

ROBIN W. KLOOT

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Education History

Degree	Field	School	Year
PhD	Environmental Health Sciences	University of South Carolina	2005
MBA	Finance/Economics	University of South Carolina	1998
B.Sc.	Chem. Eng.	University of Cape Town, South Africa	1982

Employment History

2014-	Research Associate Professor Environmental Health Sciences, University of South Carolina, Columbia, SC.
2014-	Adjunct faculty, Clemson School of Agricultural, Forest and Environmental Sciences
2005-2014	Research Associate Professor & Associate Director, Earth Sciences and Resources Institute, University of South Carolina, Columbia, SC.
1999 - 2005	Research Assistant Professor, Earth Sciences and Resources Institute, University of South Carolina, Columbia, SC.
1998 - 1999	Consultant, Metago Environmental Engineers, Johannesburg, South Africa.
1996 - 1998	Full-time MBA Student, University of South Carolina, Columbia, SC.
1985 - 1996	Uranium Plant Superintendent. Rössing Uranium Mine, Swakopmund, Namibia. (various previous positions include Metallurgist, Senior Metallurgist, Asst. Superintendent Metallurgy).
1983 - 1985	Lieutenant, South West African Territorial Forces, Namibia.

Honors and Awards

2014	Earth day Environmental Stewardship Award for Faculty (ESP)
2012	IABC Award of merit Electronic Communication for St. Helena Island documentary.
2006 & 2007	GDUSA American Inhouse Design Award for <i>Summary of Resource Concerns in SC</i>
2003	Walker Institute - Lake Victoria Drinking Water & Sanitation Project
1998	Dobson Volunteer Service Award – Lake Victoria Drinking Water Project
1998	Winning student paper at the SC chapter of the American Statistical Association
1997	Beta Gamma Sigma Honor Society for Business Students. Distinguished MBA Student Award for Academic Excellence. Charles Coker Memorial Fellowship for Continuing MBA Students.

Teaching

ENHS 766 – Applied Aquatic Sciences – each spring since 2009

ENHS 793 – Soils and Environmental Health – each fall since 2011

Supervision of Student Research

Masters Students (as primary advisor)

In Progress

Name	Year	Program	Title or Topic
Pat Curwen	2014-2015	MEERM	Effect of Potassium on Wheat Growth and Harvest

Completed

Name	Year	Program	Title or Topic
Francine Davis	2011	ENHS	Use of a Fluorometer to aid in Detection of Waterborne Fecal Matter
Aashka Patel	2010	MEERM	Locating Sources of Bacterial Contamination In the Toms Creek Watershed
Sara Powell	2010	ENHS	Out of the Lake and Into the Watershed – a study on Lake Wateree
Jessica Arz	2008	MEERM	An Assessment of Water Quality and Urbanization in the Gills Creek Watershed
Daniel Brantley	2006	MEERM	Alternative Ecological Assessments on the 303 (d) Listed Bush River Watershed
Laura Malezewski	2005	MEng	Assessment of Contaminant Sources and Pathways Affecting the Congaree National Park, South Carolina.
Bobby Radakovich	2002	MEERM	The Effects of Land Use on Phosphorus Concentrations in the Pee Dee Basin of South Carolina.

Undergraduate Students

Name	Year	Program	Title or Topic
Bethany Williams	2014	SCHC	Understanding the Impact of Conventional and No-Till Agriculture on Infiltration Rates on a Small Urban Farm (also a Magellan Scholar)
Tegan Plock	2011	SCHC	The impact of Urban land management Practices on Water Infiltration rates in Columbia, South Carolina.
Matthew Wolfer	2010	SCHC	Sh!t Happens (Video mini documentary)

Other

Doctoral Dissertation Committee Membership

Name	Year	Program	Title or Topic
Erika Chin	2015	Geography	TBD –Comprehensives Committee
Mohammed Aljassim	2015	ENHS	Water Quality Decision Support Tool on Congaree River

Masters Thesis Committee Membership

Name	Year	Program	Title or Topic
David Robb (Clemson)	2014-	Ag	Measuring the effectiveness of a no-till organic system
Amna Al-Hashmi	2014	MEERM	Assessing the impact of mining on water quality in the Hatta Open Pit in Oman
Brett Sexton	2014	MEERM	Potential Stormwater Runoff Reductions by Incorporating Low Impact Development: Rocky Branch Watershed, Columbia, SC
Jeffrey Schrag	2011	MEERM	A Predictor Model for Naturally Occurring Radium in Private Residential Drinking Water Wells of the Inner Coastal Plain of South Carolina

Supervision of Masters Practicum/Residency/Internship

Name	Year	Program	Title or Topic
Stu Tribbs	2015-	MPH	Practicum – Business Plan for an SC Farmers Sustainable Research Consortium

Other teaching activity

Activity	Date	Title or Topic
Seminar, VA tech	2014	“Video Recording, Editing, and Using Social Media to Promote Sustainable Agriculture Practices in Virginia”
Seminar, VA tech	2015	“Video Recording, Editing, and Using Social Media to Promote Sustainable Agriculture Practices in Virginia”
GERM 295	2014	Soils and sustainability
GERM 295	2015	Soils and sustainability

Scholarship and Research

Refereed Journal Articles

- Kloot, R.W.** 2006. Locating *Escherichia coli* Contamination in a Rural South Carolina Watershed. *Journal of Environmental Management*. 83 (4) pp. 402-408.
- Kloot, R.W.**, B. Radakovich, X. Huang, X. and D. Brantley. 2006. A Comparison of Bacterial Indicators and Methods in Rural Surface Waters. *Environmental Monitoring and Assessment*. 121: pp. 275-287.
- Kloot, R.W.**, J.D. Rickman and W.M. Evans, Predicting the Time required for Swine CNMP Development using Statistical Methods and Real Data. 2004. *Trans. of ASAE* 47(3) pp. 865-870.
- De, S., **Kloot, R.W.**, Covington, E., Bezuglov, A. and Taduri, H. 2003. AFOPro: a Nutrient Management Decision Support System for the United States. *Computers and Electronics in Agriculture* 43(1) pp. 69-76.

Conference Proceedings and Abstracts

- Kloot, Robin.**, Bezuglov, Anton. and Henry, Stephen. "Location of Agricultural Activities and their Influence on Bacteria and Nutrients in Midsized Watershed Streams" Paper presented at the annual meeting of the SOIL AND WATER CONSERVATION SOCIETY, Saddlebrook Resort, Tampa, Florida, Jul 21, 2007
- Radakovich, B, **R. W. Kloot**, M. Aelion and C. O'Dell. Getting a handle on water quality: Alternatives for limited-resource watershed managers. Abstract: Soil and Water Conservation Society Conference July 24 – 28, 2004, St. Paul, MN.
- Standish, W., M. Evans, and **R.W. Kloot**. Overcoming Barriers to ArcView Technology Transfer in USDA-NRCS. In Proc. ESRI User's Conference, July 8-12, 2002, San Diego, CA.
- Kloot, R.** Covington, E. and Henry, S. 2001. Local Application of a GIS Based Decision Support System for Siting Animal Feeding Operations. Proc. In *Journal of Soil and Water Conservation* 56(4) p. 347.
- Clement, C., De, S. and **R.W. Kloot**. Using GIS to Model and Predict likely Archaeological Sites, Proc. 21st ESRI International User's Conference, July 9-13, 2001, San Diego, CA.
- Henry, S., **R.W. Kloot**, M. Evans, and G. Hardee. 2003. Comprehensive Nutrient Management Plans and the Tools Used to develop them in South Carolina. In Proc. Ninth Annual Symposium on Animal, Agricultural and Food Processing wastes. October 12-15, 2003, Durham, North Carolina.
- Covington, E., **R.W. Kloot**, H. Reddy, 2001. GIS Decision Support System for Animal Feeding Operations Planning. In Proc. ESRI User's Conference, July 7-13, 2001, San Diego, CA.
- Kloot, R.** Covington, E. and Henry, S. 2001. Local Application of a GIS Based Decision Support System for Siting Animal Feeding Operations. Proc. In *Journal of Soil and Water Conservation* 56(4) p. 347.

Kloot, R. W., W. Owens, E. Covington and S. De. A GIS-Based Decision Support Tool for Siting Animal Feeding Operations. Poster in Proceedings of the Seventh Federal Interagency Sedimentation Conference, March 25 through 29, 2001, Reno, NV Volume 1.

Covington, E., **R.W. Kloot**, and J.B. Atkins, 2000. Tool for Animal Feeding Operations Siting. In Proc. ESRI User's Conference, July 2000, San Diego, CA. ArcUser magazine October-December 2000 Issue.

Atkins, J.B. , E. Covington, and **R.W. Kloot**, 2000. GIS Decision Support System for Animal Feeding Operations Siting and Management. In Proc.AWWA Conference June, 2000, Denver, CO.

Outreach

In-House Publications:

Book:

Kloot, R.W. and Thomas, P. 2007. Summary of Natural Resource Concerns in South Carolina. Natural Resources Conservation Service. Columbia, SC. 124 pp.

Bulletins:

Kloot, R.W. 2006. Rapid Watershed Assessments for 8-Digit HUA's in South Carolina. Natural Resources Conservation Service. Columbia, SC (36).

Video Documentaries

2013- Taking the Lowcountry Back - the Story of Oak Grove and Chinese Tallow – [link](#)

2013 – Submerged, Silent, Sinister – Submerged Invasive Plants in SC – [link](#)

2013 - Agri + Culture: Following Food from Farm to Fork in South Carolina - [link](#)

2012- Winter Grazing – a Better Way to Feed - [link](#)

2012 – Under Cover Farmers - [link](#)

2012 - St. Helena Island, SC. A Better Place - [link](#)

2011 - Soil Stories - [link](#)

Video Series

2014 - Science of Soil Health (21 Video Vignettes) – [link](#)

2013 - Soils 101 – [link](#)

2013 - Ray the Soil Guy - Soil Health Lessons in a Minute - [link](#)

2011 – Wildlife Habitat for Good – [link](#)

2010 – Healthy Soils Health Crops - [link](#)

2009 – Prescribed Grazing - [link](#)

2009 – Livestock Watering Facilities - [link](#)

Grants and Contracts

Grants and Contracts Received in the Past Seven years

To Provide Technical Assistance and to Promote Soil Health Through the Conservation Stewardship Program. Sponsor NRCS, \$98,000

-CIG-Demonstration model using cover crops to improve soil health and reduce crop stress and aflatoxin contamination. Award made, account still to be set up.

SC-CIG- Demonstrating tillage and cover crop management strategies on a corn-wheat-soybean rotation. Sponsor: NRCS \$43,227.

Science of Soil Health – The Big Picture and Bringing it Home.

Sponsor: Natural Resources Conservation Service/USDA, Total Requested: \$30,000 - 06/01/2015 - 05/31/2016

Testing Monty's Liquid Carbon on a Fall-Planted Wheat Crop no-tilled into a Summer Cover Following Corn.

Sponsor: Monty's Plant & Soil Products, Total Requested: \$11,239 - 12/01/2014 - 09/30/2015

How Much Fertilizer do we Really Need?

Sponsor: Crowdfunding through Experiment.com, Total requested: \$5,000 - 11/13/2014-09/30/2015

International Year of Soils (IYS): Video Outreach

Sponsor: Natural Resources Conservation Service/USDA, Total Requested: \$25,000 - 09/15/2014 - 09/30/2015

Science of Soil Health Communication and Education

Sponsor: National Resources Conservation Service (NRCS)/USDA, \$20,000; 06/01/2014 - 05/31/2015

Technical Assistance for Conservation-Related Database Applications

Sponsor: Natural Resources Conservation Services/USDA, Total Requested: \$43,825 - 09/26/2013 - 04/30/2014

Using CO2 Burst Tests to Measure on-farm Plant Available Nitrogen from Cover Cropped Soils in South Carolina

Sponsor: Richland Soil and Water Conservation District/USDA-NRCS, Total Requested: \$24,641 - 09/16/2013 - 09/15/2016

Model for Economics of Soil Health

Sponsor: Natural Resources Conservation Service/USDA, Total Requested: \$17,971 - 11/01/2013 - 04/30/2014

Technical Assistance for Conservation-Related Database Applications

Sponsor: Natural Resources Conservation Services/USDA, Total Requested: \$43,825 - 09/26/2013 - 12/31/2014

Video Documentary on the South Carolina Farm to Fork Revolution

Sponsor: Natural Resources Conservation Service/USDA, Total Requested: \$69,970 - 11/01/2012 - 03/31/2014

Video Coverage for Providing Diversity in Cropping Systems to Improve Soil Health

Sponsor: Natural Resources Conservation Service (NRCS)/USDA, Total Requested: \$35,591 - 07/18/2011 - 06/30/2014

Wildlife Species Information System for S1 Species in South Carolina

Sponsor: Natural Resources Conservation Service (NRCS)/USDA, Total Requested: \$10,000 - 09/14/2011 - 03/31/2013

Develop Video Material for Cultural and Natural Resources Outreach and Soils Education

Sponsor: Natural Resources Conservation Service (NRCS)/USDA, Total Requested: \$79,109 - 08/01/2011 - 06/30/2013

Using Video to Communicate Estate Planning Ideas

Sponsor: Rolling Hills RC&D Council Inc./USDA, Total Requested: \$5,755 - 11/01/2010 - 07/31/2011

Determine Source(s) Of Fecal Contamination in Toms Creek Watershed Entering Congaree National

Park Sponsor: National Park Service (NPS)/DOI, Total Requested: \$24,993 - 08/19/2008 - 06/30/2011

Wildlife Species Information System

Sponsor: Natural Resources Conservation Service (NRCS)/USDA, Total Requested: \$9,972 - 06/30/2010 - 06/30/2011

Use of Video Medium for Recruiting, Outreach, Training and Education

Sponsor: Natural Resources Conservation Service (NRCS)/USDA, Total Requested: \$79,832 - 01/01/2010 - 06/30/2011

Hydrologic Effects - Bowers Pond Project

Sponsor: Milliken Forestry Co., Inc., Total Requested: \$5,765 - 08/24/2009 - 11/06/2009

Development of SC CNMP/Nutrient Management Template for MMP and Legacy Application Support for NRCS-SC Based Applications

Sponsor: Natural Resources Conservation Service (NRCS)/USDA, Total Requested: \$36,661 - 07/15/2009 - 05/15/2010

Natural Resource Technology Transfer for Cropland Conservation Systems

Sponsor: Natural Resources Conservation Service (NRCS)/USDA. Total Requested: \$71,582 - 06/15/2009 - 09/30/2010

Natural Resource Technology Transfer for SC USDA Natural Resources Conservation Service

Sponsor: Natural Resources Conservation Service (NRCS)/USDA Total Requested: \$154,997 - 09/01/2008 - 12/31/2009

Lake Wateree Water Quality Data Acquisition and Analysis

Sponsor: Lake Wateree Association, Inc., Total Requested: \$10,608. - 05/21/2008 - 01/31/2010

Grant/Contract Proposals Submitted (pending)

Proposal 1: SC-CIG-Demonstration model using cover crops to improve soil health and reduce crop stress and aflatoxin contamination. Preproposal accepted proposal in the works

Proposal 2: SC-CIG- Demonstrating tillage and cover crop management strategies on a corn-wheat-soybean rotation. Proposal in the works

Recent Speaking Engagements

Date	Topic
03/05/2015	Teaching soils and soil health class at Cultivate Sustainable Farming Conference in Greenville, SC
03/03/2016	Speaker at soil health day in Scranton, SC – “How to Make Cover Crops Pay”
01/13/2016	Keynote Speaker at Indiana Association of Soil and Water Conservation Districts annual conference, Indianapolis
12/3/2105	Speaker at USDA-NRCS headquarters in DC on “Healthy Soils for Life” event to commemorate end of the International Year of soils.
6/5/2015	Speaker at Dirtworks Incubator Farm Training –Soil Health
5/13/2015	Speaker at Cover Crop Workshop – Clemson
5/5/2015	Speaker at Field Day Coleman farm, Dillon SC– Presenting Wheat Plot Results
4/8/2015	Speaker at Symposium on Africa and the information Society
3/19/2015	Speaker, cover crop demo meeting, Manning (Alcolu), SC
2/28/2015	Teaching Advanced Soil Health at GROW Conference (Greeneville, SC)
2/26/2015	Speaker in Orangeburg county on Soil Health
2/25/2015	Speaker/Instructor at Dirtworks Incubator Farm (Charleston) on Soils and Soil health
1/21/2015	Speaking to Farmers in Marlboro/Dillon Counties on CIG Project Results
1/15/2015	Speaker at SC Ag Expo on Soil Health