

Numerical Experiments on Deconvolution Applied to LES in the Modeling of Turbulent Flow

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Abstract

The Large Eddy Simulation is an important method to simulate turbulent flow. It does not produce a closed system of equations, to achieve this it is necessary to model the not-closed terms. The deconvolution can be used for this purpose. In this study some numerical experiments on this topic are performed with COMSOL Multiphysics®. The main objectives are to find an efficient way to implement deconvolution and to evaluate its numerical behavior, with particular attention to the boundary conditions, or rather to their LES-deconvolution modeling.