A baseline for global weather and climate simulations at 1 km resolution

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In this talk I will summarise parallel efforts to improve the performance and portability while handling the increasing complexity for the different existing and emerging applications of ECMWF's Integrated Forecasting System (IFS), also known as the "European Model". Moreover, I will describe recent efforts towards increasing realism with storm-scale resolving simulations, including results from the recently completed seasonal simulation at 1.4km horizontal grid-spacing on Summit.