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# LSM-Webinar

Time: WED November 09, 2022 14:00 pm

ZOOM ID: 886 936 3932

## Large eddy simulation of a blunt body with sharp corners using a tensorial eddy viscosity model


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## Abstract:

The purpose of the present work is to test a new large eddy simulation (LES) model with the simulation of the flow around a rectangular cylinder with a chord-thickness ratio of c/D = 5, commonly known as BARC. The diversity of turbulent phenomena that characterize this case of study, notwithstanding the simple geometry of the solid body, provides multiple aspects on which to assess the performance of the new model. The flow is simulated in T-Flows for the well-established dynamic Smagorinsky scheme, for the new model -which introduces a new tensorial, non-linear approach to eddy viscosity, and for the implicit LES (ILES) approach forgoing the direct modeling of turbulence. All simulations are otherwise performed under the same configuration, which is designed to suit the characteristics of the LES approach. The new model is compared against the dynamic Smagorinsky model, the ILES, and previously existing high-accuracy direct numerical simulation data.



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