KARL-FRANZENS-UNIVERSITÄT GRAZ
UNIVERSITY OF GRAZ
FWF-DK Climate Change

Wegener Center

Invitation to FWF-DK Guest Lecture and WEGC Lunch Seminar

High-resolution extreme weather forecasting and perspectives under climate change

Prof. Roland Potthast

Head of Data Assimilation, Deutscher Wetterdienst/DWD, Offenbach/Main, Germany

Thursday, 26 January 2017 | 12.00 to 13.15
SR 56.11 (Wegener Center, Brandhofgasse 5, 1st floor)

Please register at bettina.schlager@uni-graz.at until January 23rd so that we can prepare a sandwich for you!

The question of high-impact weather and its relation to climate change today is of tremendous importance for all parts of our modern world. It touches all basic layers of a modern society, from logistics and production to national safety, from renewable energy political strategy and daily energy supply to personal holiday planning. National weather services and research institution are reacting to the increasing need to estimate risk and distributions of both standard variables of weather and climate, such as temperatures or humidity, and high-impact phenomena such as strong precipitation, wind gusts and storm, tornados, hurricanes or fog. The agenda of weather and climate forecasting and projection today includes the development and operation of ensemble forecasting system (EPS) on all scales, which have the ability to model and describe the distribution of possible events and as such the variability of extreme weather, its variables and phenomena.

We describe the setup of the ensemble data assimilation (EDA) and forecasting systems, which have been developed and are under development at DWD, including the ICON global model with its hybrid ensemble variational data assimilation (EnVAR) and ensemble prediction system ICON EPS as well as the high-resolution ensemble data assimilation system COSMO-KENDA (Kilometer Scale Ensemble Data Assimilation), which is in the process of becoming the operation system at DWD and further members of the COSMO consortium to drive the high-resolution ensemble forecasting system COSMO-DE-EPS. We demonstrate the high quality of the system.

We will end with giving perspectives on the use of the coupled ICON-EPS COSMO-EPS ensemble system for the investigation of climate variability for reanalysis and climate projection, which is under investigation by DWD core teams in collaboration with the Hans-Ertel center HErZ in Bonn.

Organised by the FWF-DK Climate Change in cooperation with the
Wegener Center for Climate and Global Change (WEGC) at the University of Graz

kindly suported by
FWF
Der Wissenschaftsfonds.