Low Reynolds Flows

Component
École Nationale Supérieure d'Électrotechnique d'Électronique

In brief

- **plugin.odf-inp:PLUGINS_ODF_COURSE_NBHOURS_TXT:** 12,25
- **Code ELP:** N6EM03B

Presentation

Objectives

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

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

Pre-requisites

Méca Fluides 1

Non-contractual information.
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