

CURRICULUM VITAE
KRISHNASWAMY JAYACHANDRAN

Earth and Environment Department
Florida International University

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Miami, FL 33199	http://agroecology.fiu.edu

EDUCATION:

Ph.D. Kansas State University, Manhattan, KS, Plant Pathology (Soil Microbiology), April 1991.

M.Sc. Tamil Nadu Agricultural University, Coimbatore, India, Agricultural Microbiology, December 1983.

B.Sc. Tamil Nadu Agricultural University, Coimbatore, India, Agriculture Sciences, May 1981.

ACADEMIC EXPERIENCE:

Dept. of Earth and Environment Florida International University, Miami	Professor (Soil Microbiology)	Aug 2010-present
Dept. of Earth and Environment Florida International University, Miami	PSM-EPM Program	Jan 2014-present
STEM Transformation Institute Florida International University, Miami	Founding Fellow	Jan 2015-present
Dept. of Earth and Environment Florida International University, Miami	Co-Director, Agroecology (Founding)	Aug 2005-present
Dept. of Earth and Environment Florida International University, Miami	Graduate Program Director	Aug 2008-2015
Dept. of Earth and Environment Florida International University, Miami	Associate Professor (Soil Microbiology)	Aug 2002-2010
The Honors College Florida International University, Miami	Fellow	Aug 2003-2009
The Honors College	Founding Director-SRAI	Aug 2003-2005

Florida International University, Miami

Dept. of Environmental Studies Florida International University, Miami	Graduate Program Director (Interim)	Aug 2003-Jan 04
Dept. of Environmental Studies Florida International University, Miami	Assistant Professor	May 1996-2002
National Laboratory for Agriculture & Environment, USDA-ARS, Ames, IA	Assistant Scientist	May 1991-1996
Dept. of Plant Pathology Kansas State University, Manhattan, KS	Grad Res Assistant	Aug 1987-1991
International Crops Research Institute for The Semi-Arid Tropics (ICRISAT) Hyderabad, India	Research Associate	Jan 1984–1987
Dept. of Agrl Microbiology Tamil Nadu Agricultural University Coimbatore, India	Grad Res Assistant	Aug 1981–1983

EMPLOYMENT RECORD AT FLORIDA INTERNATIONAL UNIVERSITY:

Professor	Aug 2010 – Present
Associate Professor	Aug 2002 – 2010
Assistant Professor	May 1996 – 2002

RESEARCH INTERESTS AND EXPERTISE:

- Agroecology and Sustainable Agriculture.
- Nutrient cycling and soil quality in wetland and upland systems.
- Wetlands soil characterization.
- Microbial diversity and activity in surface and subsurface soils.
- Physiology, biochemistry, molecular biology, and biological interactions of arbuscular-mycorrhizal (AM) fungi.
- Biological Nitrogen Fixation.
- Pesticide degradation, transport, and potential groundwater contamination.
- Isolation and characterization of pesticide degrading microorganisms.
- Biocontrol of invasive plant species.
- Restoration ecology.
- Bioenergy and microbial hydrogen production.
- Marine and freshwater toxins and microbial degradation.
- Pathogens tracking and remediation measures.

- Antibiotic resistance in the environment.
- Bioremediation (plant - microbe based system) of organic contaminants in soil and water.
- Microbiomes – Plant and Soil.
- Industrial Hemp – Variety Screening, Agronomic Practices.

PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS & SIGNIFICANT ACHIEVEMENT:

- American Society of Agronomy Fellow 2020
- University Faculty Excellence Research & Creative Activities Award 2019
- Sri Chinmoy Oneness Peace Run Award 2018
- Certificate of appreciation from USDA-NIFA Director for promoting grantsmanship for USDA-NIFA programs August 2017
- University Faculty Excellence Service Award 2017
- Dean's Excellence Award for Research 2017
- Top Scholar Award – Significant Grant Funding in the Sciences 2017
- Knowledge Exchange for Undergraduate STEM Education – Invitee by The White House Office of Science and Technology, NSF, DOE, USDA 2016
- FIU-President's Excellence Award for Agroecology Program 2016
- Dean's Excellence Award for Community Engagement 2016
- University Faculty Excellence Advising and Mentoring Award 2015
- Founding Faculty – STEM Transformation Institute (2014-2017)
- University Faculty Excellence Teaching Award 2012
- FIU-President's Access and Equity Award 2011
- University's Agroecology Program Excellence Award (Finalist) 2011 and 2013
- AAAS – On Call Scientist (2015 – present)
- Chair – Miami-Dades's Agriculture & Natural Resources Council (2016 – present)
- Certificate of Appreciation from Senator Bill Nelson for promoting National Needs Fellows in Sustainable Agriculture and Natural Resource Sciences - 2011
- Certificate of Appreciation from Senator Bill Nelson for promoting multicultural undergraduate scholars education in agriculture and environmental sciences – 2009, 2016
- Certificate of Appreciation from USDA-NIFA Program Officer for planning and organizing Project Directors Conference – 2009
- Certificate of Appreciation from the Office of American Society of Agronomy, Soil Science Society of America, and Crop Science Society of America for serving as Associate Editor for six years for the Journal of Environmental Quality – 2008.
- Certificate of Appreciation from Executive Publisher, Elsevier for the review and evaluation of more than 75 journal articles for Agriculture, Ecosystems & Environment – 2008.
- Certificate of Appreciation from Director of FIU Upward Bound Program for engaging 50 under-represented minority high school students on experiential

learning at the Organic Garden.

- The Honors College Fellow (2003-2009)
- Founding Member and Director, The Honors College Student Research & Artistic Initiatives (2003-2005)
- Founding Member and Co-Director of Agroecology Program at Florida International University (<http://agroecology.fiu.edu>) and Agriscience Major.
- People's Garden Award by USDA (April 2010)
- Certificate of Appreciation from Agroecology and Garden Club (November 2010)
- Certificate of Appreciation from National University of Agriculture, Honduras (November 2010)
- Certificate of Appreciation for participation in Latin American biofuel conference organized by OLADE – 2010
- Established MOU between FIU and Tamil Nadu Agricultural University, Tamil Nadu, India – 2010
- Established MOU between FIU and National University of Agriculture, Honduras – 2011
- Established MOU between FIU and ISARA-Lyon Agroecology Program, France - 2014
- National Research Panels (~35) for EPA, NSF, USDA-NIFA
- FIU President's Access & Equity Recognition Award Nominee (2009, 2010)
- National Academy of Biological Sciences (India) life membership
- *Phi Kappa Phi* Honors Society, 2005

Research Equipment Resources Established in Soil-Plant-Microbiology Laboratory:

Biological Safety Cabinet, Laminar Flow Chamber, four Refrigerators, two -20 °C Freezers, -80 °C Freezer, three Biological Incubator, Growth Chamber, Benchtop Centrifuge (Thermo IEC Centra CL3R), Benchtop Centrifuge (Fisher Scientific Marathon 8K), Refrigerated High Speed Centrifuge, Autoclave (ZERBUS), three Ovens (Thermo Scientific), Muffle furnace (Fisher Scientific Isotemp), Laboratory Dishwasher, five Balances, three Open Platform Shakers, three temperature Controlled Shakers, Colony Counter (Leica Quebec Darkfield), Fluorescence Microscope with Camera, three Stereo Microscopes, Atomic Absorption Spectrophotometer (Shimadzu AA-6200), Total Organic Carbon Analyzer (Shimadzu), Total Nitrogen and Total Carbon Analyzer (LECO TruSpec), AQ2 Discrete Analyzer (SEAL Analytical Inc.), Synergy HT Multi-Mode 96 Well Plate Reader (Biotek Inc.), GC – triple detector 2014 (Simadzu), HPLC (Agilent 1260 Infinity), Scintillation Counter, Heavy Duty Digester, Two Rotary Evaporator (Buchi R300 & Buchi R114), Julabo Chiller for rotavap Model:FE 500, NESLAB RTE-111 chiller for rotavap, SYNGENE UV lights on transilluminators, two UV-Vis Spectrophotometers, Fluorescence Microscope with Camera (Olympus BX51) Polarizing Light Microscope, Stereo Microscopes (Olympus SZX7), Microbial ID system (Biolog), Bioreactor (), Freeze Drier (), DNA Extracting Bead Beater, microcentrifuge, Flurameter, Temperature Cycler for PCR amplifications, PCR Hood, and Gel Electrophoresis, Orion 3 Star Benchtop pH meter (Thermo Scientific), UltraBasic Benchtop pH/mV meter (Denver Instrument), Fieldscout Portable pH 400 meter (Spectrum),

Digital Mini Vortexer (Fisher Scientific), Mini Vortexer (Fisher Scientific), Handheld Leaf Area Meter and Benchtop Attachment (CID Bio-Science), 6400XT Portable Photosynthesis System w/ Soil Respiration Chamber (LI-COR), Chlorophyll Meter (SPAD 502 Plus), Crop Sensing System(Greenseeker), Chlorophyll Meter (atLEAF CHL), HydraProbe (STEVENS).

Undergraduate Students Supervision/Mentoring:

Supervised/Mentored **~200 Independent Study projects** for undergraduate students (about 10 projects per year through EVR 4905 Independent Study 1996-2015)

Supervised/Mentored **~100 Internships in Agriculture** (AGG 4941) for Agroecology and AgriScience undergraduate students. **Total 300 undergraduate students.**

Topics and students names available

Supported and Mentored **50 Multicultural Scholars** from **five USDA-NIFA-MSP projects** and **50 Hispanic Scholars** from **seven USDA-NIFA-HSI projects** with Scholarships of ~\$5,000 each student per year for four years of their study from USDA-NIFA MSP and HSI grants.

Graduate Student Supervision/Mentoring:

Student List:

Graduated Students Number: 50

Major Advisor for **PhD** Students:

1. **Dr. Ariel Freidenreich:** Developing Sustainable Soil Building Strategies for Tropical Fruit Groves within the South Florida Redland. PhD Candidate. **USDA-NNF Fellow. Graduated in Spring 2021. Received numerous awards including SSSA Poster presentation, DEA and DYF Awards.**
2. **Dr. Shagufta Gaffar:** Production and Characterization of Twelve Different Biochars and Evaluating their Effects on Soil Health and Plant Growth. **Graduated in Fall 2020. Received numerous awards including Miami-Dade County Agri Council Award, SSSA Poster presentation, Department Graduate Symposium Poster presentations.**
3. **Dr. Lamar Burton:** Towards In-situ Based Printed Sensor Systems for Real Time Soil-Root Nutrient Monitoring and Prediction with Polynomial Regression. **Graduated in Spring 2020. Coadvised with Dr. Shekhar Bhansali.**
4. **Dr. Pushpa Soti:** Influence of Soil Biogeochemical Properties on the Invasiveness of

Old World Climbing Fern (*Lygodium microphyllum*). **Graduated in Fall 2013.**
Received Dissertation Evidence Award.

5. **Dr. Hillol Guha:** Influence of Hydrobiogeochemistry on Transport of Chromium Through Manganese – Containing Sediments: Experimental and Modeling Approaches. **Graduated in Spring 2000. Coadvised with Dr. Florentin Maurrass**

Current PhD Students:

6. **Mr. Prabhakar Pant** – Sustainable Biofuels Production from Non-Crop Plants in Nepal. PhD student in Biological Sciences. Self Supported, Two years completed, Submitted D1, Expected to graduate in 2021.
7. **Ms. Mary Tiedeman** – PhD Candidate. Developing Legacy Phosphorus in Calcarous Soils dissertation proposal. USDA-NIFA-NNF Fellow.
8. **Mr. Ganesh Khadka** – PhD Candidate. Characterization of endophytic microbiomes for their antimicrobial properties isolated from medicinal plants of south Florida. PhD Candidate.
9. **Ms. Jazmin Locke** – PhD Candidate. An Evaluation of Market Crops on Floating Treatment Wetlands as a Phytoremediation Strategy for eutrophic Water in South Florida. USDA-NIFA-NNF Fellow.
10. **Ms. Jessica Dominguez** – PhD Candidate. Utilization of Antagonistic Endophytes and their bioactive secondary metabolites to control Citrus Greening. USDA-NIFA-HSI Fellowship
11. **Ms. Daphne Sugino Souffront** – Industrial Hemp project
12. **Ms. Vagheeswari Venkadesh** – Heavy metals phytoremediation

Major Advisor for MS Thesis Track Students:

13. **Mr. Jordan Prats:** Evaluation of Optimal Harvesting Time of Industrial Hemp (*Cannabis sativa L.*) Grown in South Florida. **USDA-NIFA-HSI-START-NOW Fellow. Graduated in Spring 2021.**
14. **Ms. Blaire Kleiman:** How do weeds affect insects in mango cultivation of Homestead, FL?
Sigma Xi Grants in Aid Research Scholarship recipient, 2021, \$1,000
Several Awards, 2020, \$13,000
Miami-Dade County Agri Council Award, 2020, \$500
CASE News
<https://casenews.fiu.edu/2020/05/15/hey-farmer-leave-them-weeds-alone/>

15. **Ms. Leticia Ines Matos:** Impacts of legume-grass consortia on soil quality recovery and cattle's weight gain in Brazil's Savannah.
16. **Ms. Riki Bonnema:** The effects of food waste-based compost addition to coastal urban soils on local water quality in Miami Beach, FL.
17. **Ms. Anchal Singh:** To determine the effect of Antibiotic exposure on microbes in the environment and identify the presence of phase variants.
18. **Ms. Daphne Sugino Souffront:** Influence of Vermicompost Tea on Secondary Metabolites in *Solanum lycopersicum* within South Florida. **Graduated Fall 2019. USDA-NIFA-HSI-BASE Fellow, *Worlds Ahead* Graduate, CASE Service Award Fall 2020.**
 FIU News
<https://news.fiu.edu/2019/when-earthworms-soil-themselves-everyone-wins>
19. **Ms. Claudia Garcia:** Inoculating rhizobium and arbuscular mycorrhizal fungi on snap bean under salinity stress to study plant growth and glomalin production effects. **Graduated Summer 2019. USDA-NIFA-HSI-START-NOW Fellow. Best Thesis Award by American Association for Hispanics in Higher Education USDA Graduate Fellow by American Association for Hispanics in Higher Education.**
 FIU News
<https://news.fiu.edu/2019/oh-snap-bacteria-fungus-combo-can-help-crops>
 Current Position: Lab Manager II, Earth and Environment, FIU
20. **Jennifer Gil:** Sensitivity of Marine Cyanobacteria and Green Microalgae to Nano and Bulk Zinc Oxides. **Graduated in Fall 2018. USDA-NIFA-HSI-BASE Fellowship. Co-Advised with Dr. Kateel Shetty.**
 ASM Travel Grant Awardee
 AAHHE's Career Preparation Institute Awardee – USDA Graduate Fellow
 FIU News
<https://news.fiu.edu/2018/05/fulbright-fellows-tackle-international-concerns/122697>
21. **Ms. Adel Pena** – Improvements in plant taxonomic preservations for south Florida Pine Rocklands. **Graduated Fall 2017. Coadvised with Dr. Suzanne Koptur**
22. **Ms. Ariel Freidenreich:** Comparison of Synthetic versus Organic Herbicides/Insecticides on Arbuscular Mycorrhizal Fungi in *Abelmoschus esculentus*. **Graduated Summer 2016. USDA-NNF Fellow.**
23. **Ms. Andrea Salas:** Effects of host-plant density on herbivores and their parasitoids: a field experiment with a native perennial legume. **Graduated Summer 2016.**

Received Provost Excellence in Teaching Award – 2016
CASE Best Thesis Award
AAHHE's Career Preparation Institute Awardee – USDA Graduate Fellow
Coadvised with Dr. Suzanne Koptur

- 24. Ms. Herma Pierre:** Mangiferin as a Biomarker for Mango Anthracnose Resistance. **Graduated in Summer 2015. USDA-NNF Fellow.**
- 25. Mr. Eric Betancourt:** Evaluation of Crop Seed Powders as Amendments for Purple Nutsedge (*Cyperus rotundus*) Control compared to the Traditional Herbicide, Roundup. **Graduated in Summer 2015. USDA-NNF Fellow.**
- 26. Mr. Ramon Salazar:** Leaf Functional Traits and Forest Structure of Tropical Dry Forest Species along a Rainfall Gradient in Florida and Puerto Rico. **Graduated in Spring 2015. USDA-NNF Fellow. Coadvised with Dr. Mike Ross.**
- 27. Ms. Yujie Hua:** Changes of Soil Biogeochemistry under Native and Exotic Plant Species. Defended her thesis, **Graduated in Spring 2015.**
- 28. Mr. Miles Medina:** Effect of Aquafeed on Productivity of Red Amaranth and on Water Quality under Aquaponic Cultivation of Blue Tilapia. **USDA-NIFA-HSI Fellowship. Graduated in Spring 2014.**
Received Outstanding Thesis Award
Best Thesis Award by American Association for Hispanics in Higher Education
USDA Graduate Fellow by American Association for Hispanics in Higher Education.
Coadvised with Dr. Mahadev Bhat
- FIU News <http://news.fiu.edu/2014/11/alumnus-finds-solutions-for-food-insecurity-through-aquaponics/82843>
- 29. Ms. Vanessa Sanchez:** Characterization of Rhizobial Diversity and Relationship of Rhizobial Partner and Legume Performance in Four South Florida Pine Rockland Soils. **USDA-NIFA-NNF Fellowship. Graduated in Spring 2014.**
- 30. Ms. Klara Scharngl:** The Effects of Arbuscular Mycorrhizal Fungi on Four Legume Hosts in South Florida Pine Rockland Soils. **USDA-NIFA-NNF Fellowship. Graduated in Summer 2013.**
- 31. Ms. Daria Boglaienko:** Buckwheat as a Cover Crop in Florida: Mycorrhizal Status, Soil Analysis, and Economic Assessment. **Graduated in Summer 2013.**
Received Outstanding Graduate Student Award.
- 32. Ms. Danielle Goveia:** An Analysis of the Potential Risk Exposure to Lead (Pb) Through Urban Community Gardens. **Graduated in Spring 2013.**
Received Outstanding Thesis Award.

FIU News <http://news.fiu.edu/2014/01/lead-contamination-research-leads-to-safer-soil-in-liberty-city/73827>

- 33. Ms. Thelma Velez:** Measuring the Impact of *Melaleuca quinquenervia* Biochar Application on Soil Quality, Plant Growth, and Microbial Gas Flux. **USDA-NIFA-HSI Fellowship. Graduated in Fall 2012.**
Received Outstanding Graduate Student Award.

USDA Blog on Agriculture Education
<http://blogs.usda.gov/2013/06/18/agroecology-program-ag-research-is-more-than-farming/>

- 34. Mr. Andrew Jungman:** Examining the Use of *Simarouba glauca* Seed Oil as a Feedstock for the Production of Biofuels in Karnataka, India. **USDA-NIFA-HSI Fellowship. Graduated in Fall 2012. Co-Advised with Dr. Mahadev Bhat**

- 35. Ms. Juliana Masaghaa:** Sediment yield modeling and identification of erosion hotspots in tropical watersheds. **Graduated in Summer 2012. Co-Advised with Dr. Assefa Melesse**

- 36. Ms. Stephany Alvarez:** Factors influence on honey bee populations in different agricultural systems. **USDA-NIFA-HSI Fellowship. Graduated in Spring 2012.**
Received Outstanding Graduate Student Award.
Received Outstanding Thesis Award.
Best Thesis Award by American Association for Hispanics in Higher Education
USDA Graduate Fellow by American Association for Hispanics in Higher Education.

FIU News <http://news.fiu.edu/2012/11/alumna-finds-answers-for-food-security-with-honeybees/>

Current Position: Senior Development Officer, CASE, FIU

- 37. Ms. Priyanka Narendar:** Screening and Identification of Everglades Algal Isolates for Biodiesel Production. **Graduated in Fall 2010.**
Received Outstanding Graduate Student Award.

- 38. Ms. Anusha Ramani:** Microbiological Degradation of Freshwater Algal Toxins, Microcystin in Florida's Freshwaters. **Graduated in Fall 2009.**
Received Outstanding Graduate Student Award.

- 39. Ms. Cristina Clark-Cuadrao:** Effects of a Switchgrass bufferstrip on soil microorganisms near a field applied with endosulfan. **USDA-NIFA-HSI Fellowship. Graduated in Fall 2007.**

- 40. Ms. Tainya Clarke:** Biocontrol of *Lygodium microphyllum* using a native pathogenic

fungi. **Graduated in Fall 2006.**

Received Outstanding Graduate Student Award.

41. Ms. Seema Sah: Effect of flooding on arbuscular mycorrhizal fungal colonization in bean plants. **Graduated in Summer 2006.**

Current Position: Lab Manager, Earth and Environment, FIU

42. Mr. Ramakrishna Ruthala: Bio-Geochemical Factors Influence on Microbial Community Structure on Tree Island Ecosystems of Florida Everglades. **Graduated in Fall 2004.**

43. Ms. Elizabeth Struhar: The Relationship between Soil Moisture and Nutrient Availability in Tree Islands of Shark Slough, Everglades National Park. **Graduated in Spring 2003.**

Received Outstanding Graduate Student Award.

44. Mr. Prabhakar Pant: Natural Attenuation of Trichloroethene in Stream Behavior Fate and Transport. **Graduated in Spring 2003.**

Received Outstanding Graduate Student Award.

45. Ms. Susan Kemp: The effects of vesicular-arbuscular mycorrhizal colonization and phosphorus on Sawgrass (*Cladium jamaicense*) growth in marl and abandoned farmland soils. **Graduated in Spring 2003.**

46. Mr. Robert McMullen: Brazilian Pepper Suppression on Soil Disposal Mounds in the Hole-In-The- Donut Restoration Area, Everglades National Park. **Graduated in Spring 2002.**

47. Mr. Kenichiro Konomi: Fate and Transport of Herbicide Atrazine in Calcareous Soils of South Florida. **Graduated in Fall 2001.**

48. Ms. Darcy Stockman: Growth Response of Certain Tropical Legume Species to Arbuscular Mycorrhizal Fungal Symbiosis. **Graduated in Spring 2001.**

Major Advisor for MS Non-Thesis Track Students:

49. Mr. Eudel Cepero: Soil Erosion Model Development and Soil Conservation. **Graduated in Spring 2007.**

50. Ms. Allison Stone: Periphyton and macrophytes as a bioindicator in the tarland burn of the river Dee. **Graduated in Spring 2005.**

51. Ms. Laura Coronel: Fate and Transport of PAH's in Florida's Groundwater. **Graduated in Spring 2004.**

52. Mr. Valantine Walker: A Shift towards Biocontrol Away from Harmful Chemical

Pesticides in Florida's Citrus Industry. **Graduated in Summer 2002.**

53. Ms. Kristina Serbesoff-King: Biology, Invasion, and Control Methods on the Invasive Category I Plant Species *Melaleuca* – A Monograph. **Graduated in Summer 2002.**

54. Ms. Angelique Lawrence: Brownfield Redevelopment in Miami-Dade County. **Graduated in Fall 2001.**

Current MS Students:

55. Mr. Erich Deutel – Developing Apps to study soil conditions in response to sea level raise. USDA National Needs Fellow – RA support.

56. Ms. Meghan Lenahan – Effects of Pesticides on the Use of Extrafloral Nectaries for Pest Management in Snap Beans. USDA National Needs Fellow – RA support.

Supported and Mentored **20 MS and 7 PhD Scholars** from **four USDA-NIFA-NNF projects** and **seven USDA-NIFA-HSI projects** with full RAships with tuition waivers from \$60,000 to \$100,000 each student.

Professional Science Master's in Environmental Policy & Management Students
Advised/Advising: (2014 – present) 80

As a Member on Master's Thesis Committees in Environmental Studies:

Total Number: 47

- 1. Ms. Gaelle Glickfield:** An aquatic risk assessment of ethion and bromacil inputs to the C-25 Canal and Indian River Lagoon. Advisor: Dr. Rand, Graduated in 1999.

2. **Mr. Mike Byrne:** Groundwater nutrient loading in Biscayne Bay, Biscayne National Park, Florida . Advisor: Dr. Meeder, Graduated in 1999.
3. **Ms. Elizabeth Mayo:** Reforestation of *Pinus Elliottii* var. *densa* on the Miami Rock Ridge: field experiment and economic analysis of two alternative methods. Advisor Dr. Clarke, Graduated in 2000.
4. **Ms. Shivanna Mahabir:** The effects of methyl tertiary butyl ether (MTBE) on soil organisms. Advisor: Dr. Rand, Graduated in 2002.
5. **Mr. Giddy Bobeche:** Ecological, economic, and organizational dimensions of organic farming in Miami-Dade County. Advisor Dr. Bray, Graduated in 2006.
6. **Mr. David Reed:** Effects of hydrology and light on seedling establishment and growth of four wetland tree species in tree islands of northern Shark Slough, Everglades National Park. Advisor: Dr. Ross, Graduated in 2007.
7. **Ms. Maria Marasigan:** Social and Ecological Dimensions of a Small Farmer Organic Cooperative in El Salvador. Advisor Dr. Bray, Graduated in 2008.
8. **Ms. Erin Hanan:** Multi-scaled patterning of plant-soil-water interactions across tree islands and marshes within the prairie and slough landscapes of everglades national park. Advisor Dr. Ross, Graduated in 2008.
9. **Mr. Rich Soto:** Accessible community gardening in South Florida. Advisor Dr. Bhat, Graduated in 2010.
10. **Mr. Fukrudhin Maalim:** Modeling potential erosion and sediment contribution from upland agricultural areas: a case study of Le Sueur river watershed, Minnesota. Advisor Dr. Melesse, Graduated in 2010.
11. **Mr. Jason Downing:** Impact of recently naturalized specialist bee *Centris nitida* on *Brysonima lucida*. Advisor Dr. Liu, Graduated in December 2010.
12. **Ms. Cara Cooper:** Dr. Liu (Advisor), Graduated in Summer 2012.
13. **Mr. Amour Seleman:** Dr. Bhat (Advisor), Graduated in summer 2012.
14. **Ms. Carolina Berget:** Dr. Bray (Advisor), Graduated in December 2012.
15. **Mr. Robert Schroder:** Dr. Scinto (Advisor), Graduated in December 2012.
16. **Ms. Leigh Ammon:** Dr. Melesse (Advisor), Graduated in April 2013.

17. **Mr. Andres Rodriguez:** Dr. Scinto (Advisor), Graduated in December 2013.
18. **Ms. Nina DeLa Rosa:** Dr. Shetty (Advisor), Graduated in Fall 2014. (Supported USDA-NNF RAship)
Current Position: Program Coordinator, ICTB, FIU
19. **Mr. David Berthold:** Dr. Shetty (Advisor), Graduated in Summer 2016.
20. **Ms. Jessica Dominguez:** Dr. Shetty (Advisor), Graduated in Summer 2019.
21. **Mr. Andrew Mullin:** Dr. Khoddamzadeh (Advisor)

As a Member on Master's Thesis Committees in various programs:

22. **Mr. Dustin Mizell:** Ecologically sound golf course development. Advisor Dr. Chmielenska (Landscape Architecture), Graduated in 1999.
23. **Ms. Lorraine Ahlquist:** Nutrient cycling in Alaskan tundra in response to experimental manipulation of growing season length and soil temperature: a climate change scenario. Advisor Dr. Oberbauer (Biology), Graduated in 2003.
24. **Ms. Danielle Palow:** Effects of light and soil type on seedling growth and physiology of two INGA species. Advisor Dr. Oberbauer (Biology), Graduated in 2003.
25. **Mr. Robert Griffith:** Locating toxic molds using solid phase microextraction/gas chromatography/mass spectrometry and canine detection of microbial volatile organic compounds. Advisor Dr. Furton (Chemistry and Biochemistry), Graduated in 2005.
26. **Ms. Saranya Krishnan:** Comparative Genomic Analysis of Pathogenic and Non-Pathogenic *Raffaelea* Isolates from Ambrosia Beetles. Advisor Dr. Mills (Forensic Sciences), Graduated in Summer 2019.

As a Member on Dissertation Committees in various Doctoral programs:

27. **Dr. Laurie McHargue:** Factors affecting the nodulation and growth of tropical woody legume seedlings. Advisor Dr. Oberbauer (Biology), Graduated in 1999.
28. **Dr. Susan Daily:** Phosphorus enrichment effects on interactions among the ecosystem components in a long-hydroperiod oligotrophic marsh in Everglades National Park. Advisor Dr. Childers (Biology), Graduated in 2000.

29. **Dr. Gregory Starr:** A multi-scale assessment of physiological processes in arctic tundra plants under natural and simulated climate change scenarios. Advisor: Dr. Oberbauer (Biology), Graduated in 2000.
30. **Dr. Joseph O'Brien:** The effects of climate on the growth and physiology of tropical rainforest trees. Advisor Dr. Oberbauer (Biology), Graduated in 2001.
31. **Dr. Flavio Moreno:** Soil carbon dynamics in primary and secondary tropical forests in Colombia. Advisor Dr. Oberbauer (Biology), Graduated in 2004.
32. **Dr. Zhangrong Chen:** Natural organic matter and colloid-facilitated arsenic transport and transformation in porous soil media. Advisor Dr. Cai (Chemistry and Biochemistry), Graduated in 2006.
33. **Dr. Ronald Mossman:** Seed dispersal and reproduction patterns among Everglades plants. Advisor Dr. Koptur (Biology), Graduated in 2009.
34. **Dr. Monica Joshi:** Drop-on Demand Inkjet technology for the development of calibration standards for use with Ion Mobility Spectrometers. Advisor Dr. Almirall (Chemistry and Biochemistry), Graduated in 2010.
35. **Dr. Sen Chen:** Reduced organic sulfur: Speciation and interaction with mercury in aquatic environment. Advisor Dr. Cai (Chemistry and Biochemistry), Graduated in Fall 2011.
36. **Dr. Paulo Olivas:** The synergetic response of Arctic ecosystems carbon exchange to manipulation of temperature and water table. Advisor Dr. Oberbauer (Biology), Graduated in Fall 2011.
37. **Dr. Ravi Godavalli:** Effect of pH and temperature on the carbonate promoted dissolutions of uranyl phosphate minerals. Advisor Dr. Tansel (Civil and Environmental Engineering), Graduated in Summer 2013.
38. **Dr. Sushant Kumar:** Energy Production through Different Mineral Oxides. Mechanical Engineering Doctoral Program, Advisor: Dr. Saxena, Graduated Fall 2013.
39. **Dr. Miguel Cruz:** Environmental and Occupational Health. Graduated in Fall 2014
40. **Ms. Zoe Pratte:** Biology Dr. Richardson - Advisor
41. **Mr. Jason Downing:** Biology Dr. Liu - Advisor
42. **Ms. Sharon Surita:** Civil and Environmental Engineering Dr. Berrin Tansel - Advisor

- 43. Dr. Yemeserach Mekonnen:** Edge IOT Driven Framework for Experimental Investigation and Computational Modeling of Integrated Food, Energy, & Water System. Advisor Dr. Arif Sarwat (Electrical Engineering), Graduated in Fall 2019.
- 44. Dr. A.M. Abdullah:** Advanced Oxidation Processes for the Remediation of Problematic Organophosphorus Compounds and Perfluoroalkyl Substance. Advisor: Dr. Kevin O'Shea (Chemistry and Biochemistry). Graduated in Spring 2020.
- 45. Dr. Luis Garbinski:** Bacterial Mechanisms of Toxicity and Resistance to Organoarsenicals. Advisor Dr. Barry Rosen (Cellular Biology and Pharmacology, College of Medicine). Graduated in Fall 2020.
- 46. Mr. Clement Olenrewaju:** Oil fingerprinting analysis using GC-APLI-TIMS-TOFMS. Advisor Dr. Francisco Lima (Chemistry and Biochemistry)
- 47. Ms. Janet Crespo Cajigas:** Improving Canine Detection Specificity via Instrumental and Sensing Tools. Advisor Dr. Kenneth Furton (Chemistry and Biochemistry).

Post-Doctoral Research Associates Supervision:

1. Dr. Meera Nair – 1997-1998
2. Dr. Kateel Shetty – 2000-2012
3. Dr. Pushpa Soti – Jan 2014 – July 2015
4. Dr. Saoli Chanda – Jan 2018 – August 2018
5. Dr. Sanku Dattamudi – July 2018 - Current
6. Dr. Divya Yuvaraj – Jan 2019 - Current
7. Dr. Shagufta Gaffar – Jan 2021 – Current

International Scholars Hosted in my Laboratory:

Dr. C. Udayasooriyan, 2000 – TNAU, Tamil Nadu, India
 Dr. R. Natesan, 2009 – TNAU, Tamil Nadu, India
 Dr. Murugesha Boopathi, 2010 – TNAU, Tamil Nadu, India
 Drs. Sundaram, Pandiyarajan, Marimuthu, 2010 – TNAU, Tamil Nadu, India
 Dr. Balagurunathan, 2010 – TNAU, Tamil Nadu, India
 Mr. German Adan Orellana, Summer 2011 – National University of Agriculture, Catacamas, Honduras
 Ms. Paola Marticorena, 2011 - Universidad de Antofagasta, Chile
 Mr. Kenta Watanabe, 2012 - The University of Ryukyus, Japan
 Dr. Bulent Toprak, 2013 - Duzce University, Duzce, Turkey
 Mr. Eduardo Peres, 2015 – Brazilian Science Mobility Program, Brazil
 Ms. Marianne Vouters, 2016 – Agroecology, ISARA-Lyon, France
 Dr. N. Umashankar, 2016 – UAS, Karnataka, India
 Ms. Mariana Santos-Reis, Summer 2016 – Brazilian Science Mobility Program, Federal University in ABC Paulista, SP-Brazil
 Dr. Maimona Saeed, 2019 – PMAS-Arid Agriculture University, Rawalpindi, Pakistan

PROFESSIONAL SERVICE:

National Research Review Panels:

Panelist	National Council for Science and Environment (2002)
Panelist	Environmental Protection Agency (2002 and 2003) (Super Fund Sites Research Panels)
Panelist	EPA-STAR Fellowships (2004, 2005, 2006, 2007, 2010, 2012, 2014, 2015) Soil, Plant, Terrestrial Ecology, Bioenergy, and Pesticides Panels
EPA Site Reviewer	SouthEastern Louisiana University Research Site (2006)
Panelist	EPA – Ecosystem Services Research Panel (2009)
Panelist	USDA-CSREES-NRI- Soil Processes Panels (2007, 2008)
Ad-hoc Panelist	USDA-CSREES-MSP (2007)
Panelist	USDA-NIFA-HSI (2010), USDA-NIFA-HBCU (2011, 2015, 2016, 2021), USDA-NIFA-WAMS (2014, 2020) USDA-NIFA-ANNH (2016) USDA-NIFA-HEC (2020) USDA-NIFA-EGP (2021)
Panel Manager	USDA-SPECA and PD-STEP (2016) USDA-NIFA-Plants and Bioenergy (2021)
Panelist	NSF-Microbiome (2020)

COMMUNITY ENGAGEMENT AND OUTREACH ACTIVITIES:

As the Co-Director of the Agroecology Program, I have been involved in various community outreach activities, in order to promote sustainable urban agriculture and community gardening in South Florid, by providing expert advice, recruiting student volunteere for organizations, conducting FIU garden tours, USDA Research Station and local organic farms tours, etc.

- Site identification for FIU Organic Garden, laying out first garden plots for teaching, experiential learning at the garden, establishing the shade-house facilities.
- Founding author and editor of Agroecology Biannual Newsletter – Cultivator.
- Urban League of Greater Miami: Site identification and planning a new community garden in Miami Downtown.
- Roots in the City Urban Farm in Miami Overtown: Student engagement, expert advise on vegetable production, and assistance with grant proposal development.
- Glaser Organic Farm and Paradise Organic Farm: Placement of student interns to learn organic farming techniques and community engagements.

- TERRA Environmental Institute: Advise on setting up a new campus garden, student mentoring etc.
- Miami-Dade Senior High Schools: Network with selected six high schools in Miami Dade; summer internships to high school students, student mentoring on their school yard project and science fair competition and the school curriculum development; engaging students in annual symposia, student recruitment to FIU and high school teachers summer workshop etc.
- Established Agriculture and Environmental Immersion Day for several High School Students to create interest in agriculture and environmental education.
- Made in Miami-Dade Farmer's Market: Participation and community engagement in Sunday Farmers market lead by Commissioner Joe Martinez, Miami-Dade County.
- Miami-Dade's Agriscience and Natural Resources Education Advisory Committee: Advise on curriculum development, agriscience facilities at schools etc (2008-present). Currently serving as the Chair of the committee.
- Member of Small Farmers Stakeholders Conference Organizing Committee in Florida.
- Advisory Board Member for ARN Foundation that helps Haiti Agriculture and Environmental issues.
- Judge: Fairchild Challenge Program for Miami-Dade Schools competition on environmental science education – for the past 11 years.
- Miami-Dade Science and Engineering Fair – Organized a community workshop on Agroecology Program, judged science competition, awarded four best science projects in Agroecology. 2010 - present
- Organized Agroecology Team for FAA judging 2012 –present
- Miami-Dade Public Schools STEM Advisory Board Member
- National Academy of Foundation (NAF) member, Miami-Dade Public Schools AgriScience Academy Board Member.
- Training Army Veterans and Socially Disadvantaged Farmers in farming systems and nursery management. Laying out the significance of working with plant and soil that helps relieve stress from veterans.

Development of Agricultural and Environment Science Research Center in Homestead:

Assisted CASE and SEAS by providing teaching, research and outreach ideas for establishing an Agroecology Center (CASA) in Redland. Key role in preparation for acquiring several pieces of property in Homestead and developing them into an agricultural research center.

- Attended several meetings including several strategic planning meetings last nine years with local farm Possum Trot, Dumond Conservatory, CASE Deans, SEAS Director, CASE development officer Paul Landrum and Mr. John Mills, the member of the CASE Advisory Board.
- Primary contact for Possum Trot Farm, and developmental activities towards agriculture education, research, and outreach. Possum Trot (30 acres) farm is official under FIU administration – approved in October 2020.
- Contributing author for development of a Business Plan (Proposal for new Research Centers) for the Agroecology Center.

- Attending biweekly meetings on Tuesdays 9.30 – 10.30 with Paul Landrum (Development Officer) to discuss various activities on food and agriculture.
- Established special programs teaching facilities and VeSFO office facilities at a 5 acre site – The Girls Home owned by John Mills.
- Developed and executed series of non-credit workshops (special programs). Professional Horticulture Workshop, Beekeeping Workshop, Orchids Workshop, and series of related workshops.
- International workshop on Agroecology and Sustainable Agriculture (IWASA) executed summer of 2015 followed by several other workshops.
- Serving as a primary coordinator for several activities related to food and agriculture initiatives.
- Prepared documents for the Dean to appear at Congress sub-committee on Agriculture and Biotechnology.
- Helping to relocate the fair grounds to Homestead area.
- Attended several fund raising events.

Local, Regional, National, International Networking (2005-Present): I have developed strong collaborations to promote education and research training with high schools, middle schools, Fairchild Tropical Botanical Garden, USDA-ARS Sub-Tropical Horticulture Research Station, the DuMond Conservancy– Monkey Jungle/Possum Trot, Vizcaya Museum & Gardens, Miami-Dade Agriculture Extension Office, local farms, University of Florida – Tropical Research and Education Center, Fruit and Spice Park, Miami-Dade College, St. Thomas University, McArthur Agroecology Research Center (Highland County), ECHO farms (Ft. Myers), Florida Nursery Growers and Landscape Association (Orlando), Inter-American University (Puerto Rico), University of Texas-RGV, Texas A&M University-Kingsville, New Mexico State University, University of California – Santa Cruz, National Laboratory for Agriculture and Environment (Iowa), National University for Agriculture (Honduras), Tamil Nadu Agricultural University (India), and Agroecology Research Center (France). I have hosted students from Brazil, Chile, France, Honduras, Japan, and Turkey in my research laboratory. Recently last year in October, I have hosted participant from Belize through Young Leaders of Americas Initiative (YLAI) from the State Department.

Non-Academic Community Service:

Board of Directors for South Florida Tamil Sangam 2010-2012 (<http://www.sfts.org>)

Fund Raising for National MS Society by participating MS Bike Ride–85 miles from 2012.

Fund Raising through Sukeebhava organization to provide educational and medical help in southern part of India. Last ten years.

FUNDED RESEARCH ACTIVITIES (Competitive Funding): ~\$20 million

Agency	Research Project Title	Participation	Amount
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Southern SARE	The Use of Cyanobacteria Biofertilizer to Increase Crop Productivity, Improve Soil Health, and Agricultural Sustainability in Florida (2021-2024)	Co-PI	\$242,000
USDA-NNF	Urban Sustainable Agriculture Education for Doctoral (USA-ED) Fellows at Florida International University (2021-2026)	PI	\$238,500
Green Point Research	Industrial Hemp Pilot Project: Variety Selection, Cropping System Development (2020 – 2022)	PI	\$75,050
FL Sply Crops Blk Grant	Nitrogen Management and Plant Quality Monitoring Using Optical Sensor Technology in Native and Non-Native Specialty Crops (2021-2022)	Co-PI	\$82,677
USDA-OPPE	Building the Agricultural Entrepreneurial Capacity of Socially Disadvantaged Farmers through Experiential Training and Progressive Mentorship (2020-2023)	Co-PI	\$400,000
Walmart Foundation	Food System Supply Chain – Tomatoes and Strawberries - 2018	Co-PI	\$450,000
USDA-OAO	Veteran Farmers Development Program (2018-2020)	Co-PI	\$180,000
USDA-OAO	Veterans in Miami—Dade Agriculture (2017-2018)	Co-PI	\$178,000
USDA	A Foundation for New Farmers in South Florida: Training and Transitioning Farmworkers and Veterans into Farmers and Nursery Growers. Sep 2017 – Aug 2021	PI	\$300,000
USDA	Cochran Fellowship Program – Moldova March 2017	Co-PI	\$60,000
USDA HSI	Broadening Agriculture Science Education (BASE) for Hispanic Students through Florida – Texas – New Mexico Consortium September 2015-August 2020	PI	\$1,000,000

USDA HSI	START NOW "Student Training in Agricultural Research Techniques by Novel Occupational Workshops" Consortium TAMUK-FIU-UTEP-UPRM September 2016-August 2021	FIU-PI (TAMUK- Lead)	\$2,000,000
USDA HSI	Innovative Curriculum for Agriculture Training and Career for Hispanics (iCATCH) September 2016-August 2021	Co-PI	\$2,000,000
USDA MSP	Multicultural Scholars Program for Agri-Science Majors at Florida International University June 2016-June 2021	PI	\$200,000
JC Tropicals	Dragon Fruits Research: Nutritional Qualities 2016 - 2017	Co-PI	\$30,000
USDA OAO	Veterans and Socially Disadvantaged Farmers Training (Two one year grants) 2014-2016	Co-PI	\$350,000
JP Morgan Chase Foundation	The Education Effect: Sub section Gardens and Aquaponic system Development 2011-2015	Co-PI	\$350,000
USDA NNF	Doctoral Education in Interdisciplinary Agriculture and Natural Resources Sciences August 2015 – July 2020	PI	\$238,500
USDA MSP	Training Multicultural Undergraduate Scholars in Agriculture and Environmental Sciences at Florida International University, January 2013 – December 2019.	PI	\$200,000
USDA NNF	Infusing Food Security, Food Safety, and Bioenergy into the Environmental Studies Graduate Program at Florida International University. January 2013 – July 2018.	PI	\$246,000
USD HSI	Florida-Caribbean Consortium for Agriculture Science Education at Florida International University FIU Lead	CoPI	\$3.4 million
USDA MSP	Multicultural Scholars in Agriculture and Resource Science at FIU 2011-2016	PI	\$180,000

USDA	National Needs Fellow in Sust. Agriculture and Natural Resource Sciences at Florida International University: An Interdisciplinary Approach. January 2011-July 2014	PI	\$246,000
USDA HIS	Biofuel Science Education for Under-Represented Students at Florida International University. August 2010 – July 2013	PI	\$290,000
Peace Corps	Establishment of Peace Corps Scholarship at Florida International University. 2008-09 and 2009-10	PI	\$21,900
FIU-CASE	Environmental Studies Colloquium Enhancement Award. 2008-09, 2009-10, 2010-11	PI	\$9,000
USDA MSP	Training Multicultural Undergraduate Scholars in Agroecology at Florida International University: An Interdisciplinary Approach. January 2009 – December 2014	PI	\$150,000
USDA HIS	Curriculum Enrichment, Instrumentation and Experiential Learning in Agroecology. August 2008 - July 2011	Co-PI	\$292,000
USDA	Internationalization of Environmental Studies Curriculum through Teaching and Research in Bio-fuel Production and Technology. August 2008 - July 2010	Co-PI	\$100,000
SFWMD	Discovery, Development and Evaluation of Native Microbial Biological Control Agents for Managing Old World Climbing Fern in South Florida. May 2008 – March 2010	PI	\$99,000
USDA MSP	Multicultural Undergraduate Scholars in Agroecology at Florida International University. August 2007 – July 2012	PI	\$150,000
ENP	Biological control of invasive plant species in South Florida October 2002 – December 2008	PI	\$380,000
NIEH	Microbial Degradation of Brevetoxin – Isolation of Novel Bacteria. September 2006 – August 2009	PI	\$187,500
USDA	Curriculum Development and Capacity Building in Agroecology Sciences. August 2005-August 2008	Co-PI	\$240,000
USDA	Understanding Limits to Growth in International Agriculture and Opportunities for Sustainable	Co-PI	\$100,000

Farming Systems. May 2006- April 2009

ILZRO	Silver Chemicals for Wood Preservation: Effect on Soil Biology. August 2003- December 2008	PI	\$45,000
ABS	Arbuscular-Mycorrhizal Colonization and Interaction with Endangered Plant Species, <i>Ziziphus celata</i> (Rhamnaceae). March 2003 – Dec. 2006.	PI	\$3,500
DOE	Natural Attenuation of Trichloro-Ethylene from contaminated soils and water from Savannah River Site and Oak Ridge – Support for the Mercury Center of Excellence (Microbial Structural and Functional Diversity). Feb. 2003 – Nov. 2005. (DOE Project through HCET {ARC}).	PI	\$90,000
ENP	Brazilian Pepper Suppression in the Soil Disposal Mounds in the Hole-in-the-Donut Pilot Restoration Program, Everglades National Park. October 2000 – September 2002.	PI	\$180,000
SDSWCD	Microbial Degradation of Pesticides in South Florida Soils. April 2000-March 2001.	PI	\$15,000
USDA	Determination of the movement of Agrochemicals in soils with Compost Amendments. April 2001 – June 2006	PI	\$132,000
FAO/WB	Bioremediation of Pesticides Contaminated Soils.	PI	\$6,000
ENP	Everglades National Park Tree Islands: Interactions of Vegetation, Hydrology, and Soils. August 2000-July 2003.	Co-PI	\$330,000
DOE	Bioremediation of TCE from contaminated soils and water from Savannah River Site. April 2002-March 2003. (DOE Project through HCET {ARC}).	PI	\$14,050
OSRA	Search for novel soil microorganisms from preserved sites of Florida. May 2001.	PI	\$4,000
ENP/SFWMD FDEP	Numerical Interpretation of Class III Narrative Nutrient Water Quality Criteria for the Everglades Wetlands. January 1996-2002.	Co-PI	\$5 million
ENP	Assessment of Marsh Vegetation Responses to Hydrological Restoration in Shark Slough. ENP. 1996-1999.	Collaborator	

BNP	Water Flow through Coastal Wetlands. 2001-2003	Collaborator
USFW	Restoration of <i>Jacquemontia reclinata</i> to the South Florida Ecosystem. 1999-2001.	Collaborator
USDA	Multistate Project to investigate Microbial Role in Land Management. (Consortium of 20 Soil Microbiologists from different regions in US). 2001-2005.	Investigator
EPA	Development of Strategies for Biological Remediation of Pesticide Contaminated Sites 1994-96	Co-PI \$835,139
LCSA	Interactions of arbuscular mycorrhizal fungi in pesticides degradation. 1992-94	Co-PI \$40,000
EPA	Assimilative Capacity of Soil Microorganisms. 1992-1995.	Co-PI \$750,000
USDA	Fate and Significance of Major Degradation Products of Atrazine	Co-PI \$120,000
USDA	Management System Evaluation Area (MSEA) for water Quality in Midwestern States: President's Initiative on Water Quality. 1991-1995	Res. Sci \$5million
NSF	A Mechanisms Regulating Phosphorus Cycling in Tallgrass Prairie. Konza Prairie LTER 1987-1991.	GRA

Additional Revenue Generated through various Academic Activities: ~\$2.7 million

Deep South Garden Club (Blair Klein's RAship)	2020-2021	\$3500
Torry Botanical Society (Blair Klein's RAship)	2020-2021	\$2500
National Garden Club (Blair Klein's RAship)	2020-2021	\$4000
Florida Federation Garden Society (Blair Klein's RAship)	2020-2021	\$3000
Higher Education Commission – Pakistan	2019	\$3500
Agroecology Workshops (IWASA, PHCP)	2015-2020	\$45,000
Professional MS-Environmental Policy & Management	2015-2021	\$2.64 mil

PUBLICATIONS IN DISCIPLINE:

*Denotes publications/presentations with students.

**Denotes corresponding author.

Books:

Dissertation and Thesis

Jayachandran, K. Role of Vesicular-Arbuscular Mycorrhizae in Phosphorus Acquisition from Unavailable Phosphorus Sources. 1991., Ph.D. Thesis, 74 pp, Department of Plant Pathology, Kansas State University, Manhattan, KS

Jayachandran K. Studies on the Survey, Spore Germination and Inoculation of VA-Mycorrhizal Fungus on the Growth of Certain Crop Plants. 1983, M.Sc. Thesis, 123 pp, Department of Agricultural Microbiology, Tamil Nadu Agricultural University, Coimbatore, India

Refereed Articles Published:

Total number of peer-reviewed publications: 88

72. Shagufta Gaffar*, Sanku Dattamudi, Amin Rabiei Baboukani, Saoli Chanda, Jeffrey M. Novak, Donald W. Watts, Chunlei Wang, and **Krishnaswamy Jayachandran**. 2021. Physiochemical characterization of biochars from six feedstocks and their effects on the sorption of atrazine in an organic soil. Provisionally Accepted: **Agronomy**.

71. Blaire M. Kleiman*, Suzanne Koptur, and **Krishnaswamy Jayachandran**. 2021. Beneficial Interactions of Weeds and Pollinators to Improve Crop Production. In Press: **Journal of Research in Weed Science**,

70. Pushpa Soti*, Bulent Toprak, Nina De La Rosa*, and **Krish Jayachandran**. 2021. Influence of Land Use Intensity and Management on Arbuscular Mycorrhizal Fungi-Avocado Symbiosis. **Journal of Agricultural Science**, 13:3, 10-16, <https://doi.org/10.5539/jas.v13n3p10>

69. Freidenreich, A*. Harris, B*., Betancourt, E*., Reis, M., Dattamudi, S., **Jayachandran, K.** 2020. Effects of Prescribed Fire on Soil Properties in a Pine Rockland Ecosystem. **Agricultural & Environmental Letters**, 5:1, 1-7, <https://doi.org/10.1002/ael2.20026>

68. Blaire M. Kleiman*, Andrea Salas Primoli*, Suzanne Koptur, and **Krishnaswamy Jayachandran**. 2020. The interactions of weeds and beneficial insects-pollinators and parasitoids and the issues in using weeds for insect manipulation in agriculture. **Journal of Research in Weed Science**, 3(3), 382-390. DOI:10.26655/JRWEEDSCI.2020.3.9

67. Lamar Burton*, **Krish Jayachandran**, and Shekhar Bhansali. 2020. The 'real-time' revolution for in-situ soil nutrient sensing: A Review. **Journal of The Electrochemical Society**, DOI: 10.1149/1945-7111/ab6f5d

66. Pushpa Soti*, Matthew Purcell, and **Krish Jayachandran**. 2020. Soil Biotic and Abiotic Conditions Negate Invasive Species Performance in Native Habitat. **Journal of Ecological Processes**, 9:18, doi.org/10.1186/s13717-020-00220-1.

65. David Berthold*, Nina De la Rosa*, **Krish Jayachandran**, Miraslov Gantar, H. Dail Laughinghouse, and Kateel Shetty. 2020. Omega-7 Producing Alkaliphilic Diatom *Fistulifera* sp. (Bacillariophyceae) from Lake Okeechobee, Florida. **Algae**, 35(1):91-106. DOI:

<https://doi.org/10.4490/algae.2020.35.12.16>

64. Claudia Lyl Garcia*, Sanku Dattamudi, Saoli Chanda, and **Krishnaswamy Jayachandran**. 2019. Effect of Salinity Stress and Microbial Inoculations on Glomalin Production and Plant Growth Parameters of Snap Bean (*Phaseolus vulgaris*). **Agronomy**. Vol 9, 545, doi:10.3390/agronomy9090545
63. Pushpa Soti*, Matthew Purcell, and **Krish Jayachandran**. 2019. Data on the foliar nutrient concentration of invasive plants in the recipient habitat and their native habitat. **Data in Brief**. Vol 25, doi.org/10.1016/j.dib.2019.104201
62. Ariel Freidenreich*, Gabriel Barraza*, **Krishnaswamy Jayachandran** and Amir Ali Khoddamzadeh. 2019. Precision Agriculture Application for Sustainable Nitrogen Management of *Justicia brandegeana* Using Optical Sensor Technology. **Agriculture**. 9, 98. doi:10.3390/agriculture9050098
61. David Erwin Berthold*, Kateel G. Shetty, **Krishnaswamy Jayachandran**, H. Dail Laughinghouse, and Miroslav Gantar. 2019. Enhancing algal biomass and lipid production through bacterial co-culture. **Journal of Biomass and Bioenergy**. 122:280-280. doi.org/10.1016/j.biombioe.2019.01.033.
60. Thelma I. Velez*, Nall I. Moonilall*, Stewart Reed, **Krishnaswamy Jayachandran**, and Leonard J. Scinto. 2018. Impact of *Melaleuca quinquenervia* biochar on *Phaseolus vulgaris* L. growth, soil nutrients, and gas flux. **Journal of Environmental Quality**, 47:1487-1495.
59. Toprack*, B., Soti, P., Jovel*, E., Alvarado*, L., **Jayachandran, K.** 2017. Mycorrhizal Fungi Status in Organic Farms of South Florida. **Mycosphere**, 8(7):951-958.
58. Pushpa Soti and **Krish Jayachandran**. 2016. Effect of Exotic Invasive Old World Climbing Fern (*Lygodium microphyllum*) on Soil Properties. **Journal of Soil Science and Plant Nutrition**, vol 16: Number 4:930-940.
57. Nall Moonilall*, Stewart Reed, and **Krish Jayachandran**. 2016. The Effect of Insect Rearing Waste Compost on *Helianthus annuus* and *Tithonia rotundifolia*. **Agrotechnology**, Vol 5: Issue 2: DOI 4172/2168-9881.1000153.
56. Shetty, Kateel G., Rivadeneira, Diana V*. **Jayachandran, Krish**, and Walker, Donald M. 2016. Isolation and molecular characterization of fungal endophytic microbiome from conventionally and organically grown avocado trees in South Florida. **Mycological Progress**, 15:977-986 DOI 10.1007/s11557-016-1219-3
55. Jungman, A.,* M. G. Bhat, **K. Jayachandran** and B. Gowda. 2017. An Assessment of Biodiesel Feedstock Conversion Efficiency: A Case Study of Decentralized Biofuel Production Program in Rural India. **International Journal of Renewable Energy Technology**, 8 (1) 47-63

54. Miles Medina*, **Krishnaswamy Jayachandran**, Mahdev Bhat, and Alok Deoraj. 2015. Assessing plant growth, water quality, and economic effects from application of a plant-based aquafeed in a recirculating aquaponic system. **Aquaculture International**, vol 23: Numer 4. DOI 10.1007/s10499-015-9934-3
53. Pushpa Soti*, **Krish Jayachandran**, Suzanne Koptur, and John Volin. 2015. Effect of Soil pH on Growth, Nutrient Uptake, and Mycorrhizal Colonization in Exotic Invasive *Lygodium microphyllum*. **Plant Ecology**, 216:989-998.
52. Pushpa Soti*, Angie Fleurissaint*, Stewart Reed, and **K. Jayachandran**. 2015. Effects of Control Release Fertilizers on Nutrient Leaching, Palm Growth, and Production Cost. **Agriculture**, 5:1135-1145.
51. Pushpa Soti, **Krish Jayachandran**, Matthew Purcel, John Volin, and Kaoru Kitajima. 2014. Mycorrhizal Symbiosis and *Lygodium microphyllum* Invasion in South Florida – a biogeographic comparison. **Symbiosis**, DOI 10.1007/s131199-014-0272-4
50. Beglailenko*, D., P. Soti, K.G. Shetty, and **K. Jayachandran**. 2014. Buckwheat as a Cover Crop in Florida: Mycorrhizal Status and Soil Analysis. **Journal of Agroecology and Sustainable Food Systems**, 1033-1046, DOI:10.1080/21683565.2014.906016
49. Sheahan*, C., D. Bray, M. Bhat, and **K. Jayachandran**. 2012. Ecological, Economic, and Organizational Dimensions of Organic Farming in Miami-Dade County. **Journal of Sustainable Agriculture**, 36:83-105.
48. Ramani*, A., K.G. Shetty, K.S. Rein, and **K. Jayachandran**. 2012. Microbial Degradation of Microcystin in Florida's Freshwaters. **Biodegradation**, 23:35-45.
47. Shetty, K.G., A.Y. Rossman, A.D. Minnis, and **K. Jayachandran**. 2011. The Brazilian peppertree seed-borne pathogen, *Neofusicoccum batangarum*, a potential biocontrol agent. **Biological Control**, 56:91-97.
46. Shetty, K.G., J.V. Huntzicker*, K.S. Rein, and **K. Jayachandran**. 2010. Biodegradation of polyether algal toxin – Isolation of potential marine bacteria. **Journal of Environmental Science and Health**, 45:1850-1857.
45. Andrew Ogram, Ashvini Chauhan, Kanika Sharma Inglett, **Krish Jayachandran**, and Susan Newman. 2011. Microbial Ecology and Everglades Restoration. **Critical Reviews in Environmental Science and Technology**, 41:289-308.
44. Joseph*, R., S. Reed, **K. Jayachandran**, C. Clark-Cuadrado*, and C. Dunn. 2010. Endosulfan has no Adverse Effect on Soil Respiration. **Agriculture, Ecosystems & Environment**, 138:181-188.
43. Shinde, D., M.R. Savabi, **K. Jayachandran**, S. Reed, P. NKedi-Kizza, and K. Konomi*. 2009. Influence of Compost Amendments on Leaching of Phosphorus in a Calcareous Soil of

South Florida. **International Agricultural Engineering Journal**. 18(3-4): 35-41.

42. Prabhakar Pant*, Marshall Allen, Yong Cai, and **Krishnaswamy Jayachandran**. 2008. Design and Performance of a Mesocosm Chamber for Trichloroethylene Evaporation Study. **Journal of Water, Air, and Soil Pollution**, 193:3-13.

41. Fisher, Jack B., and **Krish Jayachandran**. 2008. Beneficial role of arbuscular mycorrhizal fungi on Florida native palms. **Palms**, 52(3):115-125.

40. Fisher, Jack B., and **Krish Jayachandran**. 2008 .Arbuscular Mycorrhizal Fungi Promote Growth and Phosphorus Uptake in *Zamia*, A Native Florida Cycad. **Florida Scientist**, 71(3):265-272.

39. Suwa Ryuichi, **Krish Jayachandran**, Nguyen T N, Abdellah Boulenouar, Kounosuke Fujita, and Hirofumi Saneoka. 2008. Barium Toxicity Effects in Soybean Plants. **Archives of Environmental Contamination and Toxicology**, 55(3):397-403.

38. Assefa Melesse, **Krishnaswamy Jayachandran**, and Keqi Zhang. 2008. Modeling coastal eutrophication of Florida Bay using Neural Networks. **Journal of Coastal Research**, 24(2B): 190-196.

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33. Prabhakar Pant*, Marshall Allen, Yong Cai, **Krishnaswamy Jayachandran**, and Yin Chen. 2007. Influence of Physical Factors on Trichloroethylene Evaporation from Surface Water. **Journal of Water, Air, and Soil Pollution**, 183:153-163.

32. Clarke*, T., K.G. Shetty, **K. Jayachandran**, and M.R. Norland. 2007. *Myrothecium verrucaria* - a potential biological control agent for the invasive "old world" climbing fern, *Lygodium microphyllum*. **Biocontrol**, 52:399-411.

31. Jones, D.T., J.P. Sah, M.S. Ross, S.F. Oberbaeur, B. Hwang, and **K. Jayachandran**.

2006. Growth and physiological responses of twelve tree species common in Everglades tree islands to simulated hydrological regimes. **Wetlands**, 26:830-844.

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garden: A comparative analysis of okra grown in different fertilizer treatment. International Conference on Precision Agriculture, June 2018, Montreal, Quebec, Canada

Krish Jayachandran, Mahadev Bhat, Kateel Shetty, Amir Khoddamzadeh, and Eric Betancourt. 2018. An Innovative Agricultural Science Education at a Non-Land Grant University. North American Colleges and Teachers of Agriculture Annual Conference, June 12-15, 2018, Ames, IA

Ganesh Khadka, Jessica Dominguez, **Krishnaswamy Jayachandran**, and Kateel Shetty. 2018. Synergistic activity potential of Stevia rebaudiana whole extract against environmental bacteria. American Society for Microbiology Annual Conference, July 2018, Atlanta, GA

Jennifer Gil, **Krishnaswamy Jayachandran**, Miroslav Gantar, and Kateel Shetty. 2018. Sensitivity of marine cyanobacteria and green microalgae to nano and bulk zinc oxides. American Society for Microbiology Annual Conference, July 2018, Atlanta, GA

David Berthold, Miroslav Gantar, Nicholas Engene, Kateel Shetty, **Krishnaswamy Jayachandran**. 2018. Omega-7 producing alkaliphilic diatom *Fistulifera alcalina* sp. Nov. from Lake Okeechobee, Florida. PSA/ISOP Annual Conference, August 2018, Vancouver, BC, Canada

Ariel Freidenreich***, Mary Tiedeman, **Krishnaswamy Jayachandran**, and Pushpa Soti. 2017. Cover Crop Termination Times for Building Soil Carbon in South Florida Soils. ASA-CSSA-SSSA Annual Conference, October 20-25, 2017, Tampa, FL

Riera, D***., Khoddamzadeh, A.A., Lewis, C., and **Jayachandran, K.** 2017. Florida Cowhorn Orchid: an Alternative *Ex-situ* Conservation Method for the Endangered *Cyrtopodium punctatum*. Florida Rare Task Force Conference. Naples, Florida.

Rodriguez A***., Khoddamzadeh, A.A., Vendrame, W., **Jayachandran K.** and Freidenreich, A. 2017. Poinsettia Fertilizer Management: Application of Optical Sensor Technology. Agroecology Symposium. Miami, Florida.

Riera, D***., Khoddamzadeh, A.A., Lewis, C., and **Jayachandran, K.** 2016. *Ex-situ* Conservation Strategy: Cryopreservation of Threatened Floridian Orchids by Encapsulation-Dehydration. International Tropical Botany and Pine Rockland Conference at Fairchild. Miami, Florida.

Duarte, E***., Vandenberg, K., Khoddamzadeh, A.A., Supurna, D., Mathee, K. and **Jayachandran, K.** 2016. Panax Ginseng Extracts as a Novel Antibiotic. ASHS Annual Conference. Atlanta, Georgia.

Font, A***., Khoddamzadeh, A.A., Supurna, D., Mathee, K. and **Jayachandran, K.** 2016. Anti-Bacterial Properties of the Annona Montana. ASHS Annual Conference. Atlanta, Georgia.

Barraza, G.A***., Khoddamzadeh, A.A., Riera, D. and **Jayachandran, K.**, Shetty, K. Handheld Sensors Application for Fertilizer Management in Landscaping Ornamental *Justifia Brandegeana*. 2016. ASHS Annual Conference. Atlanta, Georgia.

Riera, D***., Khoddamzadeh, A.A., Lewis, C., Vendrame, W. and **Jayachandran, K.** 2016 Commercial Orchid Production: Artificial/Synthetic Seed Approach. ASHS Annual Conference. Atlanta, Georgia.

Riera, D***., Khoddamzadeh, A.A., Lewis, C., Vendrame, W. and **Jayachandran, K.** 2016 Orchids on Ice: Protecting Imperiled Floridian Orchids through Cryopreservation. ASHS Annual Conference. Atlanta, Georgia.

David Berthold, Nina De la Rosa, **Krish Jayachandran**, Miroslav Gantar, Kateel G. Shetty. 2016. Omega-7 Producing Alkaliphilic Diatom *Fistulifera* sp. 154-3 from Lake Okeechobee, Florida Algae Biomass Summit, Phoenix, AZ, October 23 to 26, 2016.

Ariel Friedenreich, Pushpa Soti, Brittany Harris, Eric Betancourt, Mariana Santos Reis, Shagufta Gafar, and **Krish Jayachandran**. 2016. Effect of prescribed burn on pine rocklands soil health and plant communities within FIU's nature preserve. ASA, CSSA, SSSA International Annual Conference, Nov 6-9, Phoenix, AZ

Ariel Friedenreich and **Krish Jayachandran**. 2016. Comparison of Synthetic versus Organic Herbicides/Insecticides on Arbuscular Mycorrhizal Fungi. ASA, CSSA, SSSA International Annual Conference, Nov 6-9, Phoenix, AZ – **Ariel Won an Award in national competition.**

James Dautel and **Krish Jayachandran**. 2016. Developing remote sensing tools to identify flooding stress rise in Avocado trees. ASA, CSSA, SSSA International Annual Conference, Nov 6-9, Phoenix, AZ

Krish Jayachandran. 2017. Environmental Policy and Management through Education at Florida International University. NCSE Annual Conference, Jan 24-26, Washington, DC.

Betancourt, E., M. G. Bhat, **K. Jayachandran**, K. Shetty and A. Khoddamzadeh. Innovative Curriculum for Agriculture Training and Career for Hispanics. Poster Presented at the USDA HSI National Project Directors Meeting, Albuquerque, New Mexico, February 2017.

Bhat, M. G., **K. Jayachandran**, N. de La Rosa, and J. Mills. "Role of Veterans in Agriculture and Food Security: Factors Influencing their Long-Term Success in Farming." Presented at the International Society of Ecological Economics Conference, Washington, DC, June, 2016

Krish Jayachandran, Eduardo Peres, and Pushpa Soti. 2015. Mycorrhizal Fungi: A Biological Control Agent of Plant Parasitic Nematodes. ASA, CSSA, SSSA International Annual Conference, Nov 15-18, Minneapolis, MN

Krish Jayachandran, Joshua Munoz-Jimenez, and Pushpa Soti. 2015. Using Summer Cover Crops for Nematode Control in a Low Input Agriculture Systems. ASA, CSSA, SSSA International Annual Conference, Nov 15-18, Minneapolis, MN

Andrea Salas, Suzanne Koptur, and **Krish Jayachandran**. 2015. Effect of Host Plant Density on Herbivores and their Parasitoids: A Field Experiment with a Native Perennial Legume. ASA, CSSA, SSSA International Annual Conference, Nov 15-18, Minneapolis, MN

Krish Jayachandran, Len Scinto, and Mike Ross. 2015. Phosphatases Enzymes Activity in Phosphorus Rich Everglades Tree Islands Ecosystem. GEER Conference, April 21 -23, 2015, Coral Springs, FL

Pushpa Soti, **Krish Jayachandran**, and John Volin. 2015. Influence of Soil biogeochemical Properties on Exotic Invasive Lygodium Microphyllum: A Cross Continent Comparison of Soil Characteristics to Invasion Success. GEER Conference, April 21 -23, 2015, Coral Springs, FL

Krishnaswamy Jayachandran, Mahadev Bhat, Stephany Alvarez, and Kateel Shetty. 2014. Experiential and Experimental Learning Approaches for Undergraduate Education in Agroecology. ASA, CSSA, SSSA International Annual Conference, Nov 2-5, Long Beach, CA

Kateel G. Shetty, **Krish Jayachandran**, and Mahadev Bhat. 2013. Models for Teaching Interdisciplinary Biofuels Science: A Multi-pronged Approach. 59th Annual North American Colleges and Teachers of Agriculture Conference. June 25-29, 2013, Blacksburg, VA

Mahadev Bhat, **Krish Jayachandran**, and Stephany Alvarez. 2013. Mentoring undergraduate students in agroecology. 59th Annual North American Colleges and Teachers of Agriculture Conference. June 25-29, 2013, Blacksburg, VA

Krish Jayachandran, Mahadev Bhat, and Kateel Shetty. 2013. Attended a meeting at Biofuels Center, University of Tennessee, Knoxville, TN, July 2013. To develop collaboration between FIU and UT

Priyanka Narendar*/***, Miroslav Gantar, and **Krishnaswamy Jayachandran**. 2010. Screening and Identification of Everglades algal isolates for Biodiesel production. Florida Energy Systems Consortium, September 28-29, 2010. Orlando, FL

Krish Jayachandran***, Kateel G. Shetty, Tainya C. Clarke*, Shili Miao, LeRoy Rodgers, and Robert Johnson. 2010. Potential for use of native phytopathogens as biocontrol agents for invasive plant species. Greater Everglades Ecosystem Restoration, The Greater Everglades: A

Living Laboratory Change – Planning, Policy, and Science Meeting, July 12-16, 2010, Naples, FL

Mahadev Bhat*** and **Krish Jayachandran**, 2010. Agriculture science education in minority serving, urban Universities: Service learning, collaboration, and community engagement. National Colleges and Teachers of Agriculture Conference, June 22-25, 2010, Pennsylvania State University, State College, PA

Krish Jayachandran***, Kateel G. Shetty, LeRoy Rodgers, Shili Miao, and Robert Johnson. 2010. Potential for use of native phytopathogens as biocontrol agents for Old World Climbing fern (*Lygodium microphyllum*). Florida Exotic Pest Plant Council Symposium, April 5-8, 2010, Crystal River, FL

Krish Jayachandran*** and Mahadev Bhat. 2009. Multicultural Undergraduate Scholars in Agroecology at Florida International University: In Interdisciplinary Approach. Joint MSP/NNF Project Directors and Beneficiaries Meeting, October 20-21, 2009, 1410 Waterfront Center, Washington DC Invited Speaker.

Krish Jayachandran***, Kateel G. Shetty, and Lynne Feiber. 2009. Microbial Biodegradation of Brevetoxins – Isolation and Screening of Potential Marine Bacteria. March 9-10, 2009, ARCH Meeting, Florida International University.

Krish Jayachandran*** and Kateel G. Shetty. 2009. Native phytopathogens as biocontrol agents: Problems and potentials in the management of invasive exotic species. Weed Science Society of America National Conference February 9 – 13, 2009 Orlando, FL

Krish Jayachandran***, Mike Ross, and Steve Oberbauer. 2008. Structural and functional diversity of microbial communities in pristine wetlands of the Everglades. Soil Science Society of America, American Society for Agronomy, and Crops Science Society of America Annual Conference, October 5 – 8, 2008, Houston, TX

Krish Jayachandran***, Kateel G. Shetty, and Lynne Feiber. 2008. Microbial Biodegradation of Brevetoxins – Isolation and Screening of Potential Marine Bacteria. March 3-4, 2008, ARCH Meeting, Florida International University.

Krish Jayachandran***, Tainya C. Clarke*, and Kateel G. Shetty. 2008. A Potential Biological Control Agent for Invasive Plant Species, Old World Climbing Fern (*Lygodium microphyllum*). 23rd Annual Symposium, Florida Exotic Pest Council, April 21- 24, 2008, Jacksonville, FL. Invited Speaker.

Krishnaswamy Jayachandran***, Seema Sah*, and Jeffrey Ellis. 2007, Investigation of Silver Chemicals for Wood Preservation and Soil Biology. Soil. Soil Science Society of America Annual Meeting, Nov. 4-8, 2007, New Orleans, LA

Joel Trexler***, Evelyn Gaiser, Len Scinto, Daniel Childers, and **Krishnaswamy Jayachandran**. 2007. Phosphorus Load-Dependent Limitation of Aquatic Consumers in an

Oligotrophic Wetlands. North American Benthological Society 55th Annual Meeting, Columbus, SC

Stewart Reed***, Dilip Shinde, Kenichiro Konomi*, **Krish Jayachandran**, Peter Nkedi-Kizza, and Mohammed Savabi. 2006. Phosphorus Leaching Potential from Compost Amendments in a Carbonatic Soil. Soil Science Society of America Annual Meeting, Nov. 12-16, 2006, Indianapolis, IN

Seema Sah*/***, Stewart Reed, **Krish Jayachandran**, and Anne Hartley. 2006. Arbuscular mycorrhizal fungi response to flooding in snap bean cultivation in south Florida. Soil Science Society of America Annual Meeting, Nov. 12-16, 2006, Indianapolis, IN

Jayachandran*, Krish.**, Kateel G. Shetty, Michael R. Norland and Craig S. Smith. 2006. Development of microbial biocontrol agent for Brazilian Pepper Management. Plant Biologists of South Florida Annual Meeting. April 1, 2006, Fairchild Tropical Garden Research Center, Miami, FL

Sah*/***, Seema, Stewart Reed, and **Krish Jayachandran**. 2006. Arbuscular Mycorrhizal Fungi Interactions with Bean Plants Under Flooded Conditions. Plant Biologists of South Florida Annual Meeting. April 1, 2006, Fairchild Tropical Garden Research Center, Miami, FL

Jayachandran*, Krish** and Jeffrey Ellis. 2006. Exploratory Research on Silver Chemicals as Wood Preservatives. 102nd American Wood Preservatives Association Conference, April 9-12, 2006, Austin, TX

Jeffrey Ellis*** and **Krish Jayachandran**. 2006. Silver – It keeps Wood Healthy. 102nd American Wood Preservatives Association Conference, April 9-12, 2006, Austin, TX

Kateel G. Shetty, **Krish Jayachandran*****, and Michael R. Norland. 2005. Development of techniques for assessing biocontrol potential of indigenous pathogens on invasive Brazilian Pepper (*Schinus terebinthifolius* Raddi) in the Everglades National Park. Soil Science Society of America Annual Meeting, Nov. 6-10, 2005, Salt Lake City, UT

Robert T. Griffith***, **Krish Jayachandran**, William Whitstine, and Kenneth G. Furton. 2005. Canine and SPME/GC/MS detection of Microbial Volatile Organic Compounds from Toxic Indoor Molds. Forensic Science Symposium February 4-5, 2005, Fort Lauderdale, FL

Robert T.Griffith***, **Krish Jayachandran**, William Whitstine, and Kenneth G. Furton. 2005. Identification of Signature Microbial Volatile Organic Compounds from Toxic Molds using SPME/GC/MS and Canine Detection. PITTCON, March 4, Orlando, FL

Trexler***, J. C., E. Gaiser, J. Richards, D. Childers, **K. Jayachandran**, L. Scinto, and R. Jones. 2004. Phosphorus Load-Dependent Limitation of Aquatic Consumers in An Oligotrophic Wetland. 89TH Ecological Society of America Annual Conference, August 1-6, 2004, Portland, OR

Ross^{***}, M., P.L. Ruiz, **K. Jayachandran**, C.L. Coultas and J.P. Sah. 2004. Nutrient relationships in the “ridge-and-slough” vegetation mosaic of the southern Everglades, Florida, USA. Annual Conference on International Association for Vegetation Science, July 18-23, 2004, Kailu-Kona, Hawaii

Krish Jayachandran^{***}, Michael R. Norland, Kateel G. Shetty, Tainya C. Clarke*, and Robert T. McMullen*. 2004. Development of Strategies to Manage Biological Invasion by Exotic Plant Species in Everglades National Park. National Conference on Ecosystem Restoration, Dec. 05-10, 2004, Orlando, FL

Evelyn E. Gaiser^{***}, Joel C. Trexler, Jennifer H. Richards, Daniel L. Childers, David Lee, Adrienne L. Edwards, Leonard J. Scinto, **Krish Jayachandran**, Gregory B. Noe and Ronald D. Jones. 2004. Cascading Ecological Effects of Low-Level Phosphorus Enrichment and Abatement in the Florida Everglades. National Conference on Ecosystem Restoration, Dec. 05-10, 2004, Orlando, FL

K. Jayachandran^{***}, S. Sah*, J. Sah, and M. Ross. 2003. Biogeochemistry of Treeisland Soils of the Everglades. Soil Science Society of America Annual Meeting, Nov. 2-6, 2003, Denver, CO

Jones^{***}, M. Ross, B. Hwang, J. Walters, S. Oberbauer, and **K. Jayachandran**. 2003. Effects of Simulated Hydrologic Regimes on Twelve Species of Everglades Tree Island. Ecological Society of America Annual Meeting, August 3-8, 2003, Savannah, GA

Krish Jayachandran^{***}, Seema Sah*, Jay P. Sah, and Mike Ross. 2003. Interactions of Vegetation, Hydrology, and Soils in Everglades National Park Tree Islands: Phosphorus Biogeochemistry of Soils. Joint Conference on the science and restoration of the Greater Everglades and Florida Bay Ecosystem, April13-18, 2003, Palm Harbor, FL

Jayachandran^{***}, K., K. Konomi*, R. Savabi, and S. Reed. 2002. Agrochemicals Transport in Calcareous Soils of South Florida. Soil Science Society of America Annual Meetings, Nov. 10-14, 2002, Indianapolis, IN

Fisher^{***}, J.B., and **K. Jayachandran**. 2002. Arbuscular mycorrhizae and their role in plant restoration in subtropical Florida. Botanical Society of America – Biocomplexity in Mycorrhizae Symposium, Madison, WI, August 2002.

Mickler*/^{***}, E., **K. Jayachandran**, M. Ross, D. Stockman, P. Ruiz, D. Reed, and S. Oberbauer. 2002. Relationship between soil moisture and nutrient availability in the tree islands of Shark Slough, Everglades National Park. The 66th Annual Meeting of the Florida Academy of Sciences, Barry University, March 7-9, 2002.

Kemp*/^{***}, S., **K. Jayachandran**, D. Stockman, and M. Norland. 2002. The effect of mycorrhizal colonization and phosphorus levels on *Cladium jamaicense* growth in marl and Hole-in-the-Donut soils. The 66th Annual Meeting of the Florida Academy of Sciences, Barry University, March 7-9, 2002.

McMullen*/^{***}, R.T., **K. Jayachandran**, and M. Norland. 2002. Suppression of Brazilian Pepper on soil disposal mounds in Everglades National Park. The 66th Annual Meeting of the

Florida Academy of Sciences, Barry University, March 7-9, 2002.

Konomi*, K., **K. Jayachandran*****, M. Savabi, D. Shinde, and S. Reed. 2002. Transport of agrochemicals in calcareous soils of South Florida. The 66th Annual Meeting of the Florida Academy of Sciences, Barry University, March 7-9, 2002.

Fisher***, J.B., and **K. Jayachandran**. 2002. Arbuscular mycorrhizae and restoration of endangered plants in subtropical Florida. The 66th Annual Meeting of the Florida Academy of Sciences, Barry University, March 7-9, 2002.

Jayachandran*, K.**, M. Ross, C.L. Coultas, P. Ruiz, and D.L. Reed. 2002. Soil survey of Shark Slough in the Everglades National Park. The 66th Annual Meeting of the Florida Academy of Sciences, Barry University, March 7-9, 2002.

Jayachandran*, K.**, K.G. Shetty, L.J. Scinto, R.D. Jones, D.L. Childers, and J.C. Trexler. 2001. Effect of low level phosphorus dosing on microbial activity in the everglades soils. Soil Science Society of America Annual Meetings, Oct. 21-25, 2001, Charlotte, NC

Noe***, G., D. Childers, A. Edwards, E. Gaiser, **K. Jayachandran**, D. Lee, J. Richards, L. Scinto, J. Trexler, and R. Jones. 2001. Short-term changes in an oligotrophic Everglades wetland ecosystem receiving experimental phosphorus enrichment. Ecological Society of America, Madison, WI August 2001.

Guha***, H., **K. Jayachandran**, F. Maurrasse. 2000. Hydrological, Geochemical, and Microbiological Processes Affecting Chromium Transport Through Pyrolusite Coated-Sand. Conference on Wetland System for Water Pollution Control. Nov 11-16, Lake Buena Vista, FL

Gaiser***, E.E., L.J. Scinto, **K. Jayachandran**, R.D. Jones, J.H. Richards, D.L. Childers, and J. Trexler. 2000. Nutrients sequestered in microbial mats reflect remote source water quality in Everglades National Park. Greater Everglades Ecosystem Restoration Conference, Dec. 11-15, Naples, FL

Kernan, C., J.B. Fisher, D. Garvue, C. Lane***, H. Thornton, D. LaPuma, E. Pinto, S. Carrara, **K. Jayachandran**, S. Koptur, J. Pascarella. 2000. Restoration of *Jacquemontia reclinata* to the South Florida Ecosystem. Greater Everglades Ecosystem Restoration Conference, Dec. 11-15, Naples, FL

Jayachandran*, K.**, J.M. Novak, D.W. Watts, and P.G. Hunt. 1999. Effect of Tillage on Microbial Activity in Southeastern Coastal Plains Soils. Soil Science Society of America Society of Agronomy meetings, October 31-November 4, 1999. Salt Lake City, UT

Fisher***, J.B., and **K. Jayachandran**. 1999. Survey of arbuscular mycorrhizae in palms and related cyclanths growing on different soils in Costa Rica and Florida. Soil Ecology Conference, Chicago, IL May 24-26, 1999.

Fisher*** J.B., and **K. Jayachandran**. 1998. Arbuscular-mycorrhizal status of the palm *Serenoa repens* in South Florida. Conference on "The Supporting Root", Bordeaux, France July 20 –23, 1998.

Jayachandran*, K.** 1998. Mycorrhizal association in Sawgrass. Plant Biologists of South Florida, Homestead, FL April 11, 1998.

Moorman***, T.B., **K. Jayachandran**, and A. Reungsang*. 1996. Sorption of Atrazine to Soils and Subsurface Geologic Materials in Iowa. Geological Society of America Meetings, Ames, IA 1996.

Jayachandran*, K.**, T.B. Moorman, and J.K. Moscinski*. 1996. Bioremediation of Atrazine in Soils by Inoculation of a Bacterial Mixed Culture. Weed Science Society of America Annual Meeting, Norfolk, VA February 5-8, 1996.

Moorman***, T.B., B.L. Hoyle, and **K. Jayachandran**. 1996. Approaches to Remediation of Herbicide-Contaminated Subsoils and Aquifers. Weed Science Society of America Annual Meeting, Norfolk, VA February 5-8, 1996.

T.B. Moorman***, D.B. Jaynes, **K. Jayachandran**, J.M. Novak, J. Miller, C.A. Cambardella, and J.L. Hatfield. 1995. Processes controlling atrazine leaching in the pothole topography of central Iowa. Clean Water - Clean Environment - 21st Century - Meeting. Kansas City, MO, March 1995.

Jayachandran*, K.**, T.B. Moorman, and E.A. Douglass. 1994. Enumeration, isolation, and activity of atrazine-degrading microorganisms. American Society of Agronomy 86th National Meeting, Seattle, WA, Nov. 1994.

Moorman***, T.B., **K. Jayachandran**, and J.A. Welch*. 1994. Assimilative capacity of subsurface microorganisms for atrazine and 2,4-D. American Society of Agronomy 86th National Meeting, Seattle, WA, Nov. 1994.

Novak***, J.M., **K. Jayachandran**, T.B. Moorman, and J. Weber. 1993. Sorption and binding of organic compounds in soils and their relation to biodegradation. American Society of Agronomy 85th National Meeting, Cincinnati, OH, Nov. 1993.

Jayachandran*, K.**, T.R. Steinheimer, L. Somasundaram, T.B. Moorman, R.S. Kanwar, and J.R. Coats. 1993. Distribution of atrazine and metabolites as contaminants in groundwater and soil cores from no-till corn. Agricultural Research to Protect Water Quality, Soil & Water Conservation Society Meeting, Minneapolis, MN, Feb. 1993.

Hetrick***, B.A.D. and **K. Jayachandran**. 1990. Plant acquisition of nutrients in sustainable agriculture. Eighth North American Conference on Mycorrhizae (NACOM), Jackson Hole, WY, Sep. 1990.

Jayachandran*, K.**, B.A.D. Hetrick, and A.P. Schwab. 1989. Influence of iron chelation on phosphorus availability to prairie mycorrhizal plants. Konza Prairie LTER Meeting, Manhattan, KS, Aug. 1989.

Jayachandran, K., D. Kandasamy***, and G. Oblisami. 1984. VA-Mycorrhizae for better crop productivity in certain crop plants. National Symposium on Soil Pest and Soil Organisms, Varanasi, India, Oct. 1984.

Kandasamy***, D., **K. Jayachandran**, and G. Oblisami. 1984. Influence of pesticides and certain nutrients on phosphorus mobilizing organisms. National Symposium on Soil Pest and Soil Organisms, Varanasi, India, Oct. 1984.

Jayachandran, K., D. Kandasamy***, and G. Oblisami. 1983. Response of cowpea to VA-Mycorrhizal inoculation and graded levels of phosphorus application. Sixth Southern Regional Conference on Microbial Inoculants, Bangalore, India, Sep. 1983.

Jayachandran, K., D. Kandasamy***, and G. Oblisami. 1982. Occurrence of VA-Mycorrhizal resting spores in certain plantation crops. Fifth Annual Symposium on Plantation Crops, Kerala, India, Dec. 1982.

Accepted abstracts for conference poster presentations

Jessica Dominguez*, **Krishnaswamy Jayachandran**, Mahadev G. Bhat and Kateel G. Shetty. 2019. Isolation of Antimicrobial-producing Endophytic Microorganisms as Potential Biocontrol Agents for Citrus Greening. American Society for Microbiology Annual Conference, June 20-24, San Francisco, CA

Ariel Freidenreich*, Gabriel Barraza, **Krishnaswamy Jayachandran**, and Amir Khoddamzadeh. 2019. Sustainable Fertilizer Management for Ornamental Production in South Florida via Optical Sensor Technology. Florida State Horticultural Society Annual Conference, June 9-11, Orlando, FL

Brandon Rodriguez, Mary Tiedeman, Saoli Chanda, **Krishnaswamy Jayachandran**, and Joelle Sasso. 2019. Effect of environmental stressors on the essential oil quality and quantity of spearmint (*Mentha spicata*). 2019. American Association for Hispanics in Higher Education Annual Conference, March 1-3, 2019, Costa Mesa, CA

Ariel Friedenreich* and **Krish Jayachandran**. 2019. Developing Sustainable Soil Building Strategies for Tropical Fruit Groves within the South Florida Redland. Soil Science Society of America Annual Conference, January 6-9, San Diego, CA

Shagufta Gaffar* and **Krish Jayachandran**. 2019. Effects of Different Biochars on the Adsorption and Desorption of Atrazine. Soil Science Society of America Annual Conference, January 6-9, San Diego, CA

Mary Tiedeman* and **Krish Jayachandran**. 2019. Do Bioprecipitating Fungi Reduce Phosphorus (P) Solubility in South Florida's Calcareous Soils. Soil Science Society of America Annual Conference, January 6-9, San Diego, CA

Jessica Dominguez, **Krishnaswamy Jayachandran**, Mahadev Bhat, and Kateel Shetty. 2018. Discovery and Screening of Potential Antimicrobial Compounds against *Candidatus Liberibacter asiaticus*. USDA-NIFA-HSI PDs Conference, March 19-21, 2018, Washington, DC

Alana Rodriguez, Ariel Freidenreich, Amir Khoddamzadeh, and **Krishnaswamy Jayachandran**. 2017. Application of Optical Sensor Technology for Sustainable Fertilizer Management of *Euphorbia pulcherrima*. ASA-CSSA-SSSA Annual Conference, October 20-25, 2017, Tampa, FL

Gabriel Barraza, Ariel Freidenreich, Amir Khoddamzadeh, and **Krishnaswamy Jayachandran**. 2017. Non-Destructive Handheld Sensors for Sustainable Fertilizer Management of *Justicia brandegeana*. ASA-CSSA-SSSA Annual Conference, October 20-25, 2017, Tampa, FL

Daniel Calzadilla, Mary Tiedeman, and **Krishnaswamy Jayachandran**. 2017. Occultation Vs Tillage: How Does Cover Crop Termination Method Influence Dynamic Soil Properties? ASA-CSSA-SSSA Annual Conference, October 20-25, 2017, Tampa, FL

Krish Jayachandran, Mahadev Bhat, and Kateel Shetty. 2016. Experiential and Experimental Learning Approaches in Agriculture Sciences at Florida International University. Poster presentation at NACTA Annual Conference, June, 21-24, Honolulu, Hawaii.

K. G. Shetty, **K. Jayachandran**, M. Gantar, and D. E. Berthold. Mixed Cultures of Freshwater Microalgae and Bacteria for High Lipid Productivity. ASM Microbe 2016, June 16-June 20, 2016, in Boston, Massachusetts.

L. Gibson, D. Berthold, **K. Jayachandran**, K. G. Shetty. Comparative Tolerance Assessment of Fresh And Marine Water Phototrophic Microorganisms To Nano And Bulk Zinc Oxides. ASM Microbe 2016, June 16-June 20, 2016, in Boston, Massachusetts.

Barraza, G.A., Khoddamzadeh, A.A., Freidenreich, A., Riera, D., **Jayachandran, K.** and Shetty, K. 2017. Non-Destructive Handheld Sensors for Sustainable Fertilizer Management in *Justicia brandegeana*. USDA HSI Principal Investigators' Meeting Albuquerque, New Mexico.

David Berthold, Kateel Shetty, **Krish Jayachandran**, and Miraslov Gantar. 2015. Using Mixed Cultures of Microalgae and Yeast for Higher Biomass and Lipid Production. 115th American Society for Microbiology Annual Conference. May 30-June 2, 2015, New Orleans, LA

Ariel Friedenreich, Pushpa Soti, and **Krish Jayachandran**. 2015. Comparison of Synthetic versus Organic Herbicides/Insecticides on Arbuscular Mycorrhizal Fungi. ASA, CSSA, SSSA International Annual Conference, Nov 15-18, Minneapolis, MN

N. Dela Rosa, B. Toprack, N. Damaso, and **K. Jayachandran**, 2014. Comparison of Rhizosphere and non-Rhizosphere Microbial Communities of Avocado Trees Between four Different Soil Conditions in Miami-Dade County, Florida. 114th American Society for Microbiology Annual Conference. May 17-20, 2014, Boston, MA

N. Dela Rosa, **K. Jayachandran**, and K.G. Shetty. 2014. Isolation and Characterization of Alkaline Tolerant Freshwater Microalgae from Lake Okeechobee for Algae-Based Biofuels. 114th American Society for Microbiology Annual Conference. May 17-20, 2014, Boston, MA

Angie Fleurissant, Stewart Reed, and **Krish Jayachandran**. 2014. Slow Release Nutrients Study on Queen and Chinese Palms. American Society for Horticulture, Orlando, FL

Daria Boglaienko, **Kriahnaswamy Jayachandran**, Pushpa Soti, and Kateel Shetty. 2013. Buckwheat as a phosphorus scavenger: soil analysis and the role of mycorrhizal fungi in P uptake. Water, Food, Energy, and Innovation for Sustainable World. ASA, CSSA, SSSA International Annual Conference, Nov 3-6, Tampa, FL

Bhat, M.G., **Jayachandran, K.** and Alvarez-Ventura, S. “Connecting Borders through Biofuels: Collaborations between FIU and Indian Agricultural Universities and Agencies.” Poster presentation at the 99th Indian Science Congress, Bhuvanesar, India, January 2012.

Alvarez-Ventura, S., Bhat, M.G., **Jayachandran, K.** and Velez, T. “Life Cycle Analysis of Biodiesels in India.” Poster presentation at the 99th Indian Science Congress, Bhuvanesar, India, January 2012.

Priyanka Narendar and **Krish Jayachandran**. 2010. Sustainable energy production from algae – screening for higher lipid content and biodiesel. August, FIU Energy Group Conference.

Pushpa Soti*/*** and **Krish Jayachandran**. 2010. Role of Mycorrhizal Fungi Supporting Invasiveness of Old World Climbing Fern in South Florida Natural Areas. Greater Everglades Ecosystem Restoration, The Greater Everglades: A Living Laboratory Change – Planning, Policy, and Science Meeting, July 12-16, 2010, Naples, FL

Anusha. Ramani*/***, **Krish Jayachandran**, Kathleen Rein, and Kateel Shetty. 2009. Microbial Degradation of Microcystin in Florida Fresh Waters. American Society for Microbiology Annual Conference, May 17 - 21, 2009, Philadelphia, PA

Kateel G. Shetty, K.S. Rein, L. E. Fleming, and **K. Jayachandran*****. 2009. Isolation of Brevetoxin Biodegrading Marine Bacteria. American Society for Microbiology Annual Conference, May 17 - 21, 2009, Philadelphia, PA

Binod Pandey*/***, Kateel G. Shetty, Shili Miao, and **Krish Jayachandran**. 2009. Survey of naturally occurring diseases of *Lygodium microphyllum* in South Florida natural areas: Prevalence and potential for biocontrol agents. Weed Science Society of America National Conference February 9 – 13, 2009 Orlando, FL

Shea Dunifon*/***, **Krish Jayachandran**, Cinnasamy Durairaj, and Hari Sharma. 2008. An exploration into Integrated Pest Management techniques in Tamil Nadu and Andhra Pradesh, India. Soil Science Society of America, American Society for Agronomy, and Crops Science Society of America Annual Conference, October 5 – 8, 2008, Houston, TX

Krish Jayachandran***, Kateel G. Shetty, Tainya C. Clarke, Craig S. Smith, Shili Miao, and LeRoy Rodgers. 2008. Development of potential biological control agents for invasive

plant species using native pathogens in South Florida. Greater Everglades Ecosystem Restoration, For Everglades Restoration 2050: Advancing the Science to Achieve Success – Planning, Policy, and Science Meeting, July 28 – August 1, 2008, Naples, FL

Kateel G. Shetty, J. V. Huntzicker*, K.S. Rein, L. E. Fleming, Y. Cai, L. Fieber, and **K. Jayachandran*****. 2008. Isolation of Potential Polyether Algal Toxin Biodegrading Marine Bacteria using Salinomycin. American Society for Microbiology Annual Conference, May 17 - 21, 2008, Boston, MA

Erin J. Hanan***, Michael S. Ross, and **Krishnaswamy Jayachandran**. 2008. Multi-scaled Patterning of Plant-Soil-Water Interactions across Tree Islands and Marshes within the Prairie and Slough Landscapes of Everglades National Park. All Scientists Meeting, FCELTERR, March 17-18, 2008, Fairchild Tropical Botanical Garden.

Kateel G. Shetty***, **Krish Jayachandran**, Jose A. Pacheco-Soto*, and Craig S. Smith. 2008. Potential for use of Natural Plant Pathogens of Brazilian Pepper (*Schinus terebinthifolius* Raddi) in the Everglades National Park. 23 Annual Symposium, Florida Exotic Pest Council, April 21- 24, 2008, Jacksonville, FL

Ricardo Joseph***, Stewart Reed, Cristina Clark-Cuadrado and **Krishnaswamy Jayachandran**. 2007 Effects of Endosulfan on Soil Respiration. Soil Science Society of America Annual Meeting, Nov. 4-8, 2007, New Orleans, LA

Min Gao***, Kateel G. Shetty, Bernd Simoneit, **Krishnaswamy Jayachandran**, and Rudolf Jaffé 2007. Preliminary Results on the Occurrence, Origin and Environmental Implication of *Ent-Kaurenes* in the Everglades Freshwater Wetlands. FCELTERR All Scientists Meeting, March 19-20, Fairchild Tropical Garden, Miami, FL

Jose Pacheco***, Kateel G. Shetty, **Krish Jayachandran**, and Craig Smith. 2007. Biological Control of Invasive Plants in South Florida. Cell and Molecular Biology Symposium, St. Thomas University

Jose Pacheco***, Kateel G. Shetty, Mahadev Bhat, and **Krish Jayachandran**. 2007. Biological Control of Brazilian Pepper. Hispanic Students Leadership Conference, Washington, DC

Jackie V. Huntzicker*, K.G. Shetty, K.S. Rein, and **K. Jayachandran*****. 2006. Biodegradation of Polyether Algal Toxins – Isolation of Potential Marine Bacteria. 106th American Society for Microbiology Annual Conference, May 21-25, 2006, Orlando, FL

Krish Jayachandran***, Mahadev Bhat, Giddy Bobeche*, Cristina Cuadras*, and Assefa Malesse. 2006. Agroecology Program at Florida International University. Soil Science Society of America Annual Meeting, Nov. 12-16, 2006, Indianapolis, IN

Shea Dunifon*/***, **Krish Jayachandran**, and Stewart Reed. 2006. An Inventory of Arbuscular Mycorrhizae Collected at Field Sites of the USDA Sub-Tropical Horticultural

Research Station in Miami, FL. Soil Science Society of America Annual Meeting, Nov. 12-16, 2006, Indianapolis, IN

Jayachandran*, Krish.**, Seema Sah*, and Jeffrey Ellis. 2006. Wood Preservation by Silver Formulation Treatment. 102nd American Wood Preservatives Association Conference, April 9-12, 2006, Austin, TX

Jeffrey Ellis*** and **Krish Jayachandran**. Future Needs for Environmental Research on Silver and Resources Available. 2006. 102nd American Wood Preservatives Association Conference, April 9-12, 2006, Austin, TX

Shea Dunifon*/***, EVR 3rd year student. 2006. An Inventory of Arbuscular Mycorrhizae in Agricultural Crops of South Florida. Poster presented at FIU Honors College Research Conference, March 30, MARC Building, FIU. **Krish Jayachandran** serves as a mentor.

Griffith*/***, Robert T., **Jayachandran, Krishnaswamy**, Shetty, Kateel, G., Whitstine, William, Furton, Kenneth G. 2005. Hazardous Indoor Molds Detection Application in Forensic Sciences. 105th American Society for Microbiology Annual Conference, June 5-9, 2005, Atlanta, GA

Seema Sah*, Stewart Reed, and **Krish Jayachandran*****. 2005. Effect of Flooding on Arbuscular Mycorrhizal Colonization in Snap Beans. Soil Science Society of America Annual Meeting, Nov. 6-10, 2005, Salt Lake City, UT

Krish Jayachandran***, Seema Sah*, Ximena Mesa*, and Jeffrey Ellis. 2005. Investigation of Silver Chemicals for Wood Preservation. ACS South Florida Chapter Meeting, Nov 12, 2005, NOVA SE University, Fort Lauderdale, FL

Robert T. Griffith*/***, **Krish Jayachandran**, William Whitstine, and Kenneth G. Furton. 2005. Canine and SPME/GC/MS Detection of Microbial Volatile Organic Compounds emitted from *Stachybotrys chartarum*, *Penicillium chrysogenum*, and *Aspergillus versicolor*. American Academy of Forensic Sciences, February 21-26, 2005, New Orleans, LA

Teresita Bollar*/***, Biology 4th year student. 2005. Allelopathic effects of Ragweed compound Thiarubrin-A on Brazilian pepper (*Shinus terebinthifolius*). Poster presented at First Student Research and Artistic Initiatives Annual Conference, March 10, MARC Building, FIU. **Krish Jayachandran** serves as REU mentor. This work is a collaborative effort between myself, Dr. Shetty and Dr. Kevin O' Shea from Chemistry and Biochemistry.

Jackie Huntzicker*/***, Liberal Studies, 3rd year. 2005. Studies on Okadaic Acid Biotransformation/Biodegradation – Isolation and Screening of Potential Marine Bacteria. Poster presented at First Student Research and Artistic Initiatives Annual Conference, March 10, MARC Building, FIU. **Krish Jayachandran** serves as REU mentor. This work is a collaborative effort between myself, Dr. Shetty and Dr. Kelly Rein from Chemistry and Biochemistry.

Sarah Lowe*/***, Biomedical Engineering, 3rd year. 2005. The analysis of Oak Ridge Soil Samples to Determine the Absorption and Desorption Properties of Mercury. Poster presented at First Student Research and Artistic Initiatives Annual Conference, March 10, MARC Building, FIU. **Krish Jayachandran** serves as REU mentor. This work is a collaborative effort between myself, Marshall Allen and Dr. Yong Cai from Chemistry and Biochemistry.

Robert T. Griffith*/***, Kenneth G. Furton, **Krish Jayachandran**, and William Whitstine. 2004. Canine and SPME/GC/MS Detection of Microbial Volatile Organic Compounds emitted from two problematic indoor molds: *Penecillium chrysogenum* and *Aspergillus versicolor* Joint Meeting of the Southern Association of Forensic Scientists (SAFS), the Mid-Atlantic Association of Forensic Scientists (MAAFS), the Mid-Western Association of Forensic Scientists (MAFS) and the Canadian Society of Forensic Science (CSFS), September 19-24, 2004, Orlando, FL

Seema Sah*/***, Stewart Reed, **Krish. Jayachandran**, and Susana Mendiola*. 2004. Interactions of Arbuscular Mycorrhizal Fungi with Bean Plants under Flooded Conditions. Soil Science Society of America Annual Meeting, Oct. 31-Nov. 4, 2004, Seattle, WA

Kateel G. Shetty, **Krish Jayachandran*****, and Michael R. Norland. 2004. Natural Plant Pathogens of Brazilian Pepper (*Schinus terebinthifolius* Raddi) in the Everglades National Park: Potential for Biological Control. Soil Science Society of America Annual Meeting, Oct. 31-Nov. 4, 2004, Seattle, WA

Tainya C. Clarke*/***, **Krish Jayachandran**, Kateel G. Shetty, and Michael R. Norland. 2004. A Biological Control Agent for Invasive Plant Species, Old World Climbing Fern (*Lygodium microphyllum*). National Conference on Ecosystem Restoration, Dec. 05-10, 2004, Orlando, FL

Kateel G. Shetty***, **Krish Jayachandran**, and Michael R. Norland. 2004. Natural Plant Pathogens of Brazilian Pepper (*Schinus terebinthifolius* Raddi) in the Everglades National Park: Potential for Biological Control. National Conference on Ecosystem Restoration, Dec. 05-10, 2004, Orlando, FL

Elizabeth M. Struhar*, **Krish Jayachandran*****, Michael S. Ross, and Steven F. Oberbauer. 2004. The Relationship Between Soil Moisture and Nutrient Availability in Tree Islands of Shark Slough, Everglades National Park. National Conference on Ecosystem Restoration, Dec. 05-10, 2004, Orlando, FL

K. Jayachandran***, S. Sah, J. Sah, and M. Ross. 2003. Phosphorus Biogeochemistry of the Everglades National Park Tree Island Soils. Ecological Society of America Annual Meeting, August 3-8, 2003, Savannah, GA

J. Entry, P. Gillevet, **K. Jayachandran**, K. Mathee, D. Mills, G. Narasimhan, Y. Wang***, and C. Yang. 2003. Ecoinformatics Tools: Unsupervised Clustering and Classification of Microbial Communities Using ALH Profile Data from 16S rRNA. American Society for

Microbiology, 103rd Annual Meeting, May 18-22, 2003, Washington, DC

J. Entry, P. Gillevet, **K. Jayachandran**, K. Mathee, D. Mills, G. Narasimhan, Y. Wang, and C. Yang***. 2003. An Ecoinformatics Tools for Microbial Diversity Studies: Supervised Classification of ALH Profiles of 16S rRNA. American Society for Microbiology, 103rd Annual Meeting, May 18-22, 2003, Washington, DC

Fisher, J.B., and **K. Jayachandran*****. 2003. Arbuscular mycorrhizae and their role in plant restoration in subtropical Florida. Joint Conference on the science and restoration of the Greater Everglades and Florida Bay Ecosystem, April 13-18, 2003, Palm Harbor, FL

Ruttala, R., D.K. Mills, K. Mathee, and **K. Jayachandran*****. 2002. Molecular and Biochemical Characterization of Microbial Communities in Everglades Tree Island Soils. American Society for Microbiology, 102nd Annual Meeting, May 19-23, 2002. Salt Lake City, UT

Entry***, J.A., D.K. Mills, K. Mathee, **K. Jayachandran***, J.J. Fuhrmann, R. Ruttala, and R.E. Sojka. 2002. Influence of Irrigated Agriculture on Soil Microbial Diversity. American Society for Microbiology, 102nd Annual Meeting, May 19-23, 2002. Salt Lake City, UT

McMullen*, R., **K. Jayachandran*****, and M. Norland. 2002. Brazilian Pepper Suppression Factors on Soil Disposal Mounds in Everglades National Park. Soil Science Society of America Annual Meetings, Nov. 10-14, 2002, Indianapolis, IN

Jayachandran***, K., D. Stockman*, S. Kemp*, and R.D. Jones. 2001. Interactions of arbuscular-mycorrhizal fungi and wetland plant species in the everglades ecosystem. P2-164, 3rd International Conference on Mycorrhizae, 8-13 July, 2001, Adelaide, South Australia

Fisher***, J.B. and K. Jayachandran. 2001. Arbuscular mycorrhizae and restoration of endangered plants in subtropical Florida. P1-165. 3rd International Conference on Mycorrhizae, 8-13 July, 2001, Adelaide, South Australia

Ruttala***, R.K., D. K. Mills, P. M. Gillevet, **K. Jayachandran**, K. Mathee. 2001. Monitoring Microbial Communities in Marsh Sediments by Amplicon Length Heterogeneity (ALH) and ALH-temperature Gradient Capillary Electrophoresis (ALH-TGCE) Fingerprinting. The ASM Conference on Biodegradation, Biotransformation, and Biocatalysis (B3) October 2-6, 2001. San Juan, Puerto Rico

Shetty, K.G., **K. Jayachandran*****, L.J. Scinto, R.D. Jones. 2001. Determination of microbial Biomass Phosphorus in the Everglades Wetland Flocculent Detritus. Soil Science Society of America Annual Meetings, Oct. 21-25, 2001, Charlotte, NC

McMullen***, R.T., **K. Jayachandran**, and M.R. Norland. 2001. Suppression of Brazilian Pepper on Soil Disposal Mounds in Everglades National Park. Soil Science Society of America Annual Meetings, Oct. 21-25, 2001, Charlotte, NC

Jayachandran*, K.**, M. Ross, C.L. Coultas, P. Ruiz, and D.L. Reed. 2001. Soil survey of Shark Slough in the Everglades National Park. Soil Science Society of America Annual Meetings, Oct. 21-25, 2001, Charlotte, NC

Cabrera J., M. Georgiadis, Y. Cai***, and **K. Jayachandran**. 2001. Assesment of arsenic mobility in the golf courses of South Florida. 221 American Chemical Society National Meetings.

Jayachandran*, K.**, L. Scinto, K.G. Shetty, R.D. Jones, D. Childers, and J. Trexler. 2000. Changes in microbial phosphorus in response to phosphorus addition in the everglades peat soils. Soil Science Society of America Meetings, Nov. 5-9, Minneapolis, MN

Guha***, H., **K. Jayachandran**, F. Maurrasse. 2000. Microbiological reduction of chromium (VI) in presence of pyrolusite-coated sand: Laboratory column experiments and modeling approaches. Geosociety Meetings, Reno, NV

Fisher***, J.B., and **K. Jayachandran**. 2000. Mycorrhizae required for native plant growth on pine rockland soils. Greater Everglades Ecosystem Restoration Conference, Dec. 11-15, Naples, FL

Guha***, H., J.E. Saiers, S. Brooks, and **K. Jayachandran**. 1999. Transport of Chromium through Manganese-Containing Sediments. American Geophysical Union, December 13-17, 1999. San Francisco, CA

Shinde, D., M.R. Savabi***, P.N. Kizza, and **K. Jayachandran**. 1999. Atrazine Sorption and Transport in Three Soils of South Florida. Soil Science Society of America Society of Agronomy meetings, October 31-November 4, 1999. Salt Lake City, UT

Jayachandran*, K.**, and J. Fisher. 1999. Role of Arbuscular-Mycorrhizae in Tropical Species of South Florida. Soil Science Society of America Society of Agronomy meetings, October 31-November 4, 1999. Salt Lake City, UT

Jayachandran*, K.**, M. Nair, and R.D. Jones. 1998. Role of arbuscular-mycorrhizae on the growth of sawgrass under different soil types. American Society of Agronomy 90th National Meetings, Baltimore, MD October 18-22, 1998.

Fisher, J.B., and **K. Jayachandran*****. 1997. Mycorrhizae and Restoration of Everglades Upland Plant Communities (Pine Rockland and Hardwood Hammock). Society for Ecological Restoration 9th Annual International Conference, Ft. Lauderdale, FL November 12-15, 1997.

Moscinski*/***, J.K., **K. Jayachandran**, and T.B. Moorman. 1996. Mineralization of the Herbicide Atrazine by Agrobacterium radiobacter. American Society for Microbiology 96th National Meeting, New Orleans, LA May 19-23, 1996.

Moscinski*, J.K., **K. Jayachandran*****, and T.B. Moorman. 1995. Mineralization of the

herbicide atrazine by a bacterial isolate. American Society of Agronomy 87th National Meeting, St. Louis, MO, Nov. 1995.

Nedumpara*/***, M.J., T.B. Moorman, and ***K. Jayachandran**. 1995. VA-Mycorrhizal effects on herbicide dynamics in plants. American Society of Agronomy 87th National Meeting, St. Louis, MO, Nov. 1995.

Schwab***, A.P., B.A.D. Hetrick, G.W.T. Wilson, and **K. Jayachandran**. 1994 Assessing the role of mycorrhizae in enhancing phosphorus uptake by the host plant. American Society of Agronomy 86th National Meeting, Seattle, WA, Nov. 1994.

Jayachandran*, K.**, T.B. Moorman, J.M. Novak, N. Stolpe, P.J. Shea, C.A. Cambardella, E.A. Douglass, and M.D. Jawson. 1994. Sorption and degradation of atrazine in soils and subsurface sediments from the American midwest. Eighth IUPAC International Congress of Pesticide Chemistry, Washington, DC, July 1994.

Nedumpara*, M.J., **K. Jayachandran*****, and T.B. Moorman. 1994. The interactions of pesticides, VAM fungi and crops. Eighth IUPAC International Congress of Pesticide Chemistry, Washington, DC, July 1994.

Jayachandran*, K.**, T.R. Steinheimer, L. Somasundaram, R.S. Kanwar, T.B. Moorman, and J.R. Coats. 1992. Atrazine and degradates in groundwater beneath continuous corn under no-till management. American Society of Agronomy 84th National Meeting, Minneapolis, MN, Nov. 1992.

Jayachandran*, K.**, A.P. Schwab, and B.A.D Hetrick. 1990. Separation of inorganic and organic phosphorus using acidified molybdate and isobutanol. American Society of Agronomy 82nd National Meeting, San Antonio, TX, Oct. 1990.

Jayachandran*, K.**, B.A.D. Hetrick, and A.P. Schwab. 1990. Role of VA-Mycorrhizae in phosphorus acquisition from unavailable phosphorus sources. Eighth North American Conference on Mycorrhizae (NACOM), Jackson Hole, WY, Sep. 1990.

Invited Conference Presentations:

Agriculture Science Education for Hispanic Students through Florida-Texas-New Mexico Consortium. USDA-NIFA-HSI PDs Conference, March 5 - 7, 2020, Costa Mesa, CA

Experiential and Experimental Learning in Agriculture Sciences for Hispanic Students at FIU, UTRGV, and NMSU. USDA-NIFA-HSI PDs Conference, February 28 – March 2, 2019, Costa Mesa, CA

Broadening Agriculture Science Education for Hispanic Students through Florida-Texas-New Mexico Consortium. USDA-NIFA-HSI PDs Conference, March 19-21, 2018, Washington, DC

Innovative Curriculum for Agriculture Training and Careers for Hispanics (Icatch). USDA-NIFA-HSI PDs Conference, March 19-21, 2018, Washington, DC

Beginning Farmers and Ranchers Program at Florida International University. USDA-NIFA-BFRDP PDs Conference, September 25-28, 2017, Nashville, TN

Interdisciplinary Training for Multicultural Undergraduate and Doctoral Education in Agroecology. USDA-NIFA-MSP-NNF PDs Conference, June 27-28, 2017, West Lafayette, IN

Agriculture Science Education at Florida International University: Student Access, Success, and Diversity. APLU-CADE: 2015 National Access, Diversity and Excellence Summit, July 30-31, 2015, Florida International University, Miami, FL

Identifying efficient algal strain from the Everglades for biodiesel production. Second World Algal Summit, May 5-6, 2011, San Diego, CA

Current Status of Algae Use for Biofuel Production. Latin American and Caribbean Biofuel Conference. August 17-18, 2010, Santiago, Chile.

Biofuel Science Education for Agroecology students at FIU. USDA-NIFA-HSI PDs Conference, November 28-Dec 1, 2010. Washington DC

Agroecology Program at Florida International University. USAD-Hispanic Serving Institutions Priority Setting and Strategic Planning Meeting. July 26-28, 2010, Washington, DC

Multicultural Undergraduate Scholars in Agroecology at Florida International University: In Interdisciplinary Approach. Joint MSP/NNF Project Directors and Beneficiaries Conference, October 20-21, 2009, 1410 Waterfront Center, Washington DC

A Potential Biological Control Agent for Invasive Plant Species, Old World Climbing Fern (*Lygodium microphyllum*). 23rd Annual Symposium, Florida Exotic Pest Council, April 21-24, 2008, Jacksonville, FL

Establishment of Multicultural Scholars Program at Florida International University. Joint MSP/NNF Project Directors Conference, October 16-18, 2007 Washington, DC

Invited Conference Sections Moderator:

Tree Islands Ecology section of the Greater Everglades Ecological Restoration, For Everglades Restoration 2050: Advancing the Science to Achieve Success – Planning, Policy, and Science Meeting, July 28 – August 1, 2008, Naples, FL

Soil Microbial Structural and Functional Diversity section of the Soil Science Society of America National Conference, October 5 – 8, 2008, Houston, TX

Ecological Society of America Annual Conference - Presided Oral Session # 48: Mutualism-Parasitism I: Plants; Modeling Wednesday, August 6, 2003, Savannah, GA

Soil Science Society of America Annual Conference, Moderator for Soil Ecology Section, October 31 – November 4, 1999. Salt Lake City, UT

Symposia and Workshops Conducted and Organized:

Agroecology Annual Symposium organized every year since 2007 – present. Invite keynote speakers, organize a panel discussion, students poster presentations and oral presentations on students research projects.

Students Internships Day – Organized student internship day at the beginning of every Fall semester for the last 10 years (2010 – present) for students to present and share their summer research internship experience.

Summer High School Students Workshop – Organized six to eight week workshop for high school students (~10 students) every summer for the last 10 years (2010 – present) to provide experiential and experimental learning in agroecology.

Study Abroad – Costa Rica: Every year since 2016 during summer term (2016 – present), a consortium of four universities (FIU-TAMUK-UPRM-UTEP) conducted two weeks workshop on sustainable farming practices, food systems, soil quality, and water quality at selected locations in Costa Rica. Each year ~15 students gain study abroad experience.

Professional Horticulture Certificate Workshop – Developed and executed professional horticulture workshop for south Florida community members. (2015-present) This non-credit continuing education workshop recruited ~15 participants to every workshop. This workshop for 10 Saturdays from 9 am to 12 pm for 10 weeks.

International Workshop on Agroecology and Sustainable Agriculture (IWASA) – Developed and executed IWASA a week long workshop for community members. (2015 – present). ~15 participants each workshop. Lectures, farm trips, hands-on activities in agroecology are part of the workshop.

Study Abroad – Costa Rica. We took 12 FIU agroecology students in 2013 for two weeks to Costa Rica and engaged in agroecology, sustainable agriculture, food systems in Costa Rica.

Bioenergy Science Internship for High School Students – Eight weeks workshop on Bioenergy, Science and Technology. 12 High School Students attended. June 22 – August 18, 2011.

National University of Agriculture, Honduras Junior Students Workshop at FIU every October month (2010 – 2015), a week-long workshop. Hosted 40 junior students from National University of Agriculture, Honduras on experiential learning, training, research, and education.

Study Abroad – India: In 2010 summer, we took nine FIU agroecology students to University of Agricultural Sciences, Bangalore and Tamil Nadu Agricultural University, Coimbatore,

India on three week international science education trip on biofuels. Students had a wonderful opportunities to learn science, education, technology and social culture in India.

Urban Agriculture and Community Gardening. Annual Agroecology Symposium organized at FIU on February 16, 2010. A panel discussion, poster session and several oral presentation sessions were held. More than 150 people including FIU students and faculty, farmers and the area high school students attended the symposium.

Summer Agroecology Workshop for School Teachers. Conducted a five day workshop, along with Dr. Bhat at FIU from July 6 to 10, 2010 for school teachers as part of the USDA Hispanic Serving Institutes Education Grant Program. Organized two days of class room lectures followed by field trips to USDA research station, local farms.

Conducted workshop on biofertilizers, plant growth promoting rhizobacteria, biological control of weeds, soil microbial diversity for three visiting scientists from Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India Jan – Feb. 2010

Sustainable Agriculture: Challenges and Opportunities. Annual Agroecology Symposium organized at FIU on February 24, 2009. A panel discussion, poster session and several oral presentation sessions were held. More than 150 people including FIU students and faculty, farmers and the area high school students attended the symposium.

Summer Agroecology Workshop for HighSchool Teachers. Conducted a six day workshop, along with Dr. Bhat at FIU July 15-20, 2008 for high school teachers as part of the USDA Hispanic Serving Institutes Education Grant Program. Organized two day class room lectures followed by field trips to USDA research station, South Florida Water Management District water treatment area, USDA Sugarcane Research Station, Archbold Biological Station, and MacArthur Agroecology Research Center.

Agroecology and Sustainable Agriculture: Challenges and Opportunities. Annual Agroecology Symposium organized at FIU on January 15, 2008. A panel discussion, poster session and two student presentation sessions were held. More than 100 people including FIU students and faculty, farmers and the area high school students attended the symposium.

Summer Agroecology Workshop for HighSchool Teachers. Conducted a six day workshop, along with Dr. Bhat at FIU July 15-20, 2006 for high school teachers as part of the USDA Hispanic Serving Institutes Education Grant Program. Organized two day class room lectures followed by field trips to USDA research station, USDA Sugarcane Research Station, Archbold Biological Station, and MacArthur Agroecology Research Center.

Agroecology Symposium. First Annual Agroecology Symposium organized at FIU October 23, 2006. A panel discussion, poster session and two student presentation sessions were held. More than 50 people including FIU students and area high school students attended the symposium.

NSF-FIU Research Workshop Organizer on January 27, 2006. Invited NSF Program Officer

for the Ecosystem Studies to conduct a day workshop on NSF funding priorities, proposal preparation, review criteria, and students research opportunities. 50 people attended.

Symposium Organizer: Organized a special one-day symposium on “Advances in Molecular Approaches in Soil Microbiology” at Soil Science Society of America Conference, Nov 9-10, 2005, Salt Lake City, UT. Invited experts in various fields of molecular soil microbiology for a special presentation. Compiled manuscripts for publication as special issue in Soil Science Society of America Journal.

Organized first Annual Conference on Student Research and Artistic Initiatives on March 10, 2005. Put together poster displays, research panels, invited key note speaker, Professor Ray Turner from Roxbury Community College, Boston, MA. There were approximately 150 participants.

Conducted several workshops for The Honors College SRAI student preparations for research and presentation techniques. 2004 and 2005.

Organized Student Research and Artistic Initiatives Inagural symposium on February 25, 2004.

Conducted workshop on soil microbial diversity using molecular techniques from November – December 2001 for USDA-ARS Scientist from Kimberley, ID

Organized Mycorrhizal Research Workshop on June 14, 2000 at Florida International University. Twenty five researchers and graduate students from Florida attended the workshop.

Invited Papers, Seminars, Testimony and Presentations:

Agroecology Program at FIU: Education, Research, and Outreach Opportunities. March 15, 2021. ISC 1056 First Year Seminar in Earth and Environment

Role of Mycorrhizal Fungi in Sustainable Agriculture and Crop Production. November 19, 2020. NMSU - AGRO-483-M01-Sustainable Crop Production

Fundamentals of Soil Health for Sustainable Agriculture and Environmental Quality. November 09, 2020, Sierra Club, Miami, FL

Agroecology Program at FIU: Education, Research, and Outreach Opportunities. September 21, 2020. ISC 1056 First Year Seminar in Earth and Environment

Mycorrhizal Fungi – Taxonomy, Inoculum Production, Crop Growth Studies. July 02, 2019. Shandong Agricultural University, Taian, Sandong, China

Biochar from Invasive Woody Plants and their effect on Soil Health and Crop Production. Third International Symposium on Environmental Application and Impact of Biochar and Emerging Materials. Xuzhou University of Technology June 28-30, 2019, Xuzhou City, Jiangsu Province, China.

Agroecology Program and Agriculture Science Education at Florida International University. May 02, 2019, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, India.

Role of Mycorrhizal Fungi in Sustainable Agriculture and Crop Production. April 12, 2018. NMSU - AGRO-483-M01-Sustainable Crop Production

The Role of Organic Gardens in Campus Sustainable Food Production. Tuesday Times Roundtable, Office of Global Learning Initiative, February 06, 2018.

National Needs Fellowship and Tips for New Investigators. USDA-NIFA Workshop Webinar, May 25, 2017.

Agriculture Science Education at Florida International University: Student Access, Success, and Diversity. APLU-CADE: 2015 National Access, Diversity and Excellence Summit, July 30-31, 2015, Florida International University, Miami, FL

Technological Advances in Biofuel Production of Second and Third Generation - Enzymes, Microorganisms and Algae. VI Latin American and Caribbean Biofuel Conference. August 20-23, 2012, World Trade Center Morelos, Mexico

Identifying efficient algal strain from the Everglades for biodiesel production. Second World Algal Summit, May 5-6, 2011, San Diego, CA

Native Phytopathogens as Potential Biological Control Agents for Invasive Plants in South Florida. Environmental Resource Management Class. February 03, 2011.

Current Status of Algae Use for Biofuel Production. Latin American and Caribbean Biofuel Conference. August 17-18, 2010, Santiago, Chile.

Biofuel Science Education for Agroecology students at FIU. USDA-NIFA-HIS PDs Conference, November 28-Dec 1, 2010. Washington DC

Agroecology Program at Florida International University: Progress Report. Project Directors Meeting, USDA, Washington DC November 29 – December 2, 2010.

Biological Management for Exotic Invasive Plant Species in Florida. September 22, 2010. Environmental Studies Graduate Seminar.

Agroecology Program at Florida International University. USDA-Hispanic Serving Institutions Priority Setting and Strategic Planning Meeting, July 26-28, 2010, Washington, DC

Is a Biological Control Strategy Effective on *Lygodium*? Friday June 11, 2010, 11.30-1.00, B2-1S, Florida Bay Conference Room, South Florida Water Management District.

Native Biological Agents for the Management of Invasive Exotic Plant Species. February 4, 2010. Environmental Resource Management Class.

Multicultural Undergraduate Scholars in Agroecology at Florida International University: In Interdisciplinary Approach. Joint MSP/NNF Project Directors and Beneficiaries Conference, October 20-21, 2009, 1410 Waterfront Center, Washington DC Invited Speaker.

A Potential Biological Control Agent for Invasive Plant Species, Old World Climbing Fern (*Lygodium microphyllum*). 23rd Annual Symposium, Florida Exotic Pest Council, April 21-24, 2008, Jacksonville, FL

Lectures on Principles of Agroecology and Research Methods in Sustainable Agriculture at Agroecology Annual Symposiums October 23. 2006, January 15, 2008, and February 16, 2010.

Lectures on Principles of Agroecology and School Students Research Projects. Lectures at Agroecology at Biannual Summer School Teachers Workshops July 15-20, 2006, 2008, and July 6-10, 2010.

Screening and Identification of Native Microbial Isolates from *Lygodium* habitat of South Florida. March 6, 2008, 11.30-1.00, B2-3S Biscayne Bay Conference Room, South Florida Water Management District.

Importance of Agroecology, Sustainable Agriculture and the Scholarships and Internships Opportunities at selected six senior high schools in Miami-Dade County. Twice a year visit to these schools since 2007.

Establishment of Multicultural Scholars Program at Florida International University. Joint MSP/NNF Project Directors Conference, October 16-18, 2007 Washington, DC

Practice of Agroecological Principles for Sustainable Agriculture. Guest Lecture presented at the Global Environmental Issues class by Jack Parker, October 2006.

Role of Microorganisms in Soil, Plant and Water Environments. The Honors College Research Methods Class Spring 2006.

Fate and Transport of Pesticides in Soil and Water and the significance of Biodegradation. The Honors College Research Methods Class. Fall 2005.

A Microbiologist Strategy for Management Invasive Plants in South Florida. August 2007, South Florida Water Management District, West Palm Beach, FL

Sabbatical Experience in Japan: Research, Education, and Extension Experience at Hiroshima University, Japan. October 2007. Environmental Studies Graduate Seminar.

Biological Control of Invasive Plant Species. Environmental Studies Graduate Seminar, Fall 2006.

Biological Invasion in South Florida: A Microbiologist Approach for Management. SERC Brown Bag Seminar Series. Fall 2006.

Soil Characterization and Nutrient Dynamics in Everglades Wetlands. April 15, 2004. Tropical Research and Education Center, University of Florida, Homestead, FL

Phosphorus Interactions in the Everglades Wetlands Ecosystems. May 24, 2002. USDA-ARS, Kimberly, ID

Soils of South Florida. March 12, 2002, MAST Academy High School, Miami, FL

The Impact of Low-level Phosphorus Loading on the Everglades Wetlands of Florida, USA. July 16, 2001, The University of Queensland, School of Agriculture and Horticulture, Gatton, Queensland, Australia.

Fate and transport of herbicides in soils. October 9, 1998, Graduate Environmental Engineering Seminar Series.

Atrazine Degradation and its impact in Soil and Water Environment. Spring 1997, Geology Department Seminar Series.

Bioremediation of Pesticides. Fall 1996, Chemistry Department Seminar Series.

Behavior of Pesticides in Soil. Fall 1996, Environmental Studies Graduate Seminar.

Pesticides and Environment. Fall 1996, Environmental Studies Colloquium EVR 4920

TEACHING: Courses Developed

AGR 3930 Agriculture Colloquium
EVR 4272 Agroecology
EVR 4274 Sustainable Agriculture
EVR 4592 Soils and Ecosystems
EVR 4592L Soils and Ecosystems Lab
SWS 5305 Advanced Soil Resources Analysis
SWS 4303 Soil Microbiology
SWS 4303L Soil Microbiology Lab
IPM 4020 Integrated Pest Management
HOS 3012 Introduction to Horticulture Science
HOS 3012L Horticulture Science Lab

AGR 4240 Modern Crop Production
AGG 4941 Internship in Agriculture (Codeveloped with Dr. Bhat)
AGG 4055 Food Security and Food Safety (Codeveloped with Dr. Shetty)
AGR 4641 Sustainable Bioenergy (Codeveloped with Dr. Shetty)
AGR 6251 Sustainable Farming Systems
AGR 6255 Ecological Agriculture
EVS 6194 Applied Soil Biology

Courses Taught

EVR 3013 Ecology of South Florida
EVR 4592 Soils and Ecosystems
SWS 5305 Advanced Soil Resources Analysis
SWS 4303 Soil Microbiology
EVS 6194 Applied Soil Biology
AGR 3930 Agriculture Colloquium
AGG 4941 Internship in Agriculture
EVR 4272 Agroecology
AGR 6255 Ecological Agriculture
EVR 4274 Sustainable Agriculture

Co-Developed and executed Agroecology Certificate Program
Co-Developed and executed Agriculture Science Major (degree) in BS Environmental Science
Developed and executed Professional Horticulture Certificate Program (PHCP)
Developed and executed International Workshop on Agroecology and Sustainable Agriculture (IWASA)
Developed and executed Professional Science Master's in Environmental Policy and Management (PSM-EPM)

OFFICES HELD IN PROFESSIONAL SOCIETIES

Biological Control Executive Board Member: Weed Science Society of America (2005-10)

PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

Association Memberships

American Society of Agronomy (ASA)
Soil Science Society of America (SSSA)
Crop Science Society of America (CSSA)
American Society for Microbiology (ASM)
North American Colleges and Teachers of Agriculture (NACTA)
Weed Science Society of America (WSSA)
International Mycorrhizologists Society (IMS)
Society for Environmental Restoration (SER)
American Institute for Biological Sciences (AIBS)

National Geographic Society (NGS)
National Academy of Biological Sciences, India (life member)

Referee/Reviewer

Editorial:

Regional Editor	Allelopathy Journal (2008 – 2014)
Associate Editor:	Journal of Environmental Quality (2002- 2007)
Topic Editor:	Encyclopedia of Earth (2006 - Present)
Editorial Advisory Board Member:	Journal of Sustainable Agriculture (2008 – Present)
Editorial Advisory Board Member:	NACTA (2017-2020)
Editorial Advisory Board Member:	Land
Editorial Advisory Board Member:	Ecosystem and Ecography (2010 – 2016)
Editorial Advisory Board Member:	Agriculture, Ecosystems, & Environment (2002- 2008)
Editorial Advisory Board Member:	Chemosphere (1999-2001)
Executive Board Member:	Biological Control (2005-2010)

Reviewer for Journals:

(more than 200 manuscripts reviewed for publications in listed journals)

Soil Science Society of America Journal
Journal of Environmental Quality
Agronomy Journal
Environmental Practice
Journal of Soil Contamination
Weed Science
Water, Air, & Soil Pollution
Journal of Soil & Water Conservation
Journal of Population and Environment
Indian National Science Academy and Agriculture
Plant and Soil
Bioremediation Journal
Journal of Food and Agriculture
Journal of Allelopathy
Biocontrol
Chemosphere
Applied Soil Ecology
Journal of Chemical Ecology
World Mycotoxin Journal
Journal of Agriculture, and Ecosystems & Environment
American Chemical Society book chapters
Reviewed journal articles for USDA-ARS Scientists

Reviewer for granting agencies:

Research Program Reviewer: Canadian Research Secretariat WorkSafeBC (2005,

2008, 2010, 2014, 2015, 2018, 2019, 2020)
 Ad-hoc Reviewer: National Science Foundation (2002, 2004, 2005, 2006, 2010)
 Ad-hoc Reviewer NOAA (2011)
 Ad-hoc reviewer USDA-National Research Initiative
 USDA-ARS Ad-hoc reviewer
 USDA-ARS CRIS projects reviewer
 USDA/CSREES proposals reviewer
 Everglades National Park Projects reviewer
 DERM proposals reviewer
 South Florida Water Management District Projects reviewer

Reviewer for Books (pre-publishing)
 McGraw Hills

Reviwer for Conferences (moderator):

Tree Islands Ecology section of the Greater Everglades Ecological Restoration, For Everglades Restoration 2050: Advancing the Science to Achieve Success – Planning, Policy, and Science Meeting, July 28 – August 1, 2008, Naples, FL

Soil Microbial Structural and Functional Diversity section of the Soil Science Society of America National Conference, October 5 – 8, 2008, Houston, TX

Ecological Society of America Annual Conference - Presided Oral Session # 48: Mutualism-Parasitism I: Plants; Modeling Wednesday, August 6, 2003, Savannah, GA

Soil Science Society of America Annual Conference, Moderator for Soil Ecology Section, October 31 – November 4, 1999. Salt Lake City, UT

External reviewer for tenure and promotion files:

University of Tennessee, Knoxville, TN, 2003
 University of Maine, Orono, ME, 2005
 University of Illinois, Urbana Champaigne. IL, 2011
 New Mexico State University, La Cruze, NM, 2014

Other:

Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) FIU Club
Faculty Advisor

Sabbatical Leave Experience - January 2007– May 2007: Visiting Professor, Department of Environmental Dynamics and Management, Graduate School of Biosphere Science, Hiroshima University, 1-4-4 Kagamiyama, Higashi-Hiroshima, Hiroshima prefecture 739-8528, Japan

Soil Science Society of America Conference - Young Scientist Award Selection Panelist for Association of Agricultural Scientists of Indian Origin - November, 2-6, 2003, Denver, CO

Based on my previous involvement with Prokaryotic Interest Group (PIG) at Iowa State University, I created PIG at Florida International University to bring microbiologists together to discuss about microbiology research and education in general.

Secretary: Plant Pathology Student & Faculty Organization, Dept. of Plant Pathology, Kansas State University (1989 - 1990)

President: Cereal Research Program Research Associates Organization, Cereal Program, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) (1986 - 1987)

President: Graduate Student Organization, Graduate Program, Tamil Nadu Agricultural University (1982 - 1983)

Subject Matter Expert/External Examiner for International Dissertation Work:

Studies on the Establishment and Symbiotic Association of *Gluconacetobacter diazotrophicus* and AM Fungi and their Effect on Growth and Yield of Sugarcane (*Saccharum officinarum* L.) var. CoSi 98071. Department of Agricultural Microbiology, Annamalai University, Tamil Nadu, India – 2011

Modified Modalities for Rapid Diagnosis of *Mycobacterium tuberculosis* and *gyrA* Gene Based PCR-RFLP Assay for Differentiation of Mycobacterial Species. Department of Microbiology, PSG College of Arts and Sciences, Coimbatore, India – 2008

Biomethanation Kinetics of Kitchen Refuse and Characterization of Methanogenic Consortia. Department of Microbiology, PSG College of Arts and Sciences, Coimbatore, Tamil Nadu, India – 2006

Influence of Phosphorus Solubilizing Microorganisms and *Rhizobium* on *Vigna unguiculata* (L.) Walp. Department of Biology, Gandhigram Rural Institute (Deemed University), Tamil Nadu, India – 2006

Effect of Paper Mill Wastes on Soil, Groundwater and Biomass Production: A Case Study of Cholan Paper and Board Mills. Department of Environmental Sciences, Bharathiar University, Coimbatore, Tamil Nadu, India – 2006

Recycling of Tannery Sludge along with Organic Wastes by Composting. 2005 Department of Biology, Gandhigram Rural Institute (Deemed University), Tamil Nadu, India – 2005

Interactions of Vesicular Arbuscular Mycorrhiza and Plant Growth Promoting Rhizobacteria in Relation to Nutrient Management and Production of Rice in Assam. Department of Botany, Gauhati University, Guwahati, Assam, India – 2005

Studies on the Antibiotic Resistance Pattern and the Impact on Human Body Temperature of E. Coli. Life Sciences Department, Avinashilingam Institute (Deemed University), Coimbatore, Tamil Nadu, India - 2003

Studies on the Interactions of Arbuscular Mycorrhizae and Collar Rot of Groundnut. Department of Biology, Gandhigram Rural Institute (Deemed University), Tamil Nadu, India – 2002

SERVICE TO UNIVERSITY

Departmental Committees Assignments and Programs Administered

Co-Director: Agroecology Program (2005-present)

Director: Professional Science Masters' in Environmental Policy and Management (PSM-EPM) 2014-present

Director: Graduate Program (2008-2015)

Member: Graduate Program (2002-2006, 2015)

Faculty Mentor: for Dr. Len Scinto (Earth & Environment), Dr. Jin He (Physics)

Chair: Human Resource Committee (2004-2005, 2006-2007)

Member: Human Resource Committee (2003-2004, 2005-2006, 2007-2008, 2020-present)

Secretary: Faculty meetings minutes recorder (2020 – present)

Member: Ad-hoc committee for Tenure & Promotion revision (2020-2021)

Chair: Search & Screen Committee for Aquatic Ecologist, Restoration Ecologist, Aquatic Biogeochemistry, Terrestrial Ecosystem Ecologist, two lecturers (2007-2008, 2003-2004).

Chair: Search & Screen Committee for Agroecology Faculty Position 2011-2015

Member: E&E STEM Transformation Institute Faculty 2014-2017

Member: Search and Screen Committee for Earth & Environment STEM faculty 2015-2016

Member: Search and Screen Committee for Global Climate Change/Field Ecologist (2002-2003)

Chair: Curriculum Committee (2000-2002)

Member: Curriculum Committee (1998-2000, 2002-2003)

Chair: Environmental Studies Science Task Force Committee (2005-06)

Chair: Environmental Studies Future Hire Strategies Committee (2005-06)

Chair: Ad-hoc Committee for Environmental Studies Honors Track (2005-06)

Chair: Environmental Studies EVR 3013 Ecology of South Florida revisions (2004-2005)

Member: As-hoc Committee for Environmental Studies PhD Proposal Development (2000-2001, 2004-2005)

Member: Ad-hoc Committee for Environmental Studies Laboratory Improvement (1998-1999)

Member: Undergraduate Committee (1997-1999)

Member: Library Committee (1996-1997)

Member: Space and Laboratory Committee (1997-1999)

Chair: Space and Laboratory Committee (1996-1997)

Acting Chair (Environmental Studies): June 26-27, 2003, December 22-23, 2003, and March 17-23, 2004, numerous times during 2008-09 including Acting Chair of merged Department Earth and Environment, Acting Chair of Earth and Environment and Acting Associate Chair of Earth and Environments on numerous times during 2009 -10.

College and University Committees & Programs

Member: President's Committee on NCAA Gender/Diversity Issues and Student-Athlete Well-Being (2010-2014).

Chair: Diversity Sub-Committee of President's Committee on NCAA Gender/Diversity Issues and Student-Athlete Well-Being (2010-2014)

Panelist: Graduate Research Opportunities – Grant Writing Workshop, Organized by College of Arts and Sciences, November 4, 2010

Faculty Senate: Senator (2010-2011, 2011-2013, 2013-2015, 2015-2017, 2019-2021)

UCCOC Committee – Member. This is a five member committee to administer University Core Curriculum issues. Monthly meeting is required. We have met weekly basis on every Tuesday 11 – 12. Worked out Tier 1 and Tier 2 core curriculum and Gordon Writing Requirements. Spent my service hours for this committee meetings. Completed my service in 2019.

Building and Environment Committee - Member

Tenure and Promotion Committee – Member. Completed tenure and promotion review of 27+ files and made recommendation to Dean.

CAS Strategic Committee – Invited as one of the members for Graduate Education and Special Program Strategic Initiated (2014-15)

ICTB Director Search & Screen Committee: member of ICTB Director Search and Screen Committee.

ARC's Director of Operations Search & Screen Committee: member of Search and Screen Committee for the Director of Operations. Spent two days – a day for phone interviews and another day for campus interviews.

Land Steward Position – Search and screen for a land steward position to manage agriculture land property in Redlands. Robert Barnum was hired and I supervise Land Steward Position – now Horticulture Curator.

Chair: President's Access & Equity Committee (2008- 2012)

Member: President's Access and Equity Committee – Member (2001 – 2014)

Chair: Diversity and Minority Enrollment Sub-Committee of A&E Committee (2003 – 2008)

Member: Ad-hoc screening and selecting President's Access and Equity Award candidates on annual schedule (2003-2009)

Member: Ad-hoc selection committee for Grant-in-Aid Applications. Screen and select candidates for Grant-in-Aid on annual basis (2003-2010)

Member: Ad-hoc selection committee for Delores Auzenne Fellowship Applications. Screen and select candidates on annual basis (2003-2010)

Member: Search & Screen Committee for Assistant Vice-President, Human Resources. (2008-2009)

Member: Search & Screen Committee for Director EEOP Office, Human Resources. (2008-2009)

Member: Academic Judicial Committee (2007- 2010)

Member: Radiation Safety Committee (1999 – present)

Nuclear Science Committee – Member, participate in nuclear science program at FIU.

Best Graduate Students Publication: Served last two years to select best graduate student publication for UGS

ICOT 2018 – Scientific Committee member.

Member: FIU's Hispanic Serving Institutions Strategic Planning and Discussion Group.

Director: The Honors College – Students Research and Artistic Initiatives (SRAI). Founding member and director (2003-2005)

Fellow: The Honors College (2003-2009)

Banner Marshal: Faculty Convocation 2003, Commencement Fall 2003, 2004, Spring 2005

Member: Representative from Environmental Studies for Fairchild Tropical Botanical Garden Research Service Agreement (2006)

Member: Representative from Environmental Studies for the Dept. of Environment and Occupational Health Graduate Program Committee (2006)

Member: NSF - Faculty Institutes for Reforming Science Teaching (2002 – 2008)

Member: Environmental Preserve Committee (1999 – 2003)

Member: Search and Screen Committee for Hydrologic Modeling Position (Earth Science) 2002

Member: Search and Screen Committee for Stable Isotope Position (Geology-SERC) 1999.

Member: Shade House facilities at the Preserve (2003-present).

Representative: College of Arts and Sciences initial meeting on School of Environment, November 17, 2003.

News Media Articles:

<http://blogs.usda.gov/2013/06/18/agroecology-program-ag-research-is-more-than-farming/>

<http://news.fiu.edu/2014/01/lead-contamination-research-leads-to-safer-soil-in-liberty-city/73827>

<http://news.fiu.edu/2016/03/fiu-trains-professionals-to-manage-natural-resources/98047>

<http://www.miamiherald.com/news/local/education/article25716169.html>

<http://news.fiu.edu/2015/12/cultivating-success-fiu-supports-farming-business/94926>

[FIU Washington DC Office Visit Summer 2016](#)

<https://www.youtube.com/watch?v=Eq6eXU1G8jo>

FIU Agroecology Class Video Fall 2016

<https://www.youtube.com/watch?v=8DUafyxvLdI>

Ignite – Faculty & Staff Campaign thank you Video Spring 2017

<https://youtu.be/OpZPCqkBQv4>

USDA Ed. Bulletin – March 2018

<https://content.govdelivery.com/accounts/USDANIFA/bulletins/1dcf0df>

Graduate Student – Fulbright May 2018

<https://news.fiu.edu/2018/05/fulbright-fellows-tackle-international-concerns/122697>

<https://news.fiu.edu/2019/when-earthworms-soil-themselves,-everyone-wins>

<https://news.fiu.edu/2019/oh,-snap-bacteria,-fungus-combo-can-help-crops>

Industrial Hemp Project – PantherNow June 17, 2020

<http://panthernow.com/2020/06/17/fiu-announces-partnership-with-green-point-research/>

<https://casenews.fiu.edu/2020/07/28/for-biological-sciences-student-life-revolves-around-orchids/>

Prescribed fire – Pine Rocklands September 17, 2020

<https://news.fiu.edu/2020/a-little-fire-did-a-lot-of-good-for-microbes-in-fius-nature-preserve>

ASA Fellow September 25, 2020

<https://casenews.fiu.edu/2020/09/25/agroecology-program-director-recognized-as-the-2020-american-society-of-agronomy-fellow/>

<https://casenews.fiu.edu/2020/05/15/hey-farmer-leave-them-weeds-alone/>

<https://casenews.fiu.edu/2020/12/01/alumna-trades-dance-floor-for-farm-fields/>

<http://panthernow.com/2021/02/22/fiu-ranked-1-university-combating-climate-change/>

https://news.fiu.edu/2021/growing-our-way-out-of-nutrient-problems-on-our-waterways?utm_source=Newsletter&utm_medium=email&utm_campaign=FIU%20News%20Newsletter

Affiliations:

Agroecology Program <http://agroecology.fiu.edu>

International Center for Tropical Botany

Fairchild Tropical Botanical Garden <http://fairchildgarden.org>

Energy Research Group <http://www.erg.fiu.edu>

ARCH program between Chemistry and Biochemistry, FIU and UM <http://arch.fiu.edu/>

The Honors College ARCH Program

International Forensic Research Institute <http://www.ifri.fiu.edu>

Florida Coastal Everglades Long-Term Ecological Research Program <http://fcelter.fiu.edu/>
Southeast Environmental Research Center <http://serc.fiu.edu>
MBRS MARC-USTAR & RISE Program <http://www.fiu.edu/~mbrs/>