

**Course offered for the PhD program
in Civil, Chemical and Environmental Engineering
Curriculum in Fluid Dynamics and Environmental Engineering
Curriculum in Structures, Materials and Geotechnics
a.a. 2015/2016 (XXXI ciclo)**

(possibility of participation for students in other PhD cycles or other PhD courses)

1. Title

Hydrodynamic stability

2. Course Description

The course is a short introduction to hydrodynamic stability theory and covers the basic concepts regarding temporal stability of parallel shear flows. In particular we focus our attention on concepts like modal- and nonmodal stability analysis, as well as optimal perturbations and their respective relation to transition from laminar to turbulent flow.

3. Course Organization

The course consists of lectures and exercises in the classroom.

4. Teacher

Jan Pralits

5. Duration and credits

The course consists of 10 hours of lessons (2 credits).

6. Activation mode and teaching period

The course is annual and will be held in week 8 to 12 February 2016. The minimum number of participants to activate the course is 5.

7. Deadline for registration

The deadline for applications is January, the 30th 2016 (please, send an e-mail confirmation to Prof. J. Pralits Jan.Pralits@unige.it).

8. Final exam

Programming exercises in class of different arguments treated during the course