

Biography of Dr. Krish Jayachandran

Dr. Krish Jayachandran is Professor of environmental microbiology/soil science in the Department of Earth and Environment at Florida International University, Miami, FL. Dr. Jayachandran received his PhD in Plant Pathology with specialization in soil microbiology and soil science, from Kansas State University in 1991 and a master's degree in agricultural microbiology in 1983 from Tamil Nadu Agricultural University, Coimbatore, India. Dr. Jayachandran's current research focuses on biological control of invasive plant species in South Florida, biodegradation processes and mitigation potential for freshwater and marine toxins, mycorrhizal fungal interactions with tropical plants for conservation/restoration, and agroecology/sustainable agriculture. Using microbiology as a central tool, he is specialized in nutrient cycling and soil quality in wetland and upland systems, microbial diversity and activity in soils, pesticide degradation, transport, and potential groundwater contamination, isolation and characterization of pesticide degrading microorganisms, biocontrol of invasive plant species, bioenergy and microbial hydrogen production, marine and freshwater toxins and microbial degradation, and soil-plant-microbial interactions. His research projects have been funded by the ENP, SFWMD, USDA, NIEH, DOE, ABS, Silver Consortium, and World Bank/FAO. He has more than 200 publications, including referred articles (65), research reports, book chapters, conference publications, and over 50 invited lectures. Dr. Jayachandran co-leads the ongoing FIU Agroecology Program, which he built with the support of USDA grants of more than 9.0 million dollars towards research, education, student training, and outreach activities. Through USDA Multicultural Scholars Programs, he has created 50 undergraduate college scholarships, each carrying \$26,000 per student for four years and 15 national needs graduate fellowships each carrying \$37,000 per fellow for two three years and five regular graduate fellowships. Other grants have supported research, travel and scholarly activities for over 100 FIU students, faculty, 48 high school students, and 75 school teachers. For the last three years working with veterans and socially disadvantaged farmers, training in farming practices.

Dr. Jayachandran has developed and taught eight new disciplinary and interdisciplinary courses in the broad areas of soil science, microbiology, biogeochemistry, plant sciences, environment, agroecology, and sustainable agriculture. He has supervised directed research projects for >100 undergraduate students, graduated 38 master's students, two PhD students, and served on several doctoral and master's students committees. Dr. Jayachandran served as Graduate Program Director between 2008 and 2015 for the Environmental Studies master's program. Currently serving as Graduate Program Director for PSM-EPM. Besides serving on departmental major Committees, Dr. Jayachandran served as the Chair of President's Access and Equity Committee, member of NCAA Gender/Diversity Issues and Student-Athlete Well-Being Committee of the NCAA Division I athletic certification program. A three term faculty senator and serves on various University Committees. Dr. Jayachandran was the founding member and Director of The Honors College's Student Research & Artistic Initiative (SRAI). In his professional field, Dr. Jayachandran served as an Associate Editor for one of the premier environmental journals, Journal of Environmental Quality (2002-07), Editorial Advisory Board for the Journal - Agriculture, Ecosystems, and Environment (2002-08), Editorial Advisory Board for Chemosphere (1999-01), as a Regional Editor for the journal Allelopathy, and currently serving as Editorial Advisory Board Member for the journal of Sustainable Agriculture, Biocontrol Executive Board. He also served on ~30 research panels (as panel member and panel manager) that included EPA Super Fund Sites Research, EPA-STAR fellowships, EPA research site review, EPA Ecosystem Services, USDA-NIFA research and educational grants. He serves as the Chair of Miami-Dade Agriculture and Natural Resources Committee. Recently, he has been invited by The White House OST, NSF, DOE, USDA to participate in Knowledge Exchange on Undergraduate STEM education.