

Anna C. Linhoss, Ph.D.

Assistant Professor ▪ Mississippi State University

Department of Agricultural and Biological Engineering ▪ Starkville, MS 39762

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Education and Training

Postdoctoral Associate: University of Florida, Agricultural & Biological Engineering, 2011-2012

Topics of study: hydrodynamic modeling, ecological modeling, decision analysis

Ph.D.: University of Florida, Agricultural & Biological Engineering, 2011

Dissertation: Hydrology and fish population dynamics in the Okavango Basin: Managing for uncertainty in a data poor environment

M.S.: University of Georgia, Agricultural & Biological Engineering, 2005

Thesis: The Calibration, Validation, and Sensitivity Analysis of DoSag: An In-stream Dissolved Oxygen Model

B.A.: University of Colorado Boulder, Anthropology, 1997

Professional Experience

Since 2013 Assistant Professor, Dept. of Ag. & Bio. Engineering, Mississippi State University

2008-2009 GIS Specialist, MacTech, Gainesville, FL

2005-2007 Environmental Scientist, Buck Engineering, Asheville, NC

1998-2001 Entomologist/Biologist, Chatham County Mosquito Control, Savannah, GA

Research Interests

- *Hydrologic and ecological modeling*: simulating the impacts of hydrology on ecological systems (and vice versa) with particular interest in management implications and system resiliency. Specific interests include coastal hydrodynamics and water quality, sediment transport, population dynamics, water management, and watershed modeling.
- *Model analysis*: using multi-criteria decision analysis, global sensitivity and uncertainty analysis, and automatic calibration to 1) refine and simplify models, 2) reduce model uncertainty, 3) target monitoring efforts, 4) provide information regarding a model's reliability, and 5) identify optimal management choices.

Research

Grants (18 funded grants totaling \$4 million)

1. Title: Hydrodynamic and water quality modeling in the Western Mississippi Sound
Funding source: National Fish and Wildlife Federation
Investigators: **Linhoss, Anna (Principle)**
Funding amount: \$315,000 Period of performance: Aug 1, 2016-June 30, 2021
Role: sole investigator, postdoc mentoring
2. Title: The Efficacy of Marsh Terraces in Enhancing and Restoring Gulf Coastal Wetlands
Funding source: National Academies of Sciences, Engineering and Medicine
Investigators: Davis, Brian (Principle), **Linhoss, Anna (Co-Principle)**, Woodrey, Mark S (Co-Principle), Moorhead, Robert J. (Co-Principle), Skarke, Adam Daniel (Co-Principle), Armandei, Mohammad Mehdi (Co-Principle)
Funding Amount: \$852,386 Period of performance: Jan 1, 2018-Dec 31, 2020
Role: wind driven wave modeling of marsh terraces, postdoc and graduate student mentoring
3. Title: Gulf of Mexico strategic conservation assessment
Funding source: National Fish and Wildlife Federation
Investigators: Evans, Kristine (Principle), **Linhoss, Anna (Co-Principle)**, Ashby, Steven L. (Co-Principle), Burger, Loren W. (Co-Principle)
Funding Amount: \$1,766,617 Period of performance: June 1, 2017- May 30, 2020
Role: multicriteria decision analysis modeling, postdoc and graduate student mentoring
4. Title: AOML-NGI South Florida Water Quality Data Analyses 2
Funding source: National Oceanographic and Atmospheric Administration
Investigators: Ashby, Steven L. (Principle), **Linhoss, Anna (Co-Principle)**
Funding Amount: \$152,936 Period of performance: Oct 1, 2017–Sept 30, 2018
Role: overseeing water quality modeling effort, postdoc mentoring
5. Title: Investigating methodologies for remote sensing of sediment tracers
Funding source: National Oceanographic and Atmospheric Administration
Investigators: Czarnecki, Joby (Principle), **Linhoss, Anna (Co-Principle)**
Funding Amount: \$45,000 Period of performance: Oct 1, 2017 - Sept 30, 2018
Role: sediment tracer processing and modeling, undergraduate student mentoring

6. Title: Development of a wave and current sensor for low-energy, shallow coastal environments
Funding source: Mississippi Agricultural and Forestry Experimental Station
Investigators: **Linhoss, Anna (Principle)**, Sparks, Eric L. (Co-Principle)
Funding Amount: \$49,800 Period of performance: Jan 1, 2018 - Dec 31, 2018
Role: project lead

7. Title: Assessing soil erosion with unmanned aerial vehicles for precision conservation
Funding source: Mississippi Agricultural and Forestry Experimental Station
Investigators: Czarnecki, Joby (Principle), **Linhoss, Anna (Co-Principle)**
Funding Amount: \$17,980 Period of performance: Jan 1, 2017 - Dec 31, 2018
Role: sediment tracer processing and modeling, undergraduate student mentoring

8. Title: Bridging the Channels: Dredge Spoil in the Coastal Sand Transport System
Funding source: Mississippi Department of Marine Resources
Investigators: **Linhoss, Anna (Principle)**, Cathcart, Thomas P. (Co-Principle), Pote, Jonathan W. (Co-Principle)
Funding Amount: \$105,000 Period of performance: Mar 1, 2014–Dec 31, 2017
Role: project lead (field work and modeling), graduate student mentoring

9. Title: AOML-NGI South Florida Water Quality Data Analyses 1
Funding source: National Oceanographic and Atmospheric Administration
Investigators: Ashby, Steven L. (Principle), **Linhoss, Anna (Co-Principle)**
Funding Amount: \$148,884 Period of performance: Oct 1, 2016 - Sep 30, 2017
Role: overseeing water quality modeling effort, postdoc mentoring

10. Title: SEC Academic Conference: The Future of Water: Regional Collaboration on Shared Climate, Coastlines and Watersheds
Funding source: Southeastern Conference
Investigators: **Linhoss, Anna (Principle)**, Tagert, Mary L. (Co-Principle), Petrolia, Daniel R. (Co-Principle)
Funding Amount: \$100,000 Period of performance: Mar 28, 2011-Mar 27, 2017
Role: project lead

11. Title: Simulating oyster habitat and larvae transport for strategic reef restoration
Funding source: Mississippi Agricultural and Forestry Experimental Station
Investigators: **Linhoss, Anna (Principle)**
Funding Amount: \$35,840 Period of performance: Jan 1, 2015–Dec 31, 2015

Investigators: **Linhoss, Anna (Principle)**

Funding Amount: \$33,800

Period of performance: Nov 1, 2013 - May 31, 2014

Role: project lead

18. Title: An integrated watershed approach to WASH priorities for Lake Chivero, Zimbabwe

Funding source: Mississippi Agricultural and Forestry Experimental Station

Investigators: **Linhoss, Anna (Principle)**, Buka, Hazel (Co-Principle)

Funding Amount: \$5,000

Period of performance: Aug 1, 2013-Jul 31, 2014

Role: project lead, undergraduate student mentoring

Publications

Peer Reviewed Manuscripts (20)

1. Millet, C, C Kelbe, **AC Linhoss**, S Ashby. "Using Spatial Variability in the Rate of Change of Chlorophyll a to Identify Primary Sources of Nutrients into a Subtropical Oligotrophic Estuary." *Marine Pollution Bulletin Accepted pending revisions*, October 2017.
2. **Linhoss, A.C.**, C.M. Seigert, D. Levia. "A comparison of five rainfall interception models using automated parameterization." *Submitted to Journal of Hydrology*, August 2018.
3. Millet, C, C Kelbe, **AC Linhoss**, S Ashby, L Visser. "The cause of long-term increase in chlorophyll a concentrations in Biscayne Bay, Florida, USA." *Submitted to Marine Pollution Bulletin*, August 2017.
4. Millet, C, C Kelbe, **AC Linhoss**, S Ashby, L Visser. 2017. "Shift in baseline chlorophyll a concentration following a three-year Synechococcus bloom in southeastern Florida." *Marine Resource Bulletin*. Available on-line: November 2017. [Link](#).
5. **Linhoss, A.C.**, M.L. Tagert, H. Buka, G. Sassenrath. 2017. "Factors affecting model sensitivity and uncertainty: Application to an irrigation scheduler." *Transactions of the American Society of Agricultural and Biological Engineers*. 60(3):803-812. [Link](#).
6. Agouridis, C.T., K.R. Douglas-Mankin, **A.C. Linhoss**, A.R. Mittelset. 2016. "Wetlands and coastal systems: Protecting and restoring valuable ecosystems." *Transactions of the American Society of Agricultural and Biological Engineering*. 59(5): 1301-1303. [Link](#).
7. **Linhoss, A.C.**, R. Camacho, S. Ashby. 2016. "Oyster habitat suitability in the Northern Gulf of Mexico." *Journal of Shellfish Research*. 35(4):841-849. [Link](#).
8. **Linhoss, A.C.**, C.M. Seigert. 2016. "A comparison of five forest interception models using global sensitivity and uncertainty analysis." *Journal of Hydrology*. 538:109-116. April 2016. [Link](#).

9. **Linhoss, A.C.**, W. Underwood. 2016. "Modeling salt panne land cover suitability under sea-level rise." *Journal of Coastal Research*. 32(5). [Link](#).
10. **Linhoss, A.C.**, Ballweber, J. 2015. "Incorporating uncertainty and decision analysis into a water sustainability index." *Journal of Water Resources Planning and Management*. 141(Special Issue: Sustainability). [Link](#).
11. **Linhoss, A.C.**, R. Muñoz-Carpena, G. Kiker, K., and P. Wolski. 2015. Reducing uncertainty based on model fitness: Application to a reservoir model. *Water South Africa*, 41(1). [Link](#).
12. Zhu, M., T. Hoctor, M. Volk, K. Frank, **A.C. Linhoss**. 2015. "The conservation value of elevation data accuracy and model sophistication in reserve design under sea-level rise." *Ecology and Evolution*. 5(9):4376-4388. [Link](#).
13. Zhu, M., Frank, K., Hoctor, T., Volk, M., **Linhoss, A.C.**, Zwick, P., Carr, M. 2015. "Spatial Conservation Prioritization to Conserve Biodiversity in Response to Sea Level Rise and Land Use Change in the Matanzas River Basin, Northeast Florida." *Landscape and Urban Planning*. 144:103-118. [Link](#).
14. **Linhoss, A.C.**, G. Kiker, M. Shirley, K. Frank. 2014. "Sea-level rise, inundation, and marsh migration: Simulating impacts on developed lands and environmental systems." *Journal of Coastal Research*. 31(1):36-46. [Link](#).
15. **Linhoss, A. C.**, G.A. Kiker, M.E. Aiello-Lammens, M.L. Chu-Agor, M. Convertino, R. Muñoz-Carpena, R. Fischer, and I. Linkov. 2013. "Decision analysis for species preservation under sea-level rise." *Ecological Modelling*, 263, 264-272. [Link](#).
16. **Linhoss, A.C.**, R. Muñoz-Carpena, M.S. Allen, G.A. Kiker, and K. Mosepele. 2012. "A flood pulse driven fish population model for the Okavango Delta, Botswana." *Ecological Modelling*, 228, 27-38. [Link](#).
17. **Linhoss, A.C.**, R. Muñoz-Carpena, G.A. Kiker, and D. Hughes. 2012. "Hydrologic Modeling, Uncertainty, and Sensitivity in the Okavango Basin: Insights for Scenario Assessment: Case Study." *Journal of Hydrologic Engineering*. 18(12), 1767-1778. [Link](#).
18. **Linhoss, A. C.**, A. Cameron, H. Hall, S. Blair, and T. Ankersen. 2012. "Large Woody Material: Science, Policy, And Best Management Practices For Florida Streams." *Florida Scientist*, 75(3). [Link](#).
19. Kiker, G. A., R. Muñoz-Carpena, P. Wolski, **A. Cathey***, A. Gaughan., and J. Kim. 2008. "Incorporating uncertainty into adaptive, transboundary water challenges: a conceptual design for the Okavango River Basin." *International Journal of Risk Assessment and Management*, 10(4), 312-338. [Link](#).
20. Vellidis, G., P. Barnes, D. Bosch, and **A. Cathey***. (2006). "Mathematical simulation tools for developing dissolved oxygen TMDLs." *Transactions of the ASAE*, 49(4), 1003-1022. [Link](#).

* Maiden name is Cathey

Book Chapters (2)

1. Brown, M.T., **A.C. Linhoss**. 2014. "Global Biophysical Systems." In M.T. Brown, K. Patterson, Southern Africa Systems: Coupling Humanity and Environment in Southern Africa. Mobile-book Kindle Edition. [Link](#).
2. **Linhoss, A.C.** 2014. "Models and Their Applications for Natural Resource Managers." In M.T. Brown, K. Patterson, Southern Africa Systems: Coupling Humanity and Environment in Southern Africa. Mobile-book Kindle Edition. [Link](#).

Extension Publications (1)

1. **Linhoss, A.C.**, L. Gardner-Chambers, and T. Ankersen. 2013. "A Multi-Disciplinary Review of Current Sea-Level Rise Research in Florida." *University of Florida IFAS Extension Publication*. [Link](#).

Conference Papers (2)

1. **Cathey, A.***, G. Vellidis, M. Smith, R. Lowrance, and R. Burke. 2005. "The calibration validation and sensitivity analysis of Georgia DOSag: an in-stream dissolved oxygen model." *Proc., Proceedings for the Watershed Management to Meet Water Quality Standards and Emerging TMDL, Third Annual Conference, PW Gassman (Editor). ASABE, Atlanta, Georgia, 330-337*. [Link](#).
2. Worley, J.W., Czarick, M., **Cathey, A.***. 2002. "Ammonia Emissions from a Commercial Broiler House." An American Society of Agricultural and Biological Engineers Presentation. Paper No: 024118. [Link](#).

* Maiden name is Cathey

Popular press (1)

1. **Linhoss, A.C.**, J. Ballweber 2015. An Industrial Water Resources Inventory and Projections for Economic Development. AWRA IMPACT article. May 2015.

Oral presentations (30)

1. Dillon, S.C., **Linhoss, A.C.**, Smith, J.M., Skarke, A. 2018. *Examining the effects of directional wave spectra on a nearshore wave model*. Mississippi Water Resources Conference. April 2018, Jackson, MS.
2. Armandei M., **Linhoss A.C.**, *The Development of a Hydrodynamic/Water Quality Model for Oyster Restoration in the Western Mississippi Sound*. Mississippi Water Resources Conference. April 2018, Jackson, MS.

3. Buka, H., **Linhoss, A.C.**, Tagert, M. L., Pote, J. W., & Wax, C. L. *Assessing irrigation scheduling using Mississippi Irrigation Scheduling Tool (MIST) and soil moisture sensors*. Mississippi Water Resource Conference. April 2018, Jackson, MS.
4. Millette, N., Kelble, C., **Linhoss, A.C.**, Ashby, S. 2017. *Long-term trends in chlorophyll a concentrations in Biscayne Bay*. Biscayne Bay Regional Restoration Coordination Team Meeting. Miami, FL: November 15, 2017
5. Millette, N., Kelble, C., **Linhoss, A.C.**, Ashby, S. 2017. Application of chlorophyll a as an indicator to analyze the current status of Biscayne Bay. CERF National Meeting. Providence, RI: November 5-9, 2017
6. Millette, N., Kelble, C., **Linhoss, A.C.**, Ashby, S. 2017. Long-term trends in chlorophyll a in North Biscayne Bay between 1995 and 2014. Biscayne Bay Regional Restoration Coordination Team Meeting. Miami, FL: June 21, 2017
7. Czarnecki, J., Hathcock, L.A., Ramirez-Avila, J.J., **Linhoss, A.C.**, Schauwecker, T.J. 2017. *Unmanned aerial vehicles and structure from motion techniques and their use in protecting surface water quality*. American Water Resources Association Annual Conference, Portland, OR. November 5-9, 2017.
8. **Linhoss, A.C.**, Siegert, C., Levia, D. 2017. *Calibration and comparison of forest canopy interception models*. American Society of Agricultural and Biological Engineers Annual International Conference. Spokane WA. July 16-19, 2017.
9. **Linhoss, A.C.** 2017. *Coastal hydrodynamics and sediment transport*. Grand Bay Symposium, Grand Bay National Estuarine Research Reserve, MS. September 8, 2017.
10. **Linhoss, A.C.**, C.M. Seigert. 2017. *Calibration of multiple canopy interception models*. Mississippi Water Resources Conference. Jackson, MS. April 11-12, 2017.
11. Buka, H., **A.C. Linhoss**, M.L. Tagert. 2017. *Irrigation scheduling with soil moisture sensors*. Future of Agriculture Graduate Student Competition. Starkville, MS. February 9, 2017.
12. **Linhoss, A.C.**, R. Camacho, S. Ashby. 2016. *Oyster habitat suitability in the Northern Gulf of Mexico*. Invited NOAA presentation. Miami, FL. December 7, 2016.
13. **Linhoss, A.C.**, M.L. Tagert. 2016. *Data requirements for conservation irrigation*. Data Flow. Baton Rouge, LA. May 9-10 2016.
14. **Linhoss, A.C.**, C. Siegert. 2016. *A comparison of five forest interception models using global sensitivity and uncertainty analysis*. MWRC. Jackson, Mississippi. April 6, 2016.
15. **Linhoss, A.C.** 2016. *Surviving academia*. Invited presentation to the American Society of Agricultural and Biological Engineers. Orlando, FL July 17, 2016.
16. **Linhoss, A.C.** *Ecohydrology in a dynamic Landscape*. Invited presentation to the Biological Sciences Department at the University of Harare. Harare, Zimbabwe. June 27, 2016.
17. **Linhoss, A.C.**, H. Buka, M.L. Tagert, 2015. *Assessing the uncertainty and sensitivity of the Mississippi Irrigation Scheduling Tool (MIST)*. Presentation to the American Society of Agricultural and Biological Engineers. New Orleans, LA. July 28, 2015.

18. **Linhoss, A.C.**, H. Buka, M.L. Tagert, 2015. *Assessing the uncertainty and sensitivity of the Mississippi Irrigation Scheduling Tool (MIST)*. Presentation to the American Society of Agricultural and Biological Engineers. Orlando, FL July 17, 2016
19. **Linhoss, A.C.**, H. Buka, M.L. Tagert, 2015. *Measuring the uncertainty and sensitivity of the Mississippi Irrigation Scheduling Tool (MIST)*. Presentation to the Mississippi Water Resources Research Conference. Jackson, MS April 7-9, 2015.
20. M.L. Tagert, **Linhoss, A.C.**, J.C. Rawson, G. Sassenrath, W. Kingery. 2015. *Enhancing Agricultural Water Management through Soil Moisture Monitoring and Irrigation Scheduling*. Presentation to the Mississippi Water Resources Research Conference. Jackson, MS April 7-9, 2015.
21. **Linhoss, A.C.**, J. Pote. 2015. *Current Issues in the Pascagoula River*. Presented to the Mississippi Manufacturer's Association Environmental Health and Safety Conference and Expo, Philadelphia MS. Oct 15, 2015.
22. **Linhoss, A.C.**, H. Buka, M.L. Tagert, 2015. *Grant writing workshop. Invited presentation to the American Society of Agricultural and Biological Engineers*. New Orleans, LA. July 26, 2015.
23. **Linhoss, A.C.**, J. Balwebber. 2014. *A Comprehensive Water Resources Inventory for the Southeastern US*. Presentation to the American Society of Agricultural and Biological Engineers (ASABE) International Meeting, Montreal, Canada. July 16, 2014.
24. J. Rawson, **A.C. Linhoss**, M. L. Tagert, and G. Sassenrath. 2014. *Enhancing the Accuracy of the Mississippi Irrigation Scheduling Tool (MIST) for Producer Use*. Presentation at the 2014 Future of Agriculture Graduate Student Competition, Starkville, MS. Feb 6, 2014
25. **Linhoss, A.C.**, J. Ballweber. 2014. *Mississippi water resources inventory: A comparison of water stress across the southeast*. Presentation at the Mississippi Water Resources Conference, Jackson Mississippi. April 1-2, 2014
26. S. Rajasekhar, J. Kassakian, **A.C. Linhoss**. 2014. *Potential effects of climate change induced sea level rise on coastal habitats in Florida*. Environmental Data Resources (EDR) Green Week, Woburn, Massachusetts. July 16, 2014
27. **Linhoss, A.C.**, P. Sullivan, J. Ballweber. 2014. *Mississippi Industrial Water Resources Inventory & Projections for Economic Development*. Mississippi Manufacturer's Association Environmental and Safety Conference. Philadelphia, MS, October 9-10, 2014.
28. **Linhoss, A.C.**, 2013. *Ecohydrology in a Dynamic Landscape*. Presentation to the USGS, Jackson, MS, May 1, 2013.
29. **Linhoss, A.C.**, G. Kiker, M. Aiello-Lammens, M.L. Chu-Agor, M. Convertino, R. Muñoz-Carpena, R. Fischer, I. Linkov. 2013. *Decision analysis for species preservation under sea-level rise*. Mississippi Water Resources Conference, Jackson. MS. April, 2013.

30. **Linhoss, A.C.**, G. Kiker, R. Watkins, M. Shirely, K. Frank. 2013. Sea-level rise and marsh migration: vulnerabilities in urban, rural, and conservation lands. Poster Presentation to ASABE International Meeting, Kansa City, MO, July 22-24 2013.

Poster presentations (15)

1. Armandei M., **Linhoss A.C.**, *The Development of a Hydrodynamic/Water Quality Model for Oyster Restoration in the Western Mississippi Sound*. State of the Coast 2018. June 2018. New Orleans, LA.
2. Dillon, S.C., **Linhoss. A.C.**, T. Cathcart, A. Skarke. *Application and Validation of STWAVE in the Nearshore of Deer Island, MS*. Mississippi Water Resources Conference. Jackson, MS. April 11-12, 2017.
3. Armandei M., **Linhoss A.C.**, *Hydrodynamic and water quality modeling in the Western Mississippi Sound*. Grand Bay NERR Research Symposium. September 2017, Grand Bay, MS.
4. Buka, H., Pote, J. W., Wax, C. L. & **Linhoss, A.C.** *Can one hundred-year precipitation record produce patterns allowing seasonal weather prediction?* Jackson, MS. April 11-12, 2017.
5. **Linhoss, A.C.**, 2017. *Oyster habitat suitability in the Northern Gulf of Mexico*. American Society of Agricultural and Biological Engineers Annual International Conference. Spokane WA. July 16-19, 2017.
6. Aramandei, M., **Linhoss, A.C.** 2017. *Hydrodynamic and water quality modeling in the Western Mississippi Sound*. Grand Bay Symposium, Grand Bay National Estuarine Research Reserve, MS. September 8, 2017.
7. Buka, H., **Linhoss, A.C.**, Tagert, M.L. 2017. *Calibration of the Mississippi Irrigation Scheduling Tool*. Mississippi Water Resources Conference. Jackson, MS. April 11-12, 2017.
8. Dillon, C., **Linhoss, A.C.**, Skarke, A., Cathcart, T. 2017. *The Application and Validation of STWAVE in the Nearshore of Deer Island, MS*. Mississippi Water Resources Conference. Jackson, MS. April 11-12, 2017.
9. Adehndiun, J., **A.C. Linhoss**, P. Parajuli, J. Martin, R.A. Camacho. 2016. *Developing a habitat suitability model for oyster restoration in St. Louis Bay*. Poster Presentation to the Mississippi Water Resources Conference. Jackson, Mississippi. April 6, 2016.
10. **Linhoss, A.C.**, C. Siegert. 2016. *Comparison of Forest Canopy Interception Models Using Automatic Calibration*. Poster presentation to the American Society of Agricultural and Biological Engineers. Orlando, FL July 17, 2016.
11. Rojas, J. P. and **A.C. Linhoss**. *Impacts of sea-level rise in Grand Bay National Estuarine Research Reserve*. Poster presentation at the 4th Annual Student Water Conference, Oklahoma State University, Stillwater, OK. Mar 26-27. 2015
12. Adenihun, J., **A.C. Linhoss**, and S. Ashby. 2015. *Hydrodynamic and Water Quality Modeling for Oyster Restoration in the Northern Gulf of Mexico*. Poster presentation to Mississippi Academy of Science, Hattiesburg, MS. Feb 26-27, 2015.

13. Adenihun J., and **Linross A.C.**, 2015. *Hydrodynamic and Water Quality Modeling for Oyster Restoration in the Northern Gulf of Mexico*. Poster presentation to Oklahoma Water Resources Center, Student Water Resources, Stillwater, Ok. March 26-27, 2015.
14. H. Buka, **A.C. Linross**, J. Pote. 2014. An Integrated Watershed Approach to Water Sanitation and Hygiene priorities for Lake Chivero, Zimbabwe. Poster Presentation at the Mississippi Water Resources Conference, Jackson Mississippi. April 1-2, 2014
15. H. Buka, **A.C. Linross**, J. Pote. 2014. An Integrated Watershed Approach to Water Sanitation and Hygiene priorities for Lake Chivero, Zimbabwe. Poster Presentation at the Mississippi State University Undergraduate Research Symposium, Starkville Mississippi. April 3, 2014

Teaching

Classes taught

Semester	Course Number	Course Name	Credit Hours	Students	Contact Hours	Evaluation (scale 0-5)
Fall 2013	ABE 4803	Biosystems Simulation	3	24	72	3.7
Fall 2014	ABE 4803	Biosystems Simulation	3	27	81	4.2
	ABE 4000	DIS: Coastal Processes	3	2	6	N/A
	ABE 7000	DIS: Coastal Processes	3	1	3	N/A
Spring 2015	ABE 7000	DIS: Watershed Mangament	3	1	3	N/A
	ABE 8911/8921	Graduate Student Seminar	1	13	13	4.8
Fall 2015	ABE 4803	Biosystems Simulation	3	38	114	3.7
Fall 2016	ABE 4803	Biosystems Simulation	3	30	90	3.9
	ABE 4313	Biolog. Treat. of Non-Point Source Pollution	3	13	39	4.4
	ABE 4000	DIS: Irrgation Sensors	2	1	2	N/A
Fall 2017	ABE 4803	Biosystems Simulation	3	39	117	3.7
	ABE 4803	Biosystems Simulation	3	26	78	3.5
Spring 2018	ABE 4803	Biosystems Simulation	3	30	90	3.6
	ABE 4000	DIS: Water quality modeling	3	1	3	N/A
Sum			39	246	711	

US Army Corps of Engineers Educational Partnership Agreement

In 2017 I lead the development of an Educational Partnership Agreement (EPA) between Mississippi State University and the USACE Education and Research Development Center Environmental Laboratory (ERDC-EL) in Vicksburg, MS. The scope of this agreement includes the following:

- To collaborate with the University in research of mutual interest, including cooperative research programs in the disciplines set forth in Article 3 above.
- To involve students of the University in ERDC-EL research by hiring students through employment programs such as Cooperative Education Programs and contract student programs.
- To involve the faculty of the University in ERDC-EL research by participation in programs such as Interagency Personnel Agreements and Cooperative Agreements under the Intergovernmental Cooperation Act that will be negotiated under separate authority as needed.
- To identify and develop, in partnership with the University, specific areas of research where University students can obtain academic credit for work on ERDC-EL research projects.
- To promote academic achievement by establishing a list of volunteer professionals to form a pool of individuals with a wide range of expertise to support mentoring needs; assist in the development of science, mathematics, and computer science courses; make laboratory personnel available to teach courses on special science, mathematics, and computer science subjects; show real applications of scientific, mathematical, and computer science principles; and conduct site visits of ERDC-EL facilities.
- To enhance science, mathematics, and computer science education by loaning or donating mutually agreed upon ERDC-EL laboratory equipment to the University and by exchanging scientific materials, publications, and information.

Service

International Service

- Fulbright Fellow faculty sponsor for Dr. Lindah Mhlanga from the University of Zimbabwe, Zimbabwe. 2015.

Journal Reviewer

- Ecological Modeling
- Ecosystem Health and Sustainability
- Journal of Applied Ecology
- Journal of Environmental Management
- Journal of Hydrologic Engineering
- Mississippi State University Extension Publication
- Stochastic Environmental Research and Risk Assessment
- Transactions of the American Society of Agricultural and Biological Engineering
- Water Resources Management
- Water Science and Technology
- Water Resources Management
- Water

Grant Reviewer

- National Science Foundation (Coupled Natural Human Systems). Participated in Washington DC in 2015 and 2017.
- Maryland Sea Grant
- Mississippi Department of Environmental Quality Beach Outfalls Challenge

Associate Editor

- Associate Editor: Natural Resources & Environmental Systems Community, Transactions of the ASABE and Applied Engineering in Agriculture. 2015 – Present.

Professional Membership

- American Society of Agricultural and Biological Engineering. 2013 – Present.
- Coastal Education & Research Foundation. 2014 – 2017.
- Mississippi Water Resources Association. 2014 – Present.

Conference organizer

- Organizer for *The Future of Water: Regional Collaboration on Shared Climate, Coastlines and Watersheds*, A southeastern Conference (SEC) Academic Conference. 207 attendees. [Link](#). There were approximately 68 speakers and 207 attendees at the conference. Speakers included SEC faculty as well as John Barry (author), Dennis Dimick (National Geographic), Greg Sankey, (SEC Commissioner), Jay Famiglietti (University of California Davis), Jimmy Palmer (EPA), Ben Scaggs (EPA Gulf of Mexico Program), Scott Gain (USGS), Jane Watson (EPA), Edward Clark (NOAA), Suzanne Van Cooten (NOAA), Jim Dobrowolski (USDA NIFA), Earl Greene (USGS), and LaDon Swann (Sea Grant). March 27-28th 2017. (Also listed under grants)

Conference moderator

- **Linhoss, A.C.** 2017. *Ecological Studies*. Mississippi Water Resources Conference. Jackson, Mississippi. April 11-12, 2017.
- **Linhoss, A.C.** 2016. *Wetlands and coastal systems*. American Society of Agricultural and Biological Engineers. Orlando, FL July 18, 2016.
- C. Siegert, **A.C. Linhoss**. 2016. *Ecology/Hydrology II*. Mississippi Water Resources Conference. Jackson, Mississippi. April 6-7, 2016.
- **Linhoss, A.C.** 2015. *Spatial and Temporal Controls on Surface and Groundwater Hydrology in the MS Delta*. Mississippi Water Resources Conference. Jackson, Mississippi. April 7-8, 2015.

Professional Leadership

- PI on the organization of a Southeastern Conference Academic Symposium entitled, “Water for Sustainable Ecosystems, Economies, and Communities: An Interactive Symposium.” March 2017. \$100,000. (Also listed under Grants received)
- Elected Representative from NRES 21. ASABE Committee on Natural Resources and Environmental Management (NRES) – 03 Standards. 2015-2018.
- Chair 2016/2017. American Society of Agricultural and Biological Engineering Committee on Natural Resources and Environmental Management (NRES) – 03 Standards.
- Vice Chair 2016/2017. American Society of Agricultural and Biological Engineering Committee on Natural Resources and Environmental Management (NRES) – 03 Standards.
- Chair 2016/2017. American Society of Agricultural and Biological Engineering Committee on Natural Resources and Environmental Management (NRES) – 253 Riparian Zones, Floodplains, and Wetlands.
- Vice Chair 2015/2016. American Society of Agricultural and Biological Engineering Committee on Natural Resources and Environmental Management (NRES) – 253 Riparian Zones, Floodplains, and Wetlands.

Professional Service

- ASABE Committee on Natural Resources and Environmental Management (NRES) – 03 Standards, member since 2014.
- American Society of Agricultural and Biological Engineering Committee on Natural Resources and Environmental Management (NRES) – 253 Riparian Zones, Floodplains, and Wetlands, member since 2014.
- American Society of Agricultural and Biological Engineering Committee on Natural Resources and Environmental Management (NRES) – 21 Hydrology Group. Member since 2013.
- American Society of Agricultural and Biological Engineering Committee on Natural Resources and Environmental Management (NRES) – 25 Streams, Reservoirs and Wetlands Group. Member since 2014.

University Leadership

- Vice President of DAVFM faculty senate. 2018/2019 school year.
- Secretary of DAVFM faculty senate. 2016/2017, 2017/2018 school years.
- MAFES statistician faculty search committee.

University Service

- Member of President's Commission on the Status of Women at Mississippi State University. 2014 to 2017.
- Member of DAVFM Faculty Senate at Mississippi State University. 2014 to present.
- Mississippi State University Geosystems Research Institute Fellow. 2015 to present.

Departmental Leadership

- Faculty advisor for the student chapter of the American Society of Agricultural and Biological Engineering. 2015 to present.

Departmental Service

- Undergraduate academic advising. 2013 to present.