine Learning</b> Chairs: Marc Bocquet and Massimo Bonavita	

13:00 to 13:30	<b>Computational Optimizations and Emulation of EDA Perturbed Members and Statistics</b>	Elias Holm (ECMWF) Wei Pan (ECMWF)
13:30 to 14:00	<b>Merging DA and ML at various degree: examples from DA for Arctic Sea ice and for ocean biogeochemistry</b>	Alberto Carrassi (University of Bologna)
14:00 to 14:30	<b>Emerging role of machine learning in the data assimilation pipeline at NOAA</b> Virtual presentation	Sergey Frolov (NOAA PSL)
14:30 to 15:00	<b>Coffee break</b>	
15:00 to 15:30	<b>RIKEN's activities to integrate DA and AI/ML</b>	Takemasa Miyoshi (RIKEN)
15:30 to 16:00	<b>AI-DOP: Learning a medium-range weather forecast directly from observations</b>	Mihai Alexe (ECMWF)
16:00 to 17:00	<b>Panel discussion</b>	