

**Course offered for the PhD program  
in Civil, Chemical and Environmental Engineering  
Curriculum in Structural and Geotechnical Engineering, Mechanics and Materials  
a.a. 2018/2019**

(course given in the framework of the “Young Scientist” scheme)

**1. Title**

Fluid-Surface Interaction across length scales

**2. Course Description**

- Lecture 1 - Microscopic aspects
  - Introduction
  - Microscopic Properties of Fluids and Surfaces
  
- Lecture 2 - Mesoscopic aspects
  - Multiphase/multicomponent surfaces
  - Moving contact lines
  - Physical examples and applications
  
- Lecture 3 - Macroscopic aspects
  - Rough, porous and deformable surfaces
  - Effective boundary conditions
  - Examples and applications

**3. Course Organization**

- 8th of January, 2:30 to 5 pm in A11
- 9th of January 9 to 12 am in A11.

**4. Teacher**

Shervin Bagheri from the Royal Institute of Technology (KTH) of Stockholm in Sweden  
(<https://www.bagherigroup.com/>)

**5. Duration and credits**

6 hours, 2 credits.

**6. Final exam**