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SEMINAIRE CNRM

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DESTINATION EARTH: presentation of the project and progress

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Lien BJ : https://bluejeans.com/568029304/7652

Abstract:

Destination Earth – DestinE – is an ambitious initiative of the European Commission, in support of its Digital Strategy and the Green Deal. Bringing together scientific and industrial excellence from across Europe, DestinE will contribute to revolutionising the European capability to monitor and predict our changing planet, complementing existing national and European efforts. Based on the integration of extreme-scale computing, Earth system simulations and the real-time exploitation of all available environmental observations, DestinE will develop high-accuracy digital twins, or replicas, of the Earth.

Under the European Commission's leadership, and in coordination with the Member States, scientific communities and other stakeholders, ECMWF, ESA and EUMETSAT are the three entrusted entities tasked with delivering the first phase of the DestinE by 2024.
ECMWF is responsible for building the 'digital twin engine' software and data infrastructure and for using it to deliver the first two high-priority digital twins, while European Space Agency (ESA) provides the platform through which users will access the service, and the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) develops the data repository.

This talk will give a high-level introduction of the programme, and it will particularly focus on the digital twin engine and first two priority digital twins. The Digital Twin on Weather-Induced and Geophysical Extremes will provide capabilities for the assessment and prediction of environmental extremes on timescales of a few days ahead. The Digital Twin on Climate Change Adaptation will develop a multi-decadal, global, storm/eddy-resolving numerical Earth-system simulation capability with the timely delivery of climate information for policy adaptation. The talk will both highlight progress in the first year of the programme, and some of the challenges ahead to develop digital twins of the earth.