

Results of the High-Tune project

Frédéric Hourdin & Fleur Couvreur

As an introduction of this conference, we will present the main outcomes of the Hight-Tune project that aims at using High-resolution simulations to improve and Tune boundary-layer cloud parameterizations. In particular, we have use state-of-the-art statistical tools and advanced radiative models applied to Large-Eddy simulations to improve cloud dynamics and cloud radiative effects in atmospheric models. First, using machine learning we have built a tool for a process-based calibration relying on the Single-Column Model/Large-Eddy simulation comparisons. Second, Monte Carlo computation applied offline to LES cloud field has provided references for the cloud radiative effects.