

11th Annual Soil and Water Science Research Forum Program

September 10, 2010

Room 282 J. Wayne Reitz Union

- 8:00 am Registration
- 8:30 – 8:40 am **Opening Remarks**
Dr. K. Ramesh Reddy, SWSD Chair
- 8:40 – 9:10 am **Soil, Water, and Emerging Pathogens**
Dr. J. Glenn Morris
Director and Professor
Emerging Pathogen Institute
University of Florida
- 9:10 – 10:00 am **The Soil Health and Human Health Nexus**
Dr. Ian Pepper
Director, National Science Foundation-
Water and Environmental Technology Center
Director, Environmental Research Laboratory
University of Arizona
- 10:00 – 10:30 am **BREAK**

SESSION I – Oral Presentations

Room 282 J. Wayne Reitz Union

- 10:30 – 12:00 noon Invited session – Soil and Water Contamination and Public Health
- Dr. George O'Connor: The SWSD and Public Health.
- Dr. James Jawitz: Assessment and Remediation of Organic Contaminant Impacts to Hydrologic Ecosystems.
- Dr. Lena Ma: Environmental Impacts and Remediation of Metal-Contaminated Soils.
- Dr. Andrew Ogram: Fate of Organic Contaminants from the Recent Gulf of Mexico Oil Spill.
- Dr. Max Teplitski: Microbial Ecology, Ecosystem Health, and Food Safety.

12:00 – 1:10 pm **LUNCH**

SESSION II – Oral Presentations

Room 282 J. Wayne Reitz Union

Post-Doc Fellow Presentation (1:15 pm – 1:30 pm):

Dr. Brent Myers: Rapid Assessment and Modeling of Soil Carbon Storage in Florida.

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

Fate and Transport of Biosolids-Borne Triclosan (TCS).
Manmeet Waria, PhD Student, Advisor: George O'Connor and Gurpal Toor

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

Uptake and Translocation of Arsenite and Arsenate by *Pteris vittata* L.: Effects of Glycerol, Antimonite and Silver.
Shiny Mathews, PhD Student, Advisor: Lena Ma

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

Urban Water Availability and Sustainability in the United States.
Julie Padowski, PhD Student, Advisor: James Jawitz

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

Evaluation of a Denitrification Wall: Putting Microbes to Work to Fulfill Numeric Nutrient Criteria.
Casey Schmidt, PhD Student, Advisor: Dr. Mark Clark

Student Presentation (2:30 pm – 2:45 pm):

Development of Map Unit Interpretations for Subaqueous Soils.
Luke Gommerman, MS Student, Advisor: Dr. Larry "Rex" Ellis

SESSION III

Faculty/Staff Presentations – Poster Viewing and Reception

East and West Gallery, J. Wayne Reitz Union

3:00 – 5:00 pm Poster Session I, Posters 1- 2

1. The Terrestrial Carbon (TerraC) Information System Vers. 1.0
 Brandon Hoover, Gustavo M. Vasques, Biao Zhong, Sabine Grunwald, Timothy A. Martin, David L. JR. Depatie

2. Mash-ups Embedded in Online Learning Material to Stimulate Learning.
D.L. DePatie JR., B. Hoover, and S. Grunwald

SESSION III

Student Presentations – Poster Viewing and Reception

East and West Gallery, J. Wayne Reitz Union

3:00 – 4:00 pm **Poster Session I, Posters 3 - 17**

3. Simulation of Water Table Drawdown Due to Subsurface Drainage in a Seepage Irrigated Field.
Subodh Acharya, PhD Student, Advisor: Dr. Rao Mylavarapu
4. Biodigestion, Sanitation, and Public Health in Rural Cambodia
Jonathan Alldridge, ME Student, Advisor: Dr. Ann Wilkie
5. Long-term Storage Soil Nutrients in the Stormwater Treatment Areas of the Everglades Basin.
Rupesh Bhomia, PhD Student, Advisor: Dr. Ramesh Reddy
6. A Conceptual Ecosystem Services Framework Applied to Emerging Biofuel Production Systems.
Pasicha Chaikaew, PhD Student, Advisor: Dr. Sabine Grunwald
7. Phosphorus Retention and Release from Bh and Bt Horizons of Manure Impacted Soils in Florida.
Debolina Chakraborty, PhD Student, Advisor: Dr. Vimala Nair
8. Effects of pH and Ionic Strength on Sulfamethoxazole and Ciprofloxacin Transport in Saturated Porous Media.
Hao Chen, PhD Student, Advisors: Dr. Lena Ma and Dr. Bin Gao
9. Evaluation of Equilibrium Phosphorus Concentrations of Everglades Agricultural Area Canal Sediments using Adsorption Isotherms and Incubation of Intact Sediment Cores.
Jaya Das, PhD Student, Advisors: Dr. Samira Daroub and Dr. George O'Connor
10. Characteristic and Mechanism of Hexavalent Chromium Removal by Sugar Beet Tailing Derived Biochar.
Xiaoling Dong, PhD Student, Advisors: Dr. Lena Ma and Dr. Yuncong Li
11. Algal Biofuel Production through Landfill Leachate Remediation.
Scott Edmundson, MS Student, Advisor: Dr. Ann Wilkie
12. Evaluation of Equine Owner and Manager Awareness of Nutrient Management and Conservation Techniques on Small Farms.
Jennifer Marriott, MS Student, Advisor: Dr. Amy Shober

13. Fluorescent Arsenic-Resistant Bacteria Enhanced Arsenic Solubilization in the Rhizosphere and Promoted Growth of Arsenic Hyperaccumulator *Pteris vittata* L. Piyasa Ghosh, PhD Student, Advisor: Dr. Lena Ma and Dr. Bala Rathinasabapathi
14. Energy and Nutrient Resources from Organic Wastes for Small Farms. Ryan Graunke, MS Student, Advisor: Dr. Ann Wilkie
15. Effect of Hydroperiod on Phosphorus Availability in a Restored Calcareous Subtropical Wetland. Benjamin Hogue, MS Student, Advisor: Dr. Patrick Inglett
16. Effect of Rainy Season, Irrigation Method and Fertigation Frequency on Citrus Root Length Density, P and K Distribution on a Florida Spodosol. Davie Kadyampakeni, PhD Student, Advisors: Dr. Kelly Morgan and Dr. Peter Nkedi-Kizza
17. The Relationships among Biogeochemical Properties, Nitrification, and Associated Microbial Assemblage Composition of Santa Fe River Tributary Sediments. Ha Ryun Kim, PhD Student, Advisors: Dr. Andrew Ogram and Dr. Ramesh Reddy

4:00 – 5:00 pm Poster Session II, Posters 18 - 32

18. Multi-scale Modeling of Soil Series using Remote Sensing. Jongsung Kim, PhD Student, Advisor: Dr. Sabine Grunwald
19. Long-Term Arsenic Hyperaccumulation by *Pteris vittata* from Contaminated Soils and the Effect of Phosphate Rock and Increased Plant Density. Jay Lessl, PhD Student, Advisor: Dr. Lena Ma
20. Nutrient Limitation in Restored and Natural Reference Wetlands of the Florida Everglades. Xiaolin Liao, PhD Student, Advisor: Dr. Patrick Inglett
21. Pulsing of Seawater into Freshwater Wetlands: Effects on Soil Carbon Cycling. Lisa Gardner, PhD Student, Advisor: Dr. Ramesh Reddy
22. Effect of Topsoil Created from Spodic Materials on Turfgrass. Drew Mclean, MS Student, Advisor: Dr. Larry "Rex" Ellis and Dr. Amy Shober
23. Effects of Hydrology on Carbon Cycling in a Restored Subtropical Wetland. Cassandra Medvedeff, PhD Student, Advisor: Dr. Patrick Inglett
24. Characterization of a Variety of Laboratory-Produced Biochars and Importance toward Soil Fertility. Atanu Mukherjee, PHD Student, Advisor: Dr. Andrew Zimmerman

25. Okeechobee Isolated Wetlands: Influences of Hydroperiod on Plant Community Composition and Forage.
Jason Neumann, MS Student, Advisor: Dr. Mark Clark
26. Modeling Soil Organic Carbon within the St. Johns River Basin.
Christopher Wade Ross, MS Student, Advisor: Dr. Sabine Grunwald
27. The Effects of Soil Fertilization and Plant Disturbance on Wiregrass Performance.
Lisa Shaw, MS Student, Advisor: Dr. Cheryl Mackowiak
28. Soil Aggregation and Recalcitrant Carbon pools in a Florida Silvopasture System.
Julia Showalter, PhD Student, Advisor: Dr. Vimala Nair and Dr. Ramachandr Nair
29. Soil Pedogenesis and Landscape Relationships in the Santa Catalina Mountains.
Ashlyn Smith-Sawka, B.S. Student, Advisor: Dr. Larry "Rex" Ellis
30. Effects of Fertilization on Soil Carbon Stocks and Sorghum/Pigeon Pea Productivity in a Vertisol in Semi-Arid Tropical India.
Kiara Winans, PhD Student, Advisor: Dr. Ramesh Reddy
31. Modeling of Soil Organic Carbon in Dependence of Ancillary Environmental Factors.
Xiong Xiong, PhD Student, Advisor: Dr. Sabine Grunwald
32. Kaolinite-Facilitated Mercury Transport in Saturated Porous Media.
Yingjia Zhu, PhD Student, Advisor: Dr. Lena Ma and Dr. Willie Harris

5:00 – 5:30 pm

Adjourn