# SORS: Learning by Redundancy: Climate Multi-Model Ensembles and Machine Learning

Speaker: Matteo De Felice,Climate Modelling laboratory, ENEA, Italy

Abstract: Climate Models are sophisticate tools able to simulate the interactions among various components of the Earth system (atmosphere, oceans, bio-sphere, etc.). Those tools are nowadays used for many purposes: to improve the knowledge of our planet, to analyse the projections for the future climate and to forecast the climate at multiple time-scales for a wide range of applications. In the last decade the use of climate ensembles (and multi-model ensembles) has become very common, the dimensionality of climate datasets has increased drastically (thanks also to a general increment of temporal and spatial resolutions of models). Unfortunately, this rise of the dimensionality of datasets did not coincide with the development of techniques designed to cope effectively with this massive amount of information.
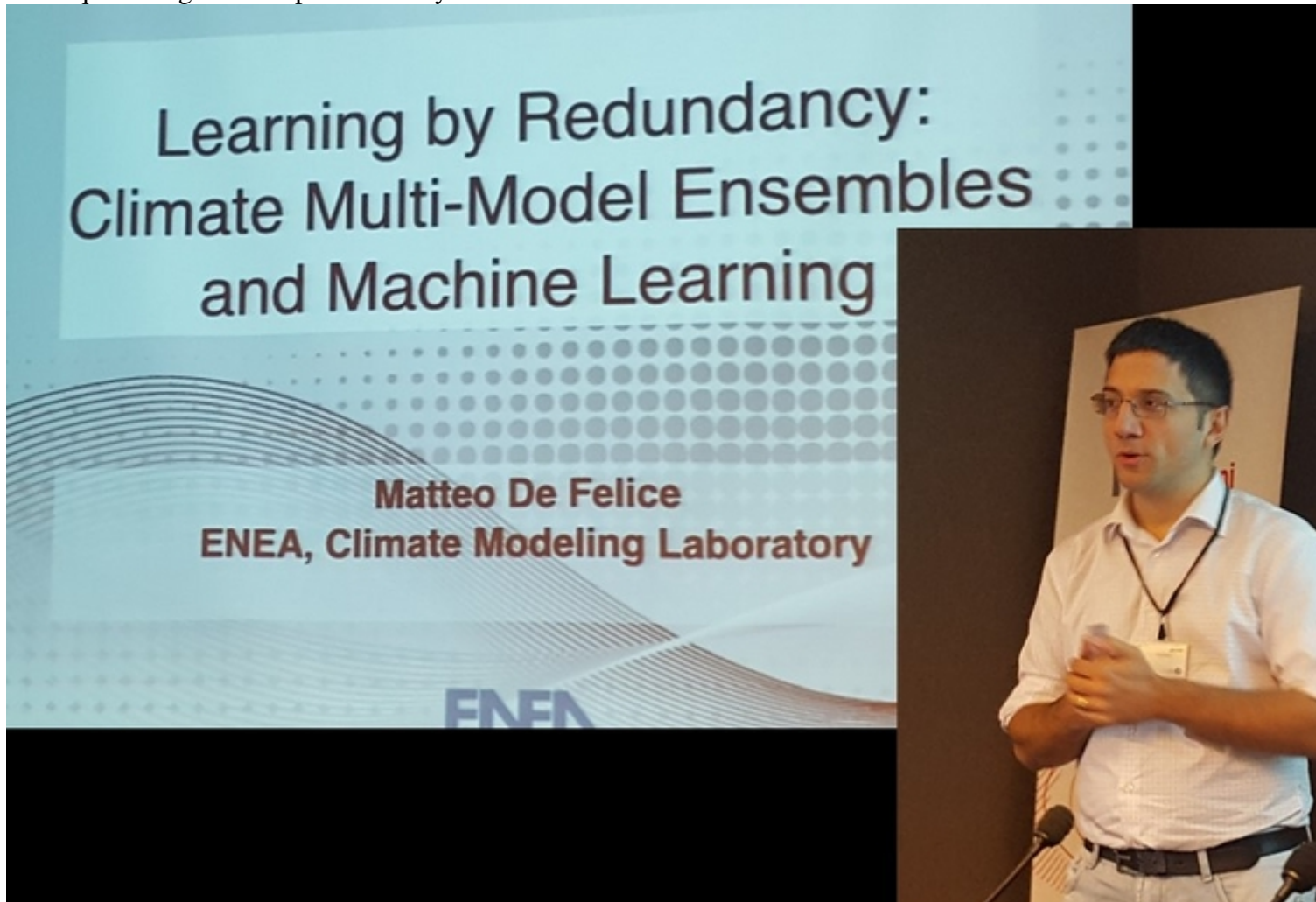
Bio: Matteo De Felice is staff scientist at the Climate Modelling laboratory at ENEA, Italy. He received his Ph.D. degree in Computer Science & Engineering at the Università "Roma Tre" in 2011. His research is focused on the extraction and use of information from climate forecasts for the application in the energy sector.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

---