Microscale wind simulations and wind resource assessment
Microscale wind simulations using Reynolds Averaged Navier-Stokes (RANS) and Large-Eddy Simulation (LES) turbulence models are becoming increasingly important in the field of wind energy. These models are used for wind resource assessment, wind farm modelling, and operational forecast of high-resolution winds in complex terrains.

In wind energy, numerical modeling has become a key tool for industry at several stages. Coupling mesoscale meteorological models (WRF) with CFD allows for high-resolution microscale wind forecasts on complex terrains.