Mécanique des Fluides 1

Component
École Nationale Supérieure d'Électrotechnique d'Électronique

In brief

> **Code:** N6AM02A

Presentation

Objectives

Small Re

The object of this course is to describe the particular hydrodynamic phenomena that one encounters with small Reynolds numbers. The basic equations are commented, analyzed and solved in simple geometries.

Description

Small Re

Introduction: Re << 1 What is inertia? and applications
Basic equations and different formulations
Specific properties (linearity, reversibility, reciprocity) and consequences.
Fundamental Solutions of Stokes Equations
Cellule of Hele-Shaw
Lubrication (hydraulic bearing)
Flows in thin layers
Calculation of the stokes force