



16th Annual Soil and Water Science Research Forum Program

September 17, 2015

Grand Ballroom - J. Wayne Reitz Union

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| 8:15 am – 9:00 am | Registration |
| 9:10 am – 9:20 am | Opening Remarks
K. Ramesh Reddy, SWSD Chair |
| 9:20 am – 9:30 am | Opening Remarks
Joel Brendemuhl, Associate Dean CALS |
| 9:30 am – 10:30 am | <u>Exploring Phosphorus Paradoxes to Avoid Unintended Consequences</u>
Andrew Sharpley
Dept. Crop, Soil, & Environmental Sciences
Division of Agriculture
University of Arkansas
Fayetteville, Arkansas |
| 10:30 am – 10:50 am | BREAK |

SESSION I – Faculty Oral Presentations

Grand Ballroom - J. Wayne Reitz Union

10:50 am – 11:50 am Invited Faculty Session

Session Chair: James Jawitz

- 10:50 am – 11:10 am **Nanotechnology Application in Agriculture and Environment**
Zhenli He, Professor
Indian River Research and Education Center – Ft. Pierce, FL
Soil and Water Science Department
University of Florida
- 11:10 am – 11:30 am **Soil Phosphorus Saturation Ratio for Risk Assessment in Land-use Systems**
Vimala Nair, Research Professor
Soil and Water Science Department
University of Florida
- 11:30 am – 11:50 am **Use of the Solvophobic Theory to Predict Extraction Efficiency of Hydrophobic Organic Chemicals from Container Walls and Soils**
Peter Nkedi-Kizza, Professor
Soil and Water Science Department
University of Florida
- 11:50 pm – 1:00 pm **LUNCH**

SESSION II – Ph.D. Graduate Student Oral Presentations

Grand Ballroom - J. Wayne Reitz Union

1:00 pm – 2:15 pm – Graduate Student Oral Presentations

Session Chairs: Wade Ross, Steph Jamis, and Tracey Schafer

Student Presentation (1:00 pm – 1:15 pm):

Evaluation of Surfactant Coated Seed in Water Repellent Soil and Deficit Irrigation

Authors: *Mica Franklin, M.D. Madsen, S.H. Daroub, S.J. Kostka, J.E. Erickson, J.B. Sartain, and K.A. Moore*

Student Presentation (1:15 pm – 1:30 pm):

Global Soil Nitrous Oxide Emissions in a Dynamic Carbon-Nitrogen Model

Authors: *Yuanyuan Huang and Stefan Gerber*

Student Presentation (1:30 pm – 1:45 pm):

Understanding the Persistence of *Salmonella enterica* in the Environment, and its Implications for Food Safety

Authors: *Marcos H. de Moraes, Kenneth D. Parker, Carol Hoffman, David W. Pascual, and Max Teplitski*

Student Presentation (1:45 pm – 2:00 pm):

Managing Expectations: Creating a Community Based Stormwater Pond Nutrient Management Program

Authors: *Charlie Patrick Nealis and Mark Clark*

Student Presentation (2:00 pm – 2:15 pm):

Region-wide Soil Carbon Assessment across “The Land of Pines”

Authors: *C. Wade Ross, Sabine Grunwald, Stephen J. Del Grosso, Stefan Gerber, and Eric K. Jokela*

SESSION III - Student Poster Viewing and Reception

Grand Ballroom, J. Wayne Reitz Union

2:30 – 3:30 pm **Poster Session I**

a. Judging of Even Numbered Posters Will Occur During This Time

3:30 – 4:30 pm **Poster Session II**

a. Judging of Odd Numbered Posters Will Occur During This Time

Judged Poster Titles & Authors

1. Potential use of Japanese Sweetflag for Remediation of Contaminated Surface Water
Noha Abdel-Mottaleb and P. Chris Wilson
2. Cadmium Monitoring in Cacao Farms of Southern Ecuador: Soil Contamination and Potential Remediation
E. Chavez, Z. L. He, P. J. Stoffella, R. S. Mylavarapu, Y. C. Li, B. Moyano, and V. C. Baligar
3. Development and first tests of a of a simple wetland methane model
Carla Alonso-Contes and Stefan Gerber

4. The Effect of Short Term Inundation on Potential Nitrogen Flux in a Coastal Ecosystem
Rose Collins, Rao Mylavarapu, Mark Clark, and Todd Osborne
5. Nitrate Loading and Source Identification across Dominant Land Uses in the Silver Springs springshed
Amanda Desormeaux, Marc G. Kramer, James W. Jawitz, Patrick Inglett, and Michael D. Annable
6. Catching Nitrate at the Source?: Potential for Soil and Vadose Zone Denitrification in the Silver Springs springshed
Katelyn Foster and Patrick Inglett
7. Anthropogenic Factors that Influence Soil Management: Ethnopedology and Ethnopedozoology
Claire Friedrichsen, Samira Daroub, and Ann Wilkie
8. Cellulosic Ethanol Stillage as a Cultivation Medium for *Spirulina*
Kimberly D. Hafner and Ann C. Wilkie
9. The Responses of Key Nitrogen Cycling Genes to Seasonal and Tidal Variations in a Tropical Estuary
Laibin Huang, Caitlin Young, Andrea Pain, Jonathan B. Martin, and Andrew Ogram
10. Struvite Recovery from Small Wastewater Treatment Plants
John Hallas, Cheryl Mackowiak, and Ann C. Wilkie
11. Florida Wildfires during the Holocene Climatic Optimum (9,000-5,000 BP)
Kalindhi Larios, Stefan Gerber, and Mark Brenner
12. Dissolved Organic Nitrogen in Runoff/Surface Water from Agricultural Fields
Liguang Li, Zhenli He, Rory J. S. Kates, Thomas S. Bianchi and Peter J. Stoffella
13. Simulating Everglades Carbon Fluxes and GHG Emission under Varying Hydrology Parameterization in the Community Land Model
Yan Liao and Stefan Gerber
14. Reducing Labile Phosphorus Pools by Controlling Floating Aquatic Vegetation in Drainage Canal Sediments
Anne E. Sexton, Jehangir H. Bhadha, Timothy A. Lang, and Samira Daroub

15. Assessment of Microbial Community Structure within an Oligotrophic Tropical Peatland
E. Morrison, S. Newman, K.R. Reddy, Z. He, J. Zhou, B. Turner, P. Thomas, T. Kahveci, and A. Ogram
16. Modeling Peat Growth and Soil Subsidence in the Everglades Agricultural Area
Andres Rodriguez and Stefan Gerber
17. Investigating N Source Preference for Bloom Forming Pico-cyanobacteria in the northern Indian River Lagoon, Florida
Joshua Papacek, Edward Philips, Margaret Lasi, and Patrick Inglett
18. Landscape Denudation Rates of a Low Relief Carbonate Platform
Eron Raines, Matthew Cohen, and Todd Osborne
19. Influence of Sediments on the Fate of Granular/Pelleted Formulations of the Aquatic Herbicide Fluridone
Matt Nance, William Haller, and P. Chris Wilson
20. Evaluation of an Organic Carbon Trajectory over a 10 -year period on a Restored Spoil Island in South-central Florida
Tracey Schafer, Caitlin Hicks, Rex Ellis, and Todd Osborne
21. Synthesis and Characterization of Lignin-based Dendrimer Gel for application in Fertilizers' Controlled Release
Shanyu Meng, Zhaohui Tong, Fei Wang, Nusheng Chen, and Yuncong Li
22. Decomposition in a Shifting Coastal Wetland Habitat
L.T. Simpson, T.Z. Osborne, and I.C. Feller
23. Water and Nitrogen Fluxes within the Upper Floridan Aquifer in the Silver River Springshed
Antonio Yaquian, James Jawitz, Michael Annable, Jaehyun Cho, and Harald Klammler
24. Impact of Flooded Rice Cultivation on Water Quality in the Everglades Agricultural Area
Mohsen Tootoonchi, Timothy Lang, Jehangir Bhadha, Ron Cherry, and Samira Daroub
25. Soil Salinity differences between Irridrain and Conventional Seepage Irrigation
Eunice Yarney and Mark Clark
26. Effect of pH and Solid-liquid Ratio on Metal Leachability in Coal Combustion Residual
Evandro Barbosa da Silva, Xiaoling Dong, Julia Gress, and Lena Ma

Non-Judged Poster Titles & Authors:

27. Preliminary Analysis for Exploring Nonpoint Source Pollution Indicator Conditions in Coastal Surface Waters of Glynn County, Georgia
C.R. Bodrey Jr, S.H. Daroub, S. Grunwald, T.A. Obreza, L.M. Risse, and D.E. Radcliffe
28. Estimation of Phosphorus Isotherm Parameters: A Simple and Cost-effective Procedure
Biswanath Dari, Vimala D. Nair, James Colee, Willie G. Harris and Rao Mylavarapu
29. Cleaning-induced arsenic mobilization and chromium oxidation from CCA-wood deck: Potential risk to children
J. Gress, L.M. de Oliveira, E.B. da Silva, J.M. Lessl, P.C. Wilson, T. Townsend, and L.Q. Ma
30. Assessing the Potential for Phosphorus Contamination of Ground Water in Different Land Uses of the Silver Springs springshed
X. Liao, P.W. Inglett, A. Canion, D. Dobberfuhl, and V.D. Nair
31. Performance of Hybrid Constructed Wetland Systems for Treating Schoolyard Domestic Wastewater
Wen Liu and Gurpal Toor
32. Evaluating the Bioethanol Potential of Industrial Sweetpotatoes in Florida
Wendy A. Mussoline and Ann C. Wilkie
33. Dominant Drivers of Peatland Soil Organic Matter Chemical Composition
Normand, Anna E., Benjamin L. Turner, Jamie Lamit, Alex W. Cheesman, Sam P. P. Grover, Adam N. Smith, Ben Baisier, Erik Lilleskov, and K. Ramesh Reddy
34. Efficacy of Foliar Nutrient Formulations in Citrus
Mylavarapu, R.S., G. Means and **L.M. de Oliveira**
35. Pharmaceuticals and Organochlorine Pesticides in Sediments of an Urban River in Florida
Yun-Ya Yang, Gurpal S. Toor, and Clinton F. Williams