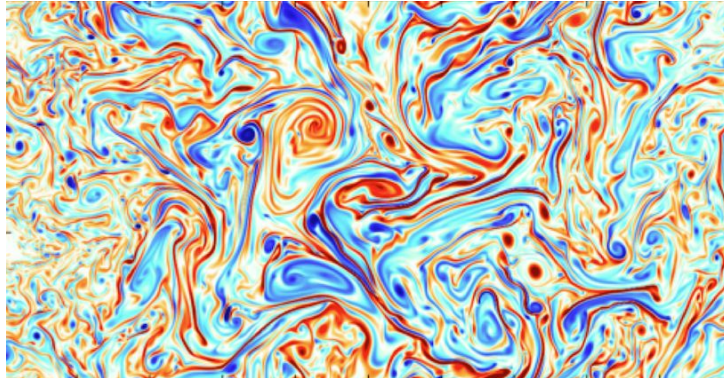


Numerical modeling of scale interactions in the ocean and the atmosphere



Ocean/atmosphere dynamics result from flow interactions on a wide range of time and space scales. The representation of such complex scale interactions is a key challenge for numerical modeling, regarding both operational applications and climate science. In recent years, various approaches were developed to address this challenge, e.g., unstructured grids, structured multi-grid, and scale-selective parameterizations. These approaches provide complementary answers to the same trade-off between computational cost and accuracy of model solutions. But the relative strengths and weaknesses of existing methods for multi-scale modeling are not fully understood.

The primary goal of this international workshop on « Numerical modeling of scale interactions in the ocean and the atmosphere» is to provide a status of knowledge on multi-scale modeling. The sessions of the workshop will in particular address the following aspects:

- Unstructured grid modeling: advances in numerical discretizations and efficiency.
- Advances in structured multi-grids
- High Performance Computing in multi-scale problems
- Scale-selective parameterizations
- Benchmarks for the comparison of structured and unstructured approaches

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