

ENVIRONMENTAL SYSTEMS GRADUATE PROGRAM

PH.D. DISSERTATION/DEFENSE

“Microbial biogeography in North America Mediterranean vernal pools”

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ABSTRACT

Microbial organisms play multiple important roles in all ecosystems, yet their diversity and distributions in different natural environments still need to be assessed. This doctoral thesis focuses on the study of macroecological distribution patterns of different microbial groups inhabiting vernal pools. Vernal pools are ephemeral wetlands, with contrasting desiccation periods and water availability periods; fundamentally they are well-delimited ecosystems, embedded in completely terrestrial habitats and populated by specialized organisms. This study took place across the Mediterranean region of Mexico and USA (Baja California and California) and UC Merced vernal pools and grasslands reserve. Molecular techniques were applied, based on 16S high-throughput sequencing, used for the analysis of Environmental DNA (eDNA) collected from different substrates in vernal pool ecosystems, to investigate the microbial communities living in these endangered ecosystems.

Schedule

Date: 04/30/2021

Time: 03:00 pm- 05:30 pm

Zoom Link: Jorge Montiel is inviting you to a scheduled Zoom meeting.

<https://ucmerced.zoom.us/j/8642010317>

More Information:

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BIOGRAPHY

Jorge Armando Mandussí Montiel-Molina is a biologist from Mexico city. Currently he focuses his work in microbiology, microbial macroecology and microbial symbiosis. His carrier path took him to learn, mycology, botany and about the amazing amphibious ecosystems –Vernal pools– After a period of environmental activisms and conservationism to protect the vernal pools in Mexico, he decided to pursue a doctoral degree in order to become the first Mexican expert in vernal pools. He believes that vernal pools hold lessons to understand microbial biodiversity origins and ecological equilibrium. His work is the first formal attempt to characterize and study aspects of microbiology in Californian vernal pools.

