



Salerno



University of Salerno



## 17<sup>th</sup> LARAM SCHOOL

5 – 16 September 2022

**Hybrid mode (on-line or in-person)**  
**each day 6 hours lessons, starting at 9:30 CET**

LARAM is an International School on "Landslide Risk Assessment and Mitigation" founded by the University of Salerno in 2005.

The Scientific Committee 2022-2024 comprises international experts in the field of Landslide Risk coming from 15 different Countries.

The School is directed at 40 PhD students selected every year among those working in the field of Civil Engineering, Environmental Engineering, Engineering Geology or with similar Engineering background.

✓ **More than 700** Alumni attended the LARAM School from **more than 200** Universities since **2006**.

### Programme of LARAM School 2022

- S1 - Introduction to landslides
- S2 - Landslide risk theory
- S3 - Landslide modelling
- S4 - Landslide risk analysis and zoning
- S5 - Landslide monitoring and mitigation
- S6 - Landslide risk management and risk governance

### More info:

- <https://www.laram.unisa.it/>
- <https://www.laram.unisa.it/school/2022hybrid/2022hybrid>

### LARAM School

Honorary President: Prof. Leonardo Cascini

President: Prof. Settimio Ferlisi

Coordinators: Prof. Michele Calvello, Prof. Sabatino Cuomo

Chair of the Technical Committee: Prof. Dario Peduto



[www.laram.unisa.it](http://www.laram.unisa.it)

# LARAM School 2022 (version 12 May 2022)

University of Salerno, Italy

5 - 16 September 2022

## Schedule in Italian Summer time (=UTC+2)

|                                                                      | 9:30 – 10:30                                                                 |                   | 10:30 – 11:30                                                   |                   | BREAK<br>30 mins | 12:00 – 13:00                                          |                   | 13:00 – 14:00     | 14:00 – 15:00                                                 |                   | BREAK<br>30 mins | 15:30 – 16:30                                              |                   | 16:30 – 17:00     |
|----------------------------------------------------------------------|------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------|-------------------|------------------|--------------------------------------------------------|-------------------|-------------------|---------------------------------------------------------------|-------------------|------------------|------------------------------------------------------------|-------------------|-------------------|
|                                                                      | Lesson<br>45<br>mins                                                         | Q&A<br>15<br>mins | Lesson<br>45<br>Mins                                            | Q&A<br>15<br>mins |                  | Lesson<br>45<br>Mins                                   | Q&A<br>15<br>mins | LUNCH<br>(1 hour) | Lesson<br>45<br>Mins                                          | Q&A<br>15<br>mins |                  | Lesson<br>45<br>mins                                       | Q&A<br>15<br>mins |                   |
| <b>Monday 5</b>                                                      | <b>Opening Ceremony</b><br>ICL President<br>LARAM President                  |                   | <b>3<sup>rd</sup> LARAM HONOUR Lecture</b>                      |                   |                  | <b>Jaboyedoff</b><br>Introduction to Landslides        |                   |                   | <b>Arbanas</b><br>In-situ investigations                      |                   |                  | <b>Arbanas</b><br>Geotechnical slope model                 |                   | TEST<br>(30 mins) |
| <b>Tuesday 6</b>                                                     | <b>Calvello</b><br>Landslide Risk Framework                                  |                   | <b>Calvello</b><br>Landslide susceptibility                     |                   |                  | <b>Mavrouli</b><br>Landslide frequency analysis        |                   |                   | <b>Mavrouli</b><br>Frequency-magnitude data                   |                   |                  | <b>Ferlisi</b><br>Elements at risk and their vulnerability |                   | TEST<br>(30 mins) |
| <b>Wednesday 7</b>                                                   | <b>Ferrari</b><br>Soil behaviour modelling                                   |                   | <b>Cotecchia</b><br>Landslide diagnosis                         |                   |                  | <b>Cotecchia</b><br>Landslides in fine-grained soils   |                   |                   | <b>Scavia</b><br>Rock slope stability analysis                |                   |                  | <b>Scavia</b><br>Rockfalls and avalanches                  |                   | TEST<br>(30 mins) |
| <b>Thursday 8</b>                                                    | <b>Ferrari</b><br>Geomechanics of landslides                                 |                   | <b>Thakur</b><br>Sensitive clay landslides                      |                   |                  | <b>Cascini</b><br>Landslide stages and evolution       |                   |                   | <b>to be confirmed</b>                                        |                   |                  | <b>to be confirmed</b>                                     |                   | TEST<br>(30 mins) |
| <b>Friday 9</b>                                                      | <b>Cuomo</b><br>Landslide initiation at slope scale                          |                   | <b>Cuomo</b><br>Landslide initiation at territorial scale       |                   |                  | <b>to be confirmed</b>                                 |                   |                   | <b>to be confirmed</b>                                        |                   |                  | Discussion Session with Professors                         |                   |                   |
| <b>Saturday 10</b>                                                   | Technical Tour [9:30-13:00] guided by University of Salerno ( <b>Cuomo</b> ) |                   |                                                                 |                   |                  |                                                        |                   |                   |                                                               |                   |                  |                                                            |                   |                   |
| <b>Monday 12</b>                                                     | <b>Cascini</b><br>Guidelines for Risk zoning                                 |                   | <b>Cascini</b><br>Preliminary level of Risk zoning              |                   |                  | <b>Calvello</b><br>Statistical analyses for zoning     |                   |                   | <b>Ko</b><br>Global risk assessment                           |                   |                  | <b>Ko</b><br>Site specific risk assessment                 |                   | TEST<br>(30 mins) |
| <b>Tuesday 13</b>                                                    | <b>Peduto</b><br>Multi-source data-based monitoring                          |                   | <b>Peduto</b><br>Innovation in landslide vulnerability analysis |                   |                  | <b>to be confirmed</b>                                 |                   |                   | <b>Froese</b><br>Remote sensing in large engineering projects |                   |                  | Student presentations 10 x 5 min                           |                   | TEST<br>(30 mins) |
| <b>Wednesday 14</b>                                                  | <b>Ferlisi</b><br>Strategies for landslide risk mitigation                   |                   | <b>Calvello</b><br>Early-warning systems                        |                   |                  | <b>Cuomo</b><br>Structural measures                    |                   |                   | <b>Ferlisi</b><br>Structural measures: case studies           |                   |                  | Student presentations 10 x 5 min                           |                   | TEST<br>(30 mins) |
| <b>Thursday 15</b>                                                   | <b>to be confirmed</b>                                                       |                   | <b>to be confirmed</b>                                          |                   |                  | <b>Zhang</b><br>Management stress test of urban system |                   |                   | <b>Zhang</b><br>Title to be confirmed                         |                   |                  | Student presentations 10 x 5 min                           |                   | TEST<br>(30 mins) |
| <b>LARAM Workshop 2022: New trends for Landslide Risk Mitigation</b> |                                                                              |                   |                                                                 |                   |                  |                                                        |                   |                   |                                                               |                   |                  |                                                            |                   |                   |
| <b>Friday 16</b>                                                     | <b>Glade</b><br>Workshop presentation #1                                     |                   | <b>Winter</b><br>Workshop presentation #2                       |                   |                  | <b>Nadim</b><br>Workshop presentation #3               |                   |                   | <b>LUNCH</b><br>(1.5 hours)                                   |                   |                  | <b>Round Table</b><br>(2 hours)                            |                   | <b>CLOSURE</b>    |