PhD Course: “Advanced aspects of geotechnical modelling”

The course, open to all the interested PhD students, will be delivered by Luca Argani in the period 30th May – 1st June 2022.
The course provides an introduction to advanced modelling of granular materials within static and dynamic regime, taking into account for fully and partial saturation. Some preliminaries of continuum mechanics are provided to ensure better understanding and to help to extend the main topics of this course to more advanced applications. An overview of novel constitutive models is provided with applications to practical problems of geotechnical engineering, and novel aspects revealed by advanced numerical modelling are presented and discussed.

Contents:

1. Preliminaries on continuum mechanics.
2. Wave propagation in saturated porous media.
3. Hyperelastic constitutive laws for granular materials.
4. Partially saturated media.

Schedule:

Monday	30 May 2022	9:00-13:00	Room 1H
Tuesday	31 May 2022	9:00-13:00	Room 1H
Wednesday	1 June 2022	9:00-13:00	Room 1H

Teaching organisation:

- The course, 1.5 credits for the Italian learning system, is delivered in 3 lectures of 4 hours each., for a total amount of 12 hours.
- Lectures will be presented on the chalkboard (theory) whereas applications will be presented on slides.
- A reference list will be provided for further readings in each specific topic.

Registration: in order to access the course, please send an email to dicamphd@unitn.it.