FLUIDES ET ENERGIE - MÉTHODES EXPÉRIMENTALES ET NUMÉRIQUES

FLUIDS AND ENERGY - EXPERIMENTAL AND NUMERICAL METHODS

Lecturers: Pierre DUQUESNE, Andrea MAFFIOLI, Didier DRAGNA

| Lecturers : 0.0 | TC : 0.0 | PW : 8.0 | Autonomy : 4.0 | Study : 6.0 | Project : 0.0 | Language : FR

Objectives

This teaching activity presents experimental and numerical methods in fluid mechanics, and the approach to be adopted for their practical implementation.

Keywords : Experimental protocal, Measurement techniques, Numerical simulation, Comparison model/experiment, Uncertainties

Programme

- Practical work on flow speed measurement in a jet
- Practical work on Bernoulli or Air treatment
- 4 BE sessions on a practical introduction to numerical simulation in fluid mechanics

Learning outcomes

- Know how to make use of experimental and numerical methods in fluid mechanics and energetics.
- Know how to design an experimental protocol to characterize a phenomenon.
- Know how to present the results of simulations or experiments.
- Know how to compare a model and measurements.

Independent study

Objectifs : Getting started with a numerical simulation software in fluid mechanics.
Exploitation of results from numerical simulation.

Méhodes : Use of the commercial software FLUENT.
Simulations performed under supervision during the three first BE and autonomously in the last BE.

Core texts

Assessment

Final mark = Know-how
Know-how mark = continuous assessment