

ECMWF and Copernicus: Weather, Climate and Atmosphere from Space

6 March 2019, 08:00 to 19:00, Brno Observatory and Planetarium, Czech Republic

Background briefing

We are delighted to welcome you to our Copernicus seminar at the Brno Space Days.

The aim of this event is to give you an overview on the story of Copernicus – Europe's eyes on Earth. As the European Union's flagship Earth observation programme, Copernicus provides free-to-use data and information services relating to environmental and security issues. The data provided by Copernicus helps governments, scientists, businesses and organisations throughout Europe to plan for the future and implement change. The Copernicus Climate Change Service (C3S) and the Copernicus Atmosphere Monitoring Service (CAMS) are implemented by the European Centre for Medium-Range Weather Forecasts (ECMWF) on behalf of the European Union.

The seminar will give users detailed insight into the products and services provided by the Copernicus Earth observation programme, with a focus on C3S and CAMS.

Participants will hear how a multitude of benefits and opportunities arise from this wide range of freely accessible data and services. For example, air quality and emissions monitoring information can be used in the transport, energy and health sectors. Reliable temperature data and forecasts can help the agriculture, construction and urban planning sectors take appropriate climate change adaptation measures.

The Copernicus programme was established to help address some of the greatest challenges facing our planet's current and future health. Earth observation technology is used to help countries respond to climate change and address challenges in key sectors.

Copernicus consists of a dedicated constellation of satellites, called 'Sentinels', along with third-party satellites — known as 'contributing space missions'. Satellite data is

complemented by in-situ (on site) sensors on land, sea and air to provide extensive and comprehensive Earth observation data.

As the data are freely available to the general public, public authorities and policy makers, scientists, entrepreneurs and businesses on a full and open basis, the Copernicus programme is instrumental in climate change adaptation and long-term planning.

A large number of businesses benefit from Copernicus data — from brewing better beer in the case of Heineken through to monitoring of water sources by water managers and the planning of wind farms by businesses in the energy sector.

Copernicus looks for the next bright idea to help businesses adapt to climate change.

Drawing on expertise from many years of European research, Copernicus is continually looking for ideas to help public sector organisations and businesses in climate-sensitive sectors adapt to climate change.

Therefore, the organisation is actively seeking innovative applications and ideas via its Invitation to Tender programme.

In order to build a climate-change proof society, we need to improve the way in which climate datasets are processed and used to inform decisions in both business and societal sectors.

The Copernicus Climate Change Service, therefore, has issued two ongoing Invitations to Tender (ITTs): businesses are welcome to apply for Use Cases (for bids in the range of €100,000-250,000) and Demo Cases (for bids in the range of €50,000-150,000).

A variety of organisations have already won contracts including for modelling seasonal weather to support trading operations in commodities affected by climate and generating virtual wind and other climate simulations to plan and safeguard renewable energy projects.

More information can be found here: <https://climate.copernicus.eu/index.php/invitation-tender>

Agenda

Wednesday 6 March 2019

Time	Topic	Speakers
8:30-9:00	Registration	
9:00-9:15	Opening	Jiří Dušek , Director of Brno Observatory and Planetarium
09.15-09.30	Introduction	Juan Garcés de Marcilla , Director of Copernicus Services, ECMWF
09.30-10.00	Use of ECMWF Forecast, Products and Services	Martin Palkovic , Director of Computing, ECMWF Umberto Modigliani , Head of User Support, ECMWF
10.00-10.30	ECMWF HPC, Cloud Computing	Martin Palkovič , Director of Computing, ECMWF
10.30-11.00	Copernicus Atmosphere Monitoring Service Product Portfolio, Cities Use Cases - Air Quality, Pollen, Solar	Johannes Flemming , Head of CAMS IFS Forecasts, ECMWF
11.00-11.30	Copernicus Climate Change Service Product Portfolio, SIS Sectoral Information System	Juan Garcés de Marcilla , Director of Copernicus Services, ECMWF
11.30-12.30	MEDIA INTERVIEWS + Lunch Break	
12.30-13.00	User Uptake Initiatives, DIAS, Social Media, Communication	Stéphane Ourevitch , Copernicus Support Office, SpaceTec Partners
13.00-13.30	ECMWF Data and Services for Weather Forecasting	Taťána Míková , CZECH TV, Weather Service Department
13.30-14.00	ECMWF Data and Services for Weather Forecasting	Michal Žák , CZECH TV, Weather Service Department
14.00-14.30	Windy App Based on European ECMWF Model Data	Tomáš Slavkovský , WINDY
14.30-15.00	COFFEE BREAK	
15.00-15.30	C3S User Learning Services, Training, CDS, Hackathons, What Does C3S Mean to Me	Gianmarco Paris , In-country Trainer C3S, ECMWF
15.30-16.00	Using C3S data to Solve Climate Adaptation Challenges	Joreen Merks , Researcher Water Systems and Global Change, Wageningen University
16.00-16.30	Discussion, Closing	
16.30-18.30	NETWORKING SESSION	

SPEAKERS in order of appearance



Jiří Dušek, Director of Brno Observatory and Planetarium

Jiří Dušek is a Czech astronomer, astrophysicist and politician. He has been the Director of the Brno Observatory and Planetarium for eleven years. Since 2016, Dušek is also a city senator in Brno (District 58). One of his ambitions is to make Brno a leading centre of science, art and education.



Juan Garcés de Marcilla, Director of Copernicus Services, ECMWF

An engineer by education, Juan Garcés de Marcilla has over 25 years of experience in the space sector in both public and private concerns including the European Space Agency. He has the overall responsibility for the strategic development and implementation of the Copernicus Atmosphere Monitoring Service (CAMS) and Copernicus Climate Change Service (C3S). Before joining Copernicus, he was CEO of Thales Alenia Space Spain, where he oversaw a 20% revenue growth from 2009 to 2014, despite the economic crisis in Spain. He firmly believes that the insights the Copernicus services yield need to be acted upon and is committed to making that happen through collaboration with public and private bodies and the provision of quality-assured, reliable data.



Martin Palkovič, Director of Computing, ECMWF

Since October 2018, Martin Palkovič is in his current role of Director of Computing at ECMWF. Before, he was the Vice President of Engineering at Cudasip Ltd in Brno, Czech Republic. Previously he was Managing Director of IT4Innovations, where he established and managed the Czech National Supercomputing Centre. A Slovakian national, Dr Palkovič holds a PhD in electrical engineering from the Technische Universiteit Eindhoven. He has served on several advisory boards and is currently a member of the EU Horizon 2020 Future and Emerging Technologies Advisory Group.



Umberto Modigliani, Head of User Support, ECMWF

Umberto Modigliani is the Head of the User Support Section at ECMWF. His team is responsible for the technical assistance to users accessing ECMWF's computing and archiving facilities to run their own models on the high-performance computing facility or to analyse data retrieved from the largest archive of meteorological data in the world. The User Support Section is also responsible for the provision of data services to hundreds of licensed commercial customers making use of ECMWF's meteorological forecast data to provide their services. In the last couple of years, he was responsible for establishing the user support function for the Copernicus Services Department. Prior to joining ECMWF, Umberto was a post-doctoral researcher, a high school teacher of mathematics and physics and an associate professor of computer science at the University of Florence and the University of Siena.



Johannes Flemming, Head of CAMS IFS Forecasts, ECMWF

Johannes Flemming is a Principal Scientist in the development section of the Copernicus Atmosphere Monitoring Service (CAMS) at ECMWF. He coordinates the development of components on atmospheric composition in the Integrated Forecasting System (IFS) that are used for CAMS. Also, one of his responsibilities is the transition of the CAMS developments in the operational CAMS Near-Real-Time forecasting system. Johannes Flemming studied meteorology and started working at ECMWF in 2004. Since 2015 he is part of CAMS.



Stéphane Ourevitch, Copernicus Support Office, SpaceTec Partners

Stéphane Ourevitch is the key point of contact for Earth Observation and Security activities within SpaceTec. Prior to SpaceTec he has held top management positions at Dassault Electronique and Becker Flugfunkwerke. He mastered the consulting trade at Arsenale Novissimo and International Development Partners where he led various communication and consulting assignments in the space, aviation and energy domain.

Stéphane has an impressive academic background, holding a Masters in Political Sciences and International Affairs from the Institut d'Etudes Politiques de Paris and a Masters in Law. Later in his career he obtained an MBA from INSEAD.



Taťána Míková, CZECH TV, Weather Service Department

Taťána Míková is a Czech meteorologist and has been a weather broadcaster on the public Czech Television station since 1990. She obtained a degree from the Department of Meteorology and Climatology at the Faculty of Mathematics and Physics of the Charles University in Prague. After working at the Czech Hydrometeorological Institute for several years, she obtained a degree in video journalism in 1999. Within the Czech TV organisation she is the Head of the Weather Department. She is the author and co-author of numerous scientific publications and articles in the field of climatology and meteorology, including the 'Climate Atlas of Czechia'.



Michal Žák, CZECH TV - Weather Service Department

Michal Žák is a Czech meteorologist, moderator and university educator. Since 2005 he has been moderating the weather forecasts on Czech TV. He graduated from the Department of Meteorology and Climatology at the Faculty of Mathematics and Physics of the Charles University in Prague. Since May 2005, he has been working for the Czech Television station as a presenter of the weather forecasts. At ČT he also worked as a moderator of the Turbulence Weather magazine, which was broadcasted on CT24 from 2011 to 2013. He also cooperates with the Czech Hydrometeorological Institute in Prague and lectures at the Faculty of Mathematics and Physics of Charles University in Prague.



Tomáš Slavkovský, WINDY

After graduating from the State University of New York, Empire State College, and the Edinburgh Napier University, Scotland, in Business Administration and Business Management, Tomáš became Project Manager at szenam.cv, the largest and most popular Czech web portal. Later, he became Marketing Manager at Melown Technologies. Currently, he is Marketing Manager of Windy, an app based on ECMWF model data.



Gianmarco Paris, In-country Trainer C3S, ECMWF

After obtaining various degrees in biology at the University of Parma, he held a post-doc funded by the European Union. Since 1994 he has been teaching in the field of geographical information systems (GIS). Since 1997 he has been providing scientific advice for the application of GIS to issues related to environmental sciences and territorial planning, collaborating with universities, research institutions, municipalities, provinces, regions, ministries and private companies.

In 2016 he joined the Trainer and Coach Network of EIT Climate-KIC and in 2018 he became In-country Trainer in Italy for the Climate Data Store of the Copernicus Climate Change Service.



Joreen Merks, Researcher Water Systems and Global Change, Wageningen

After studying Civil Engineering, Water Management and Communication at the Technical University Delft, Merks worked as a freelance science writer and a research student. Currently she is working at Wageningen University as Researcher Water Systems and Global Change.

Notes to editors

Copernicus is the European Union's flagship Earth observation programme. It delivers freely accessible operational data and information services which provide users with reliable and up-to-date information related to environmental issues.

C3S and CAMS are both run by ECMWF on behalf of the European Commission. ECMWF is an independent intergovernmental organisation, producing and disseminating numerical weather predictions to its 34 Member and Co-operating States. CAMS is implemented by the European Centre for Medium-Range Weather Forecasts (ECMWF) on behalf of the European Union. ECMWF also implements the Copernicus Climate Change Service (C3S). ECMWF is an independent intergovernmental organisation, producing and disseminating numerical weather predictions to its 34 Member and Co-operating States.

More information on Copernicus: <http://www.copernicus.eu>

The Copernicus Climate Change Service website can be found at <https://climate.copernicus.eu/>

The Copernicus Atmosphere Monitoring Service website can be found at <http://atmosphere.copernicus.eu/>

The ECMWF website can be found at <https://www.ecmwf.int/>

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