

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

Seminar June 25th, 2021

**THE CHALLENGES OF IRRIGATION IN THE MEDITERRANEAN AREAS
COPYING WITH THE CONSTRAINTS OF THE XXI CENTURY**

A growing population is exerting unprecedented pressure on water and energy resources, maximizing food production and reducing the impact on ecosystem services. Sociotechnical and socioecological variables are not just terms of our current scientific and technological dictionary but key variables to increase agricultural productivity and fulfill food and fiber supplies in a dissimilar world experiencing climate, land use, market, and social changes. With more than 45% of the world's agricultural production, irrigation has integrated scientific advancements in soil-plant-water relationships, engineering technologies, and innovation that have impacted farmers across the world. Furthermore, in the past decade, the massification of proximal and remote sensing, modeling and field data, as well as the “explosion” of robotics, artificial intelligence, and information technologies, have posed the conditions for innovating irrigation and contributing to tackle local-to-global challenges.

The seminar offers the opportunity to examine the challenges of irrigated agriculture coping with the constraints of the XXI century. The main results of research activities to preserve water, energy, and ecosystem services will be presented to emphasize the role irrigation may play to create resilient agriculture in a volatile and complex environment.

Speaker: **Leonor Rodriguez Sinobas**

Full Professor at the Agricultural Engineering School of the Polytechnic University of Madrid (UPM) and lecturer at the Hydraulic, Hydrology, and Engineering courses dealing with the irrigation system design and water management in irrigated areas. She received her MSc from the University of California, Davis, USA. Her scientific contribution regards the design and management of irrigation systems (mainly drip and subsurface irrigation) and the assessment of water use efficiency in irrigation districts. She has published more than 70 papers in international peer-reviewed journals and four of them were awarded as “Best papers”. She has also published several book chapters and has been guest editor for several journals (“Agricultural Water Management”, “Biosystems Eng.”, “Journal of Irrigation and Drainage Engineering, ASCE”), and the book “Advanced tools for integrated water resources management”. She has been involved in the program “Science without Frontiers” in Brazil for four years on the topic of water resources for irrigation. Likewise, she collaborates with colleagues from Oregon State University, Demirel-Suleyman University in Turkey. She has coordinated two EU-funded projects and participated in the other two. Finally, she was also involved in courses for continuum learning education at the Agricultural Engineering School of the UPM.

**The webinar will be held via Microsoft Teams from 3 PM to 4 PM at the following link:
<https://bit.ly/2RRiZlx>**