



Candidate for the positions of Assistant Professor of Biological Control & Assistant Professor of Subtropical IPM:
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Date: Monday, February 13, 2023
Time: 4:00 pm - 4:50 pm
Format: In-Person Seminar & Virtual Access
Location: Genomics Auditorium 1102A

Zoom: 938 1040 4405
Passcode: 833289

Title:

“Eleven years of Dynamic Invasive Species Control Optimization Via Extension and Research: DISCOVERing synergistic ways to treat exotic pests and disease invasions in California”

Abstract:

My current research activities target invasive and endemic insects that attack agricultural crops, threaten wilderness areas, and degrade urban landscapes in California (CA). As a research affiliate of UCR's Center for Invasive Species Research I am regularly engaged in emerging programs concerning invasive pests such as Asian citrus psyllid (ACP) and Argentine ant (AA) (citrus pests), avocado seed weevil and avocado lace bug (avocado pests), and palm weevils (palm pests). This research has focused on the development of dynamic IPM programs with an emphasis on enhancing natural enemy impacts. For example, the IPM and biological control programs I am developing for AA, ACP, and other important sap-sucking pests (SSPs) infesting citrus, such as mealybugs and soft scales, utilize new and innovative approaches to achieve long-term sustainable management. The dynamic IPM and biological control program I am developing combines three tools, biodegradable hydrogel baits (HGBs) to control AA, infra-red sensors (IRS) to monitor AA and guide targeted applications of HGB's, and flowering cover crops (FCCs) to enhance resident natural enemy populations, especially ACP parasitoids (*Tamarixia radiata*) and predators (syrphid flies) in commercial citrus. This combination of tools, IRS, HGBs and FCCs, synergizes IPM of AA and biological control of SSPs infesting CA-grown citrus. Products and strategies derived from this research could be re-appropriated for other valuable cropping systems that suffer greatly from ant-tended pests (e.g., grapes, tree nuts, cherimoyas) and considerably improving biological control across California and upholding its historical precedent of strongly successful IPM programs. I anticipate that this work will be well received by the scientific community and will be a continuing focus of my research program at UCR.