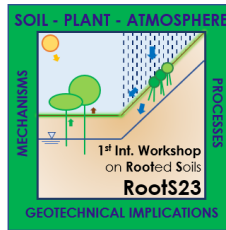


## 1st International Workshop on Rooted Soils\_RootS23

### SOIL-PLANT-ATMOSPHERE INTERACTION: MECHANISMS, PROCESSES AND GEOTECHNICAL ENGINEERING IMPLICATIONS

Perugia, Thursday 20<sup>th</sup> – Friday 21<sup>st</sup> April 2023 @ Department of Engineering, University of Perugia



#### *Short description*

The Workshop “SOIL-PLANT-ATMOSPHERE INTERACTION: MECHANISMS, PROCESSES AND GEOTECHNICAL ENGINEERING IMPLICATIONS” will focus on the current state of knowledge and research concerning the topic of soil-vegetation-atmosphere interaction. This is a very broad and multidisciplinary research theme, spanning several scientific fields, each contributing to the investigation and modeling of specific aspects of the soil and plant behavior, under variable climatic conditions. The considerable current scientific interest for this subject is testified by the numerous scientific studies published in the specialized literature over the last decade.

The Workshop is mainly addressed to researchers in geotechnical engineering, but the participation of researchers working in other fields (e.g., foresters, agronomists, soil physicians, ecologists, ....) is very welcome and considered fruitful for a constructive contamination of knowledge.

The presentations will address two main aspects:

- a) the mechanisms through which vegetation favours ground mechanical reinforcement;
- b) the phenomena and processes underlying soil-plant-atmosphere interaction, which typically require thermo-hydro-mechanical (THM) coupled analyses.

Invited presentations will focus in more detail on: plant's physical and hydrological properties; root architecture and properties; experimental evidence of the effects of vegetation evolution on soil hydrological and mechanical conditions; THM numerical analysis of the soil-vegetation-atmosphere interaction; ground bio-engineering techniques for shallow slope stability. The presentations will make reference to case studies and physical modelling.

Two 'open discussions' will be specifically dedicated to young researchers who shall contribute with very short presentations (3-4 minutes) and/or by posing questions to the Speakers and the floor for a stimulating and informal discussion.

*We hope that the workshop will represent an opportunity to share ideas and encourage new research collaborations.*


*Looking forward to see you in Perugia*

*kind regards,*

*Manuela Cecconi, Federica Cotecchia, Vincenzo Pane, Vito Tagarelli*

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A draft of the Workshop programme is available here: 

*Please, hurry up and book your stay in Perugia since during the Workshop the city also hosts another event of national interest.*

*For your convenience, some information for travelling to Perugia and suggested Hotels/BB are given here:*

