16th Annual
Soil and Water Science Research Forum
Program

September 17, 2015
Grand Ballroom - J. Wayne Reitz Union

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  Exploring Phosphorus Paradoxes to Avoid Unintended Consequences
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

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 Phlips**, **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**, **Zhao Hui Tong**, **Fei Wang**, **Nusheng Chen**, and **Yuncong Li**

22. Decomposition in a Shifting Coastal Wetland Habitat

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  

   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  

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