

NORMA : CONTRIBUTIONS UM AND INRIA

Starting for the doctoral student : october 2020

1.- IBM Brinkman. Oct-dec 2010.

Cylinder 140K or 1M ? hybrid model

2.- Multirate and IBM jan 2021- june 2021

Cylinder 140K or 1M ? hybrid model

3.- Turbulence : june 2021- june 2022 and more...

Hybrid DDES/DVMS and RANS/DVMS:

design of blending functions,

validation on Cylinder $Re_{\gamma}=140K$,

intermittency in RANS,

intermittency in DDES/DVMS.

4.- Final test cases june 2022- ...(helico, drone?)

Starting for the doctoral student : october 2020

1.- oct 2020 march 2021 High-order : CENO 3D

Development of the scheme.

Existing turbulence : DDES en Spalart-Allmaras.

Validation on elementary tests.

2.- march 2021- june 2021 Validation on Cylinder $Re_{\gamma}=140K$, 1M

3.- june 2021- october Sliding method for RM (MPI-based)

4.- june 2022 Final test cases

Proposals for papers

Paper 1.- Jan 2021 : IBM+hybrid Turb. comparisons of - numerical existing schemes (EBR and V6) , and - LES and hybrid models (DDES and hybrid with VMS) for a cylinder (we think of two Rey : 140K and 1M)

Paper 2.- June 2021 : Multirate and IBM vs ILU-SGS/IBM performance and accuracy. Cylinder 140K and 1M)

Paper 3.- March 2021 : CENO3D compared with EBR

Paper 4.- October 2021 : IBM vs Sliding