

Some numerical and statistical methods for modelling the atmosphere and ocean

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Abstract:

In this seminar I will present some recent work in numerical methods for forecasting models, as well as current efforts on modelling extreme wave events in the ocean.

For operational numerical weather prediction models, the choice of the time integration scheme is crucial and must take into account efficiency and stability in addition to accuracy. I will discuss a number of methods, which have recently been proposed as promising candidates.

In addition, I will give an overview of ongoing work within the MULTIWAVE project, focusing on an analysis of extreme sea states around Ireland, based on 29-year wave hindcast.