

Dynamics of bubbles, drops and particles



Component
École Nationale
Supérieure
d'Électrotechnique
d'Électronique

In brief

- > **Ametys Code:** N9EM14C
- > **Open to exchange students:** No

Presentation

Objectives

This course provides the basis for understanding and modeling dispersed flows containing bubbles, drops or solid particles. Local dynamics are studied by writing the equation of the trajectory involving the forces of drag, history and added mass, in order to introduce the notions of terminal velocity, relaxation time and Stokes number.

Description

Introduction: examples of industrial and environmental applications - Differences between bubbles, drops and solid particles

- I. Solid particle dynamics: forces, drag laws, terminal velocity, relaxation time, Stokes number
- II. Fluid particles (bubbles and drops): forces, drag laws, terminal velocity, relaxation time, Stokes number
- III. Application examples