

HPC for Climate Modelling and Simulation

27th February 2014

Brussels

Participants profile and photo

**European Commission
DG CONNECT
Unit eInfrastructure**

**Giovanni Aloisio, EESI coord weather/climate
Professor, U. Salento & CMCC**



Giovanni Aloisio is full professor of Information Processing Systems at the Dept. of Innovation Engineering of the University of Salento, Lecce, Italy and the director of the “Scientific Computing and Operations” Division at the Euro-Mediterranean Center on Climate Change (CMCC). He is member of the ENES HPC Task Force. He is one of the key experts of the IESP project (International Exascale Software Project). He also chaired the WCES (Weather, Climatology and Solid Earth Sciences) panel which contributed to the PRACE strategic document on “The Scientific Case for HPC in Europe”. He is the responsible for CMCC of the EU-FP7 IS-ENES2 project and the chair the WCES working group of the EU-FP7 EESI2 project.

**José M. Baldasano Recio, Professor and Member of the “Scientific Steering Committee” of PRACE
Technical University of Catalonia (UPC) and Barcelona Supercomputing Centre**



He is Full Professor in Environmental Engineering in the Technical University of Catalonia (UPC) and director of the Earth Sciences Department in the Barcelona Supercomputing Center (BSC_CNS). His research activities are oriented to air quality, mineral dust and climate modelling. He was member of the “Scientific Steering Committee” of PRACE HPC European Initiative (from 10.2010-12.2012); and he is member of the IPCC (Intergovernmental Panel on Climate Change). He has been director of 27 PhD theses. Award “Rey Jaime I” in Environmental Protection, 1997 and Diploma of Intergovernmental Panel on Climate Change (IPCC) for the contribution to NOBEL PEACE PRIZE, 2007.

CV: <http://www.bsc.es/about-bsc/staff-directory/baldasano-recio-jose-maria>

**Dr Peter Bauer, Head of Model Division position in the Research Dept.
ECMWF**



The division comprises a Physical and a Numerical Aspects section with about 25 staff. His background is Meteorology with a PhD from Hamburg University. He worked at DLR in Germany, NOAA and NASA in the US as well as IPSL/CETP in France before joining ECMWF in 2000.

The ECMWF scalability project has been launched this year and he is the project manager. It will allocate about 20 staff across ECMWF and intend to build in strong collaboration with member States and other external entities incl. vendors. There are many common issues between NWP and Climate prediction and it will be advisable to define cross-community links on this subject.

**Andy Brown, Director of Science
Met Office**



Andy Brown is Director of Science at the Met Office. His responsibilities include leading the teams developing the Unified Model for weather and climate prediction, including significant redesign to cope with future HPC architectures.

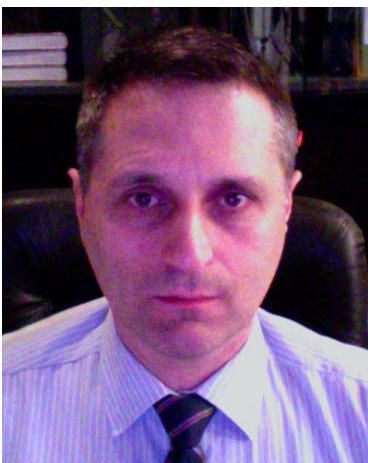
More details at <http://www.metoffice.gov.uk/research/people/andy-brown>

**Reinhard Budich,
Max Planck Institute of Metrology**



Reinhard Budich is an Oceanographer active in Climate Modelling and related infrastructures for over 25 years. As ICT-Representative of MPI for Meteorology he is responsible for MPIM's HPC strategy. He was Technical Coordinator of the FP7 project IS-ENES, Project Manager of the COSMOS network and Director of the FP5 PRISM project. Since 2001 he has also been running the ENES office in Hamburg.

Milan Dacic, NWP Expert



Milan Dacic, meteorologist, expertise in numerical weather and climate prediction. Previously national focal point for UNFCCC + IPCC. Worked at Hydrometeorological Service of Serbia (until 04/2013 Director-General and Permanent Representative of Serbia with the WMO, NWP expert onwards). Instrumental in setting-up of sub-regional SEE Virtual Climate Change Center (WMO RA VI official network member) and its operational functions. Managed the activity on creation of Integrated Earth Modeling System at SEEVCCC (atmosphere-ocean-aerosol-soil-surface hydrology components) and its application in operative seasonal prediction system cycle and climate projection studies. WMO Consultant for delivering the concept of Regional Multi Hazard Early Warning System for the Western Balkan and Turkey, under the UNISDR/WMO Project supported by the European Commission (Instrument for Pre-accession Assistance).

Francisco J. Doblas-Reyes, Director

IC3



Francisco Doblas-Reyes is an ICREA Research Professor at the Institut Català de Ciències del Clima (IC3) and his main research interests are climate variability and prediction on time scales ranging from one month to several years. He is co-chair of the Working Group on Seasonal-to-Interannual Prediction (WGSIP) of the World Climate Research Programme and member of the steering Committee of the Polar Prediction Project (PPP) of the World Weather Research Programme. He is also coordinator of the FP7 project SPECS.

Dr Marie-Claire Greening, Senior Earth Observation Applications Engineer

European Space Agency



Marie-Claire Greening is a Senior Earth Observation Applications Engineer within the European Space Agency's Climate Office at Harwell in the UK. She is responsible for data access and exploitation within ESA's Climate Change Initiative. Marie-Claire joined the Climate Office from industry where she established a successful consultancy company in Earth Observation. She has led initiatives for ESA, NASA and USGS, actively participating within the international EO community and having a particular focus on data quality assurance, technical support and international facilitation.

Sylvie Joussaume, IPSL, IS-ENES coordinator

CNRS



Sylvie Joussaume is a researcher within CNRS. She is an expert in climate modelling. She has been involved in IPCC assessment reports since the third report. Previously she was appointed as director of the National Institute for Earth sciences and astronomy (INSU) from CNRS. She is chairing the scientific board of the European Network for Earth System modelling (ENES, <http://enes.org>) and coordinates the FP7 infrastructure projects, IS-ENES and IS-ENES2, which integrate the European climate models in a common research infrastructure dealing with models, model data and high-performance computing for climate (<http://is.enes.org>) (2009-2017) and has recently published its infrastructure strategy for 2012-2022. She is vice-chair of the PRACE scientific committee and chairs the scientific committee or ORAP that promotes high-performance computing in France.

**Bryan Lawrance, Director
NCAS Model and data**



Bryan Lawrance is the Director of Models and Data at the UK National Centre for Atmospheric Science (NCAS) and the Director of the Centre for Environmental Data Archival (CEDA) at the UK Science and Technology Facilities Council (STFC). In addition, he holds a chair in weather and climate computing at the University Of Reading, and just about maintains an active research profile in atmospheric science (with interests in earth observation and high resolution modelling of atmospheric phenomena).

**Antonio Navarra, Director
CMCC**



Antonio Navarra is the President of the Euro-Mediterranean Center on Climate Change. Born in Naples in 1956, he graduated in Physics in Bologna in 1980 and returned to Italy in 1986 after a PhD at the Geophysical Fluid Dynamics Laboratory in Princeton. He is Dirigente di Ricerca of the National Institute of Geophysics and Volcanology. Dr. Navarra has been a member of the Consiglio Direttivo of the National Institute of Geophysics and Volcanology and of the National Institute of Astrophysics. He's an Affiliate Scientist of the National Center for Atmospheric Research in the US and a member of the Scientific Advisory Committee of the Asia-Pacific Climate Center in South Korea. Dr. Navarra teaches in the "Climate Change Science and Management" Ph.D program at Ca' Foscari University in Venice.

**Serge Planton, Head of Climate Modelling Group
Meteo France**



Serge Planton, senior scientist, is since 1995 the head of the climate division of the "Centre National de Recherches Climatiques" of Météo-France, the French weather service. This climate division participates to the international simulation exercises that serve as a basis of the IPCC (Intergovernmental Panel on Climate Change) assessment reports and produces and analyses climate change scenarios. He is involved in European and national projects dealing in particular with climate model development and evaluation, and with climate services.

Stéphane Requena, Chief Technical Officer at GENCI and Member of the PRACE Board of Directors

GENCI



Stephane Requena Chief Technical Officer at GENCI, an agency in charge of leading the French HPC strategy for research and of coordinating its major equipment located into 3 national centres, made available for civilian research to French scientists.

GENCI is the French representative in PRACE, the European HPC research infrastructure composed by 25 members in charge of providing access to world-class HPC resources and services to European researchers from academia and industry.

Stéphane is member of the PRACE Board of Directors and he's involved in EC funded Exascale projects like EESI2, Mont-Blanc and also PRACE implementation projects where he has a specific action towards engagement of industrial users and especially SMEs.

Markku Rummukainen, Coordinator of Swedish climate modelling platform

Lund University



Markku Rummukainen is Climate Advisor at the Swedish Meteorological and Hydrological Institute (SMHI) and Professor in Climatology at Lund University. His background is in stratospheric research, regional climate (1997-present) and Earth System modelling (2000-present). He has been the Head of the regional climate modelling unit at SMHI, (the Rossby Centre), Director of the Swedish regional climate modelling programme SWECLIM and part in such EU-projects on climate modelling as PRUDENCE and ENSEMBLES. Today, he coordinates the Strategic Research Area MERGE (Modelling the Regional and Global Earth system) with five Swedish universities and the SMHI. He is also in the Board of Directors of the Swedish National Infrastructure for Computing (SNIC).

Julian Wilson, Policy Co-ordinator in the Directors Office

Institute for Environment and Sustainability, DG JRC



An atmospheric modeller; at the JRC he initially worked on aerosol microphysical modelling developing models that culminated in M-7 and its' implementation in ECHAM5: the Hamburg Aerosol Model (HAM). He also ran procurements of external HPC for the JRC, first with ECMWF then CINECA and latterly has been involved in IES policy support to inter-alia DG CLIMA, Adaptation policy and COPERNICUS.