



## Seminar

# Sensitivity Analysis of the Penman-Monteith Reference Evapotranspiration ( $ET_0$ )

Tuesday 23/02/2021, 09:00 - 11:30

MS Teams Virtual Room

<https://teams.microsoft.com/l/team/19%3a18cce9ae39a54ea49cebb813c3e76c71%40thread.tacv2/conversations?groupId=5fef7852-37d7-47a5-9615-b941ec783d65&tenantId=13b55eef-7018-4674-a3d7-cc0db06d545c>; PIN: bymti7o

**Description:** In this seminar, the basic concepts of sensitivity analysis will be explained and applied to predict responses of the Penman-Monteith Reference Evapotranspiration ( $ET_0$ ) to the four weather variables that are required for its estimation. A range between  $\pm 10\%$  of mean temperature, wind speed, solar radiation and actual vapor pressure will be used to assess the sensitivity of  $ET_0$  over a given time period.

The sensitivity analysis of  $ET_0$  helps to understand the impact of the key weather variables on the  $ET_0$  estimation, and it is especially important when data quality is a concern in data scarce regions.

In this seminar, the calculation procedure will be implemented in Microsoft Excel, graphs and plots will be created, and obtained results will be discussed.

**Note:** "Excel Exercise files" will be provided to participants.

**Curriculum:** Dr. Homayoon Ganji - As a Ph.D. graduate in Water Resources Engineering Laboratory, Division of Environmental Science and Technology, from the Mie University of Japan, he is a specialist in Water Resources Management/Engineering with several years experience. Recently, he has worked as a Research and Teaching Assistant at the University of Mie in Japan for graduate students with two projects, hydrological modeling adapted to flood forecasting, and laser land leveling approach related to water use efficiency. His main research field is related to the evaluation of reference evapotranspiration models in various climate zones, particularly semi-arid areas exposed to strong wind velocity.

**Target students and credits assigned:** Master Degree's students. Students who follow the seminar and conduct the assigned individual elaboration activity, thus delivering a short report to Prof. Ganji, will achieve 0.5 CFU. Registration for the seminar must be sent until 20/02/2021 to: homayonganji@gmail.com.

**Hosting:** Prof. Arianna Facchi