

**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. 2014/2015 (XXIX 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 16 to 20 February 2015. The minimum number of participants to activate the course is 7.

**7. Deadline for registration**

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

**8. Final exam**

Programming exercises in class of different arguments treated during the course