

**Plenary Talk**

PV V Tue 9:45 HSZ/AUDI

**The European Destination Earth initiative – a paradigm change for weather and climate prediction** — ●PETER BAUER — ECMWF, Reading, UK

Destination Earth is a new European Commission funded activity to create a so-called digital twin of the Earth. Digital twins create unprecedented opportunities to generate and interact with highly realistic digital replica created from the combination of computer simulations and observations. Destination Earth’s primary focus is on the use of twinning for dealing responsibly with extreme weather and climate change.

Weather and climate prediction are high-performance computing and big data applications with outstanding societal and economic impact ranging from the daily decision-making of citizens to that of civil services for emergency response, and from predicting environmental impacts on food, agriculture and energy markets as well as for risk and loss management by insurances. The uncertain evolution of weather extremes with climate change adds significant political pressure to accelerate scientific development and turn science into societal benefit.

Destination Earth is the result of a decade worth of planning by leading European climate, geoscience and computing scientists. The activity will create a new information system in support of the European Green Deal and Digital Strategy.