UC ANR Water Webinar

Developing remote sensing-based tools to advance site-specific irrigation management in southern California

By: Dr. Amir Haghverdi, Assistant CE Professor of Irrigation and Water Management, Department of Environmental Sceinces, University of California Riverside

Day/Time: Friday 4/16, 3 - 4 PM

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Meeting ID: 937 2279 6133; Passcode: 92837

Speaker Bio: Dr. Amir Haghverdi is an Assistant Professor of Irrigation and Water Management in Cooperative Extension in the Environmental Sciences Department at the University of California Riverside. His research focuses on developing and disseminating scientific knowledge, practical recommendations, and tools for sustainable urban and agricultural water resources management. His approaches include field research trials, laboratory analyses, and computer modeling to identify opportunities for synergy between research and extension activities. His main research themes include irrigation water management, root zone soil hydrology, and precision agriculture. Dr. Haghverdi also is interested in applications of advanced data acquisition and mining techniques, including remote sensing, GIS (geographic information systems) and GPS (global positioning system) technologies, machine learning, and wireless sensors. He received his Ph.D. in Biosystems Engineering from the University of Tennessee-Knoxville.

Abstract: This presentation focuses on the ongoing research and extension projects done by the Haghverdi irrigation and water management lab (ucrwater.com) related to site-specific irrigation management in Southern California. I will review the history and fundamentals of site-specific variable rate irrigation management. I will talk about a decision support tool developed by my research group for pre-adoption assessment of variable rate irrigation based on within field variabilities. This GIS-RS-based tool utilizes statistical clustering techniques to delineate irrigating management zones using the normalized difference vegetation index (NDVI) collected by Landsat 8. I will also talk about our recent efforts for estimating alfalfa yield using multispectral-thermal drone-based remote sensing and statistical modeling techniques.

Host: Safeeq Khan & Ellen Bruno, CE Specialists UC ANR

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