ExaOcean

ExaOcean is a BMBF project that aims to move ocean modeling with ICON-O towards ExaScale computing. For this purpose, an AI/ML method is developed at DKRZ that allows to emulate high-resolution model simulations from coarse-resolution ones using a "super-resolution" approach. Here, small and large eddies in the model play a crucial role to ensure that coarse-resolution simulations can scientifically compete with high-resolution ones. The project is carried out with our partners at the TU Hamburg, the Max Planck Institute for Meteorology and the Research Center Jülich.