



UNIVERSITÀ
DI TRENTO

SERIES OF SEMINARS ON

SLOPE INSTABILITY: DIAGNOSIS AND RISK MITIGATION

WEDNESDAY 2nd AND THURSDAY 3rd SEPTEMBER 2026

LOCATION

University of Trento, Department of Civil Environmental and Mechanical Engineering
Main library (BUM, Biblioteca Universitaria di Mesiano, Aula Polifunzionale)
Via Mesiano 77, 38123, Trento, Italy

INFORMATION

The seminars are free to attend and will be held in person. They are organised as part of the PhD programme in Civil Environmental and Mechanical Engineering, but are highly suitable for post-graduate students as well as professionals. For further information please contact Giuseppe Pedone at giuseppe.pedone@unitn.it

ABSTRACT

The seminars aim at providing an insight into some of the most recurrent landslide mechanisms encountered in Italy, spanning from slow and deep instabilities to fast and shallow ones. The diagnosis of these landslide mechanisms often requires the use of interpretative modelling approaches that can only be calibrated and validated against comprehensive laboratory and field investigations. Examples of these investigations and their applications to a number of case studies will be discussed during the seminars, covering slope prototypes formed by fine-grained and coarse-grained materials, as well as deposits including rock blocks and soil layers. A special focus on the role played by vegetation will be provided, clarifying how soil hydraulic and mechanical properties might change due to the interaction with the vegetation roots.

AGENDA

WEDNESDAY 2nd SEPTEMBER 2026

13.30-13.40	<i>GIUSEPPE PEDONE – University of Trento</i> Introduction
13.40-14.30	<i>FEDERICA COTECCHIA – Polytechnic University of Bari</i> Diagnosis of landslide mechanisms: a geo-hydro-mechanics based methodology
14.30-15.30	<i>LUCIA SIMEONI – University of Trento</i> Monitoring the unseen: revealing extremely slow-moving landslides interacting with viaducts through integrated geotechnical monitoring
15.30-16.00	Q&A session and break
16.00-17.00	<i>GIUSEPPE PEDONE – University of Trento & VITO TAGARELLI – Polytechnic University of Bari</i> Slow and deep landslides in clay slopes: diagnosis and landslide risk mitigation measures
17.00-17.45	<i>VITO TAGARELLI – Polytechnic University of Bari</i> Step-like slow-moving landslides: challenges for diagnosis, hazard assessment and risk mitigation
17.45-18.30	<i>FEDERICA COTECCHIA – Polytechnic University of Bari</i> Towards the development of slope digital twins for landslide risk mitigation
18.30-19.00	Q&A session and concluding remarks

THURSDAY 3rd SEPTEMBER 2026

9.00-10.00	<i>GIANVITO SCARINGI – Charles University, Prague</i> Thermo-mechanical coupling in landslide shear zones
10.00-10.30	Q&A session and break
10.30-11.30	<i>FRANCESCA CASINI – University of Rome Tor Vergata</i> Full-scale test of a shallow landslide induced by artificial rainfall: analysis and interpretation
11.30-12.30	<i>MARIANNA PIRONE – University of Naples Federico II</i> Slope stability in partially saturated pyroclastic soil: field monitoring and numerical modelling
12.30-13.00	Q&A session and break
13.00-14.00	Lunch break
14.00-15.15	<i>MANUELA CECCONI – University of Perugia</i> Root-induced soil reinforcement for the protection of slope covers: geotechnical approaches and applications to a case study in central Italy
15.15-16.30	<i>ALESSANDRO FRACCICA – ISPRA</i> Slope stability: case studies on the influence of vegetation disturbance and adverse environments
16.30-17.00	Q&A session and concluding remarks
