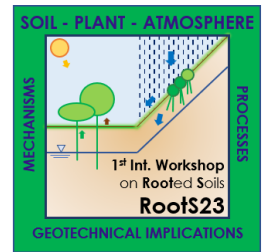



# 1<sup>st</sup> International Workshop on Rooted Soils

Soil-plant-atmosphere interaction: mechanisms, processes and geotechnical engineering implications

RootS23 - Perugia, 20<sup>th</sup> - 21<sup>st</sup> April 2023  
Final Programme



Thursday 20 <sup>th</sup> April 2023 - afternoon			
	15:00	Opening session	University of Perugia & Polytechnic of Bari
<b>Topic 1 – ground reinforcement</b>			
1	15:20	<b>Gerrit Meijer</b> <i>University of Bath (UK)</i>	Mechanical root reinforcement - Mechanisms, experiments and modelling perspectives
2	15:40	<b>Vittoria Capobianco</b> <i>Norwegian Geotechnical Institute (Norway)</i>	Root-soil feedback loops in bio-engineered slopes: examples from experimental studies at laboratory scale
3	16:00	<b>Pantaleone DeVita</b> <i>University of Napoli Federico II (DISTAR, Italy)</i>	Control of the coupling between vegetation and soil hydrological regime on the stability of pyroclastic soil mantled slopes in Campania (southern Italy)
4	16:20	<b>Massimiliano Schwarz</b> <i>Bern University of Applied Sciences (Switzerland)</i>	Upscaling of root reinforcement for practical applications
16:40 – 16:50 ----- Discussion (10 min) -----			
16:50 – 17:20 ----- Coffee break -----			
5	17:20	<b>Giovanni Biondi</b> <i>University of Messina (Italy)</i>	Seismic performance of root-reinforced slopes
6	17:40	<b>Zhun Mao</b> <i>French National Inst. for Agriculture, Food and Environment, INRAE – UMR AMAP (France)</i>	Root mechanical traits: mechanism, variation and impact on root reinforcement
7	18:00	<b>Francesca Todisco</b> <i>University of Perugia (Italy)</i>	The role of roots in SPAC and ecohydrological model
18:20 – 18:30 ----- Discussion (10 min) -----			
18:30 – 19:00  <b>Discussion from the floor – short presentations</b>			
Friday 21 <sup>st</sup> April 2023 – all day			
<b>Topic 1 - ground reinforcement</b>			
8	9:00	<b>Giuseppe Cardile</b> <i>Univ. Mediterranea di Reggio Calabria (Italy)</i>	Assessing the Reliability of Root Reinforcement Techniques for Sustainable Shallow-Landslide Prevention
9	9:20	<b>Alessandro Fraccica</b> <i>ISPRA (Italian Institute for Environmental Protection and Research (Italy)</i>	Roots reinforcement mechanisms at different soil hydro-mechanical states: laboratory results and interpretation
10	9:40	<b>Floriana Anselmucci</b> <i>University of Twente (Netherlands)</i>	The role of plant roots in the vadose zone: experimental quantification of the hydro-mechanical properties of vegetated sandy soil
10:00 – 10:10 ----- Discussion (10 min) -----			
10:10– 10:30 ----- Coffee break -----			
<b>Topic 2 – THM coupling</b>			
11	10:30	<b>Alessandro Tarantino</b> <i>University of Strathclyde (UK)</i>	Physically-based modelling of evapotranspiration to underpin the design of plant-based remedial measures for slope stability
12	10:50	<b>Ilaria Bertolini</b> <i>University of Bologna (Italy)</i>	From the calibration of the plant root water uptake spatial distribution to the quantification of its influence on slope stability

13	11:10	<b>Vito Tagarelli</b> <i>Polytechnic of Bari (Italy)</i>	The effects of selected vegetation within the soil-vegetation-atmosphere interaction: results from an in-situ test
11:30 – 11:40 ----- Discussion (10 min) -----			
14	11:40	<b>Anil Yildiz</b> <i>RWTH Aachen University (Germany)</i>	Volume change behaviour of root-permeated soils
15	12:00	<b>Sabatino Cuomo</b> , A. Di Perna, M. Martinelli, M. Moscarello <i>University of Salerno (Italy)</i>	The inception of debris avalanches: possible remediation via long-rooted grass
16	12:20	<b>David Boldrin</b> <i>James Hutton Institute, University of Dundee (UK)</i>	Hydro-mechanical reinforcement of slopes by plants: Species and traits matter!
12:40 – 12:50 ----- Discussion (10 min) -----			
13:00 – 14:30 ----- Light Lunch -----			
17	14:30	<b>Cristina Jommi</b> <i>University of Delft (Netherlands), Polytechnic of Milano (Italy)</i>	Increasing concern for climate impact on Dutch (organic) dykes
18	14:50	<b>Jean Vaunat</b> <i>Universitat Politècnica de Catalunya (Spain)</i>	Soil-Atmosphere-Vegetation interaction: a lesson from a field experiment
19	15:10	<b>Marianna Pirone</b> , A.S. Dias <i>University of Napoli Federico II (Italy)</i>	Effects of vegetation on hydro-mechanical behaviour of unsaturated pyroclastic slopes: a case study in Campania region
20	15:30	<b>Luca Pagano</b> <i>University of Napoli Federico II (Italy)</i>	Hydrological behaviour of a silty volcanic layer under vegetated conditions
15:50 – 16:00 ----- Discussion (10 min) -----			
16:00 – 16:45  <b>Discussion from the floor – short presentations</b>			

Scan the QR Code  
to download the  
digital version  
of the PDF book of  
**RootS23**

