



*PhD course in Mediterranean Agricultural, Food and Forest Systems (SAAFM)*

**Seminar April 16<sup>th</sup> 2021**

**Modeling in soil science: opportunities and threats**

The quantitative description of physical, chemical, and biological interactions in soil at multiple scales and levels of refinement has been a long-standing goal and key challenge in soil science. The remarkable complexity of soil and its importance to a wide range of ecosystem services presents major challenges to the modeling of soil processes. Therefore, although modeling is an integral part of soil science, there are threats in modeling soil processes. In this seminar, in particular, we will talk about modeling some physical and chemical processes of soil, such as sorption and desorption of elements, solute transport, soil water retention curve, water flow in soil, and errors that may occur.

*Speaker*

**Habib Khodaverdiloo**

Habib Khodaverdiloo is currently an Associate Professor at the Department of Soil Science, Urmia University, Urmia, Iran. His research covers a wide range of topics in pedohydrology, environmental soil science and soil-water-plant relationships with a major focus on apply fundamental theories from physics and mathematics to understand and quantify water, energy, and/or mass fluxes in heterogeneous soils and sediments, plant response to abiotic stresses, and assessing and remediating contaminated and degraded lands using biological technologies. He also is interested in unconventional methods to characterize physical and geomechanical properties of porous media using a combination of experiments, new theories, and numerical simulations. He has long been interested in environmental modeling to understand soil constraints to agricultural/environmental systems, and developing technologies for sustainable agriculture. He has a Ph.D. in soil physics and conservation, with much theoretical and field experience dealing with environmental problems.

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The seminar will be held on April 16<sup>th</sup> via Microsoft Teams from 3 PM to 4 PM at the following link:

<https://teams.microsoft.com/l/channel/19%3af4f35972fa424f338de51b12591d7585%40thread.tacv2/March%25205th%2520-%2520Columba?groupId=d5893b88-db47-4831-a8c2-b0a3d09ae7ac&tenantId=bf17c3fc-3ccd-4f1e-8546-88fa851bad99>