

# 13<sup>th</sup> Annual Soil and Water Science Research Forum Program

September 7, 2012

Auditorium – J. Wayne Reitz Union

- 8:30 am – 9:15 am            Registration
- 9:15 am – 9:30 am            **Opening Remarks**  
Dr. K. Ramesh Reddy, SWSD Chair
- 9:30 am – 10:30 am            **Summertime in the Rocky Mountains: A Biogeochemical Perspective on Climate Change and Water Quality.**  
Dr. Diane McKnight, Professor  
Fellow of the Institute of Arctic and Alpine Research  
National Academy of Engineering  
Dept. of Civil, Environmental and Architectural Engineering  
University of Colorado - Boulder
- 10:30 am – 10:50 am            **Break**

## SESSION I – Oral Presentations

Auditorium – J. Wayne Reitz Union

- 10:50 am – 12:30 pm            Invited Faculty Session – Carbon Cycle - Soil, Water, and Environmental Sciences

**Session Chair: Dr. James Jawitz**

- 10:50 am – 11:10 am            **Coupled Cycles and Life at the Bottom of the Food Chain.**  
Dr. Andrew Ogram, Professor  
Department of Soil and Water Science  
University of Florida
- 11:10 am – 11:30 am            **Hydrologic Linkages to Subsurface Carbon Sequestration in Florida.**  
Dr. Willie Harris, Professor  
Department of Soil and Water Science  
University of Florida
- 11:30 am – 11:50 am            **Soil Carbon and the Forest Soils Program – Summary and a Perspective on Biochar.**  
Dr. Nicholas Comerford, Professor  
Center Director of North FL. Research and Education Center  
Department of Soil and Water Science  
University of Florida

- 11:50 am – 12:10 pm      **Carbon Sequestration in Florida's Wetlands: Past Lessons and Future Challenges.**  
Dr. Todd Osborne, Research Assistant Professor  
Department of Soil and Water Science  
University of Florida
- 12:10 pm – 12:30 pm      **Soil Carbon Variability across Large Landscapes.**  
Dr. Sabine Grunwald, Professor  
Department of Soil and Water Science  
University of Florida
- 12:30 pm – 1:30 pm      **LUNCH**

## **SESSION II – Oral Presentations**

### **Auditorium – J. Wayne Reitz Union**

1:30 pm – 2:30 pm - Graduate Student Oral Presentations

**Session Chairs: Jing Hu, Eunice Eshun, and Mary Lusk**

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

Particle Matter and Surface Runoff Transports of Copper (Cu) from Land to Water Ways.

**Authors:** *Santanu Bakshi, Zhenli He, and Willie Harris*

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

Influence of Wetland Vegetation on Stability of Accreted Phosphorus in the Everglades Stormwater Treatments Areas.

**Authors:** *Rupesh Bhomia, K. Ramesh Reddy, and Delia Ivanoff*

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

Arsenic-Resistant Bacteria Solubilized Arsenic and Phosphorus from Insoluble Minerals and Enhanced Plant Growth.

**Authors:** *Piyasa Ghosh, Lena Ma, and Bala Rathinasabapathi*

#### **Student Presentation (2:15 pm – 2:30 pm):**

Imidacloprid Soil-Drench Application in Young Citrus Trees of Florida: Sorption, Degradation, and Systemic Effects on Asian Citrus Psyllid

**Authors:** *Jorge Leiva, Peter Nkedi-Kizza, Kelly Morgan, and Jawwad Qureshi*

## **SESSION III**

### **Student Presentations – Poster Viewing and Reception**

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East and West Gallery, J. Wayne Reitz Union

3:00 pm – 4:00 pm **Poster Session I,**

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

4:00 pm – 5:00 pm **Poster Session II,**

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

**Judged Poster Titles & Authors:**

1. Assessment of Management Impact on Soil Carbon Dynamics in Subtropical Grasslands.  
*Julius Adewopo, Maria Silveira, and Stefan Gerber*
2. Water Quality Monitoring at Model Watershed Nagulapally-Konapur, Medak District, Andhra Pradesh, India.  
*Cassandra Admire, Rao Mylavarapu, and Kanwar Sahrawat*
3. Relations of Iron, Aluminum, and Carbon along Transitions from Udults to Aquods.  
*Chumki Banik, Willie Harris, Scarlett Balboa, Larry Ellis, and Wade Hurt*
4. Bioremediation of DDE, DDD, and DDT in Sandy Soil from Site ZSS3027 in Field ZSE-J in the Lake Apopka North Shore Restoration Area.  
*Ben Coppenger and Dr. John Thomas*
5. Obtaining Langmuir Parameters from a Soil Test Solution.  
*Biswanath Dari, Vimala Nair, Dean Rhue, and Rao Mylavarapu*
6. Fate and Transport of Nitrogen in Onsite Wastewater Treatment Systems.  
*Mriganka De and Dr. Gurpal Toor*
7. Effect of Fertilizer Management Strategies on Color and Quality of St. Augustinegrass.  
*Rajendra Gautam, George Hochmuth, and Laurie Trenholm*
8. Testing Organic Soil Amendments to Grow Sugarcane on Sandy Soils in the Everglades Agricultural Area.  
*Susanna Gomez, Samira Daroub, Jehangir Bhadha, and Timothy Lang*
9. Impact of P Gradient and Anoxic Conditions on Temperature Sensitivity of Enzyme Kinetics in Wetland Soils.  
*Swati Goswami, Patrick Inglett, and Kanika Sharma Inglett*
10. A Chemical Risk Reduction Education Program for Residents Living Near the Koppers Superfund Site in Gainesville, Florida.  
*Julia "Ky" Gress and Lena Ma*
11. Hydrologic Modeling for Evaluating Restoration of Historically Isolated Subtropical Wetlands.  
*Jing Guan and James Jawitz*
12. Nitrogen Use Efficiency of Silage Corn.  
*Rebecca Hellmuth and George Hochmuth*
13. Nitrous Oxide Production and Consumption after the Rewetting of Soils in Isolated Wetlands and Surrounding Pasture Upland.  
*Jing Hu, Kanika Sharma Inglett, Patrick Inglett, Mark Clark, and K. Ramesh Reddy*

14. Preliminary Analysis of Ecosystem Response to Anthropogenic Nitrogen Deposition in Remote Watersheds of the Northern Hemisphere.  
*Yuanyuan Huang and Stefan Gerber*
15. Evaluation of Current and Alternative Nitrate Reduction Techniques in the Caloosahatchee River Basin.  
*Travis Knight and Edward Hanlon*
16. Algae Nutrient Limitations in Reverse Osmosis Pretreated Landfill Leachate.  
*Carlos V. Lopez and Ann Wilkie*
17. Utilization of Novel Analytical Approaches to Determine Soil Organic Matter Stability in Wetlands.  
*Anna Normand and K. Ramesh Reddy*
18. Tracking Nitrogen using SUBSTOR: A Model Based Approach for Improving Nitrogen Management for Potato Cultivation in the Suwannee River Watershed.  
*Rishi Prasad, George Hochmuth, and Christopher Martinez*
19. Assessing Terrestrial Carbon Dynamics and the Effects of Climate Driven Changes on Carbon Stocks across the Southeastern United States.  
*Christopher Wade Ross and Sabine Grunwald*
20. Use of AI-WTRs in Ermeable Reactive Barriers to Limit Phosphorus Movement in Groundwater in the Lake Okeechobee Basin.  
*William Schmahl and James Jawitz*
21. Dislodgeable Residues of Endocrine Disrupting Chemicals on Turfgrass Irrigated with Reclaimed Water.  
*Harmanpreet Sidhu, Chris Wilson, and George O'Connor*
22. Temperature Sensitivity of Greenhouse Gas (CO<sub>2</sub> and CH<sub>4</sub>) Production and Flux in a Subtropical Wetland: The Importance of Organic Matter Quality and Nutrient Availability.  
*Debjani Sihi, Patrick Inglett, and Kanika Sharma Inglett*
23. Assessing the Fertilizer Value of Anaerobic Digester Effluent.  
*Reginald Toussaint and Ann Wilkie*
24. Modified Method for the Characterization of Soil Organic Nitrogen in Wetlands.  
*Christine VanZomeren and K. Ramesh Reddy*
25. Impacts of Land Use on Ecosystem Carbon in Subtropical Grassland Ecosystems.  
*Sutie Xu, Maria Silveira, and Kanika Sharma Inglett*
26. Tracer Tests to Predict DNAPL Storage and Release from Low Permeability Zones.  
*Minjune Yang, Michael Annable, and James Jawitz*

**Non- Judged Poster Titles & Authors:**

27. Allelopathic Effects of Aquatic Vegetation on Seed Germination and Root Growth.

*Odiney Alvarez-Campos, Timothy Lang, Jehangir Bhadha, Calvin Odera, and Samira Daroub*

28. Detection of Activity and Syntrophic Acetate-Oxidizing Bacteria along a Nutrient Gradient in the Florida Everglades.  
*Michelle Amit, Hee-Sung Bae, Aditi Banerjee, and Andrew Ogram*
29. An Emergy Approach to Evaluate Impacts of Soil Subsidence on Biofuels Production Sustainability in South Florida.  
*Nana Y. Amponsah, Jose-Luis Izursa, John Capece, and Edward Hanlon*
30. Bioremediation of Landfill Leachate: Utilizing Photosynthetic Algae to Assimilate Waste Nutrients.  
*Scott Edmundson and Ann Wilkie*
31. Response of 'Floritam' St. Augustinegrass to Nitrogen Fertilizer and Reclaimed Water Application Rate.  
*Jinghua Fan, George Hochmuth, Jerry Sartain, and Jason Kruse*
32. Predicting the Effects of Climate Change on Everglades Ecosystems.  
*Rajendra Paudel, Carl Fitz, and R. Shrestha*
33. A Study on Cropland Organic Carbon Sequestration in Soil Aggregates of Long-Term Experimental Sites in the Northeast Plain of China.  
*Jiubo Pei, J.K. Wang, H. Li, and Patrick Inglett*