

Curriculum Vitae

Garey A. Fox, Ph.D., P.E.

Associate Professor

75% Research, 25% Teaching

Oklahoma State University

Biosystems and Agricultural Engineering

GAREY A. FOX, PH.D., P.E.
Associate Professor
Department of Biosystems and Agricultural Engineering
Oklahoma State University

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Education:	Texas A&M University	Agricultural Engineering	B.S.	1998
	Texas A&M University	Agricultural Engineering	M.S.	2000
	Colorado State University	Civil Engineering	Ph.D.	2003

Professional Experience/Expertise:

Over 6 years academic experience in research and teaching in surface water and ground water hydrologic and water quality modeling with an expertise in laboratory and field experimentation and numerical modeling of contaminant fate and transport.

Positions:

2009-Present - Associate Professor, Department of Biosystems and Agricultural Engineering, Environmental and Natural Resources Engineering, Oklahoma State University, Stillwater, Oklahoma (75% Research, 25% Teaching)
2006-2009 - Assistant Professor, Department of Biosystems and Agricultural Engineering, Environmental and Natural Resources Engineering, Oklahoma State University, Stillwater, Oklahoma (75% Research, 25% Teaching)
2003-2006 - Assistant Professor, Department of Civil Engineering, Water Resources and Environmental Engineering Division, University of Mississippi, University, Mississippi (50% Research, 50% Teaching)
2000-2003 - Graduate Research Assistant and USDA National Needs Fellow, Department of Civil Engineering, Water Resources, Hydrologic, and Environmental Sciences Division, Colorado State University, Fort Collins, Colorado
1998-2000 - Graduate Research Assistant and EPA STAR Graduate Fellow, Department of Agricultural Engineering, Natural Resources and Environmental Engineering Division, Texas A&M University, College Station, Texas
1999 - Research Intern, Monsanto, Inc., St. Louis, Missouri

Research/Academic Awards and Recognition:

Registered Professional Engineer in State of Oklahoma (PE No.: 23093)
Invited Speaker for Centennial Session on Advances in Soil and Water Engineering at the 2008 Annual International Meeting of the American Society of Agricultural and Biological Engineers (ASABE), only panelist below rank of Professor
2008-2009 Alpha Epsilon Distinguished Service/Outstanding Faculty Award (Oklahoma State University)
2007-2008 Alpha Epsilon Distinguished Service/Outstanding Faculty Award (Oklahoma State University)
2008-2010 Associate Editor for *Journal of Environmental Quality*

2009 Advisor to Undergraduate Student (Rachel Carson), winner of the 2009 National ASABE Undergraduate Student Poster Contest

2009 Advisor to Ph.D. Student (Maria Chu-Agor), 2nd place in the 2009 National ASABE Boyd-Scott Graduate Student Research Award competition

2008 Advisor to Undergraduate Student (Karl Garbrecht), 2nd place in the 6th Annual Oklahoma Water Resources Research Institute's Water Symposium Poster Contest

2008 Advisor to M.S. Student (John Fuchs), winner of the 2008 National ASABE Graduate Student Paper Contest (M.S. Division)

2007 Advisor to Ph.D. Student (Maria Chu-Agor), winner of the 2007 National ASABE Graduate Student Paper Contest (Ph.D. Division)

2007 Advisor to Winners of the Student Poster Contest at the 5th Annual Oklahoma Water Resources Research Institute Water Symposium Poster Contest - John Fuchs (M.S. student) was the co-winner and Rachel Cancienne (M.S. student) and Maria Chu-Agor (Ph.D. student) placed second

2006 University of Mississippi Junior Faculty Research Award in School of Engineering – Most Outstanding Researcher among Associate/Assistant Faculty in the School of Engineering for Academic Year 2004-2005

2005-2006 Semi-Finalist for Christopher Columbus Award for Research Innovation Related to Homeland Security

2004 U.S. Army Corps of Engineers (Engineer Research and Development Center) Summer Faculty Research Fellow

2003-2004 University of Mississippi Faculty Research Fellow

United States Department of Agriculture (USDA) National Needs Graduate Fellow (2000-2003)

Outstanding Graduate Student Presentation, Colorado State University Student Water Symposium (2002)

US Environmental Protection Agency (EPA) Science to Achieve Results (STAR) Graduate Fellow (1998-2000)

1998 Texas A&M University Price Hopgood Award for Outstanding Academic Achievement

1998 Texas A&M University College of Agriculture and Life Sciences Senior Merit Award

Grants Received:

Summary: Total Funding of **\$1,297,084** including three (3) nationally competitive USDA-CSREES National Research Initiative Grants (\$827,515); Total External Funding as PI: **\$1,176,160**; Total External Funding as PI or co-PI: **\$1,209,194**; Total Internal Funding as PI: **\$58,890**; Total Internal Funding as PI or co-PI: **\$87,890**

USDA-ARS National Sedimentation Laboratory, Specific Cooperative Agreement #58-6408-5-104, “Mechanisms of Streambank Stability: Importance of Ground Water Dynamics”, \$4,032, PI, Duration: February 18, 2009-February 17, 2010

Oklahoma Water Resources Research Institute, “Stream Depletion by Ground Water Pumping: An Improved Stream Depletion Factor for Oklahoma”, Funding: \$50,000, co-PI: Mike Kizer, Duration: March 1, 2009-February 28, 2010

European Crop Protection Agency, “Global sensitivity and Uncertainty Analysis of a vegetative filter strip design tool (VFSMOD-WP) for pesticide surface runoff control”, Funding: \$12,900, co-PIs: Rafael Munoz-Carpena (University of Florida), Duration: December 15, 2008-May 1, 2009

- Oklahoma Conservation Commission (US EPA 319 Grant Program), “Riparian Buffers and Floodplain Management Effects on Subsurface Phosphorus Transport in Alluvial Floodplains in the Illinois River Basin”, Funding: \$142,800, co-PIs: Dan Storm, Chad Penn, and Glenn Brown, Duration: October 1, 2008- December 31, 2009
- Oklahoma State University, Division of Agricultural Sciences and Natural Resources (DASNR), “Quantifying Time Lag and Rainfall Distribution Effects on Total Coliform and *E. Coli* Transport from Surface-Applied Poultry Litter”, co-PI: Josh Payne, Funding: \$12,500, October 1, 2008-December 31, 2009
- Oklahoma State University, Division of Agricultural Sciences and Natural Resources (DASNR), FY 2008 Team Initiative Program (TIP) Grant, “Interaction of Nonpoint Source Contaminant Loads in Streams with Riparian Ground Water”, co-PIs: Dan Storm, Chad Penn, Glenn Brown, Todd Halihan, Funding: \$46,390, January 31, 2008-December 31, 2009
- Oklahoma State University Big XII Faculty Fellowship, Visit to Iowa State University, Funding: \$2,300, March 2008
- USDA National Research Initiative (NRI) Grant, “Role of Directly Connected Macropores on Pathogen Transport to Subsurface Drainage”, PI with co-PIs from Iowa State University and USDA-ARS National Soil Tilth Laboratory, Funding: \$397,749, August 2007-July 2010
- Oklahoma Conservation Commission, “Illinois River Riparian Targeting”, co-PI with Dr. Dan Storm (PI), Funding: \$20,134, September 1, 2007 – June 30, 2008
- USDA National Research Initiative (NRI) Grant, “Quantifying Sediment Load to Streams due to Lateral, Subsurface Flow”, PI with collaborators from USDA-ARS National Sedimentation Laboratory, Funding: \$330,000, September 2005-August 2009
- Oklahoma Water Resources Research Institute, “Subsurface Transport of Phosphorus: A Potential Source not Alleviated by Best Management Practices”, PI with co-PIs Dr. Dan Storm, Dr. Glenn Brown, and Dr. Chad Penn, Funding: \$50,000, March 2007-October 2008
- Oklahoma State University, Division of Agricultural Sciences and Natural Resources, TIP Program, “Assessing the Effects of Land Management Practices on Water Resources in the Cross Timbers Ecosystem in Oklahoma”, co-PI with Dr. Don Turton (PI) and Dr. Dan Storm (co-PI), Funding: \$16,000, January 1, 2007-December 31, 2007
- U.S. Army Corps of Engineers, Engineer Research and Development Center Grant, “Performance Evaluation of Emulsions for Capturing Particulate during Spray of Surficially Applied Emulsions”, PI, Funding: \$30,000, August 2006-July 2007
- USDA National Research Initiative Seed Grant, “Experimental Analysis and Modeling of Macropore Flow during Artificial Subsurface Drainage”, PI, Funding: \$99,766, September 2004-August 2006
- U.S. Army Corps of Engineers, Engineer Research and Development Center Grant (Administered through Battelle Scientific), “Performance Evaluation of Emulsions for Stabilizing and Capturing Radioactive Particulate from a Radiological Dispersal Device”, PI, Funding: \$34,993, February 2005-January 2006
- Mississippi Water Resources Research Institute, “Analysis of Stream Bank Erosion by Lateral Ground Water Flow”, PI with collaborators from USDA-ARS National Sedimentation Laboratory, Funding: \$15,320, March 2005-March 2006
- University of Mississippi Office of Research and Sponsored Programs Faculty Research Grant, “Quantifying the Impact of Subsurface Flow on Stream Bank Erosion”, PI

with collaborators from USDA-ARS National Sedimentation Laboratory,
Funding: \$5,200, November 1, 2003-November 1, 2004
University of Mississippi Associates Grant, “Porous Media Column to Support Teaching
and Research in Water Resources/Environmental Engineering”, PI, Funding:
\$5,000, March 15, 2003 – March 15, 2004

Grants Pending:

National Science Foundation, Hydrologic Sciences Program, “Ground Water Seepage
and Piping Mechanisms of Streambank Erosion and Failure”, PI with
collaborators at the USDA-ARS National Sedimentation Laboratory, Submitted:
May 29, 2008, Total Requested: \$323,927

Recent Proposals Denied Funding but to be Resubmitted:

National Science Foundation, Hydrologic Sciences Program, “Hydrologic
Heterogeneities Leading to Spatially Variable, Subsurface Phosphorus Transport
in Riparian Floodplains”, PI, Submitted: November 26, 2008, Total Requested:
\$374,150
USGS 104(g) Program, “Subsurface Phosphorus Transport in Riparian Floodplains:
Mapping and Monitoring Subsurface Paleochannels”, PI (co-PIs: Dan Storm,
Glenn Brown, Chad Penn, Phil Hays, Brian Haggard, Andrew Sharpley, and Josh
Romeis), Submitted: February 19, 2009, Total Requested: \$197,606
Oklahoma State University Core Facilities, “Core Facility for Laser-Based Three-
Dimensional Scanning”, co-PI (PI: Jeff Byrnes, Geology), Total to be Requested:
\$286,150
Oklahoma Water Resources Research Institute, “Phosphorus transport by matrix and
macropore flow to groundwater in alluvial soils”, co-PI (PI: Dan Storm),
Submitted November 2, 2008, Total Requested: \$50,000

Research Advisor for Current Graduate Students (5):

Maria Chu-Agor (Ph.D., Oklahoma State University, Dissertation Topic: “Seepage
Mechanisms of Bank and Hillslope Instability”, Expected Spring 2009)
Jorge Guzman (Ph.D., Oklahoma State University, Dissertation Topic: “Interrelationship
of Macropores and Subsurface Drains on *E. coli* Transport”, Expected Spring
2010)
Derek Heeren (Ph.D., Oklahoma State University, Dissertation Topic: “Quantification of
Phosphorus and *E. coli* Exchange between Streams and Alluvial Aquifers”,
Expected Spring 2012)
Sharla Lovern (Ph.D., Oklahoma State University, Dissertation Topic: “Mechanisms of
Streambank Instability”, Expected Spring 2012)
Ron Miller (Ph.D., Oklahoma State University, Dissertation Topic: “Correlation of
Preferential Flow Pathways in Alluvial Aquifers with Topographic and
Geomorphological Information”, Expected Spring 2011)

Research Committee Member for Current Graduate Students (3):

Cara Cowen-Watts (Ph.D. Advisor: Dr. Dan Storm, Expected May 2009)
Reid Christianson (Ph.D. Advisor: Dr. Glenn Brown, Expected May 2009)

Research Advisor for Completed Graduate Students (9):

- Onur Akay (Ph.D., University of Mississippi, August 2007 and Research Engineer, Oklahoma State University, 2006-2007, Dissertation Topic: “Experimental Analysis and Modeling of the Interrelationship between Macropores and Subsurface Drainage”
- Mohammad Yassin (Ph.D., University of Mississippi, Dissertation Topic: “Simplified Model of COD and Ammonia Removal in Activated Sludge Processes”, August 2005)
- Rachel Cancienne (MS, Oklahoma State University, Thesis Topic: “Role of Vegetation in Mitigating Seepage Erosion of Hillslopes”, May 2008)
- Kim Caviness (MS, University of Mississippi, Thesis Topic: “Modeling the Big Black River: A Comparison of Simplified and Complex Water Quality Models”, May 2004)
- John Fuchs (MS, Oklahoma State University, Thesis Topic: “Potential for the Subsurface Transport of Phosphorus in Riparian Floodplains”, May 2008)
- Sahithi Reddy Rondla (MS, University of Mississippi, Thesis Topic: “Cost of Water Treatment in the Mississippi Embayment Unit”, May 2004)
- Raja Periketi (MS, University of Mississippi, Thesis Topic: “Quantifying the Magnitude of Subsurface Flow Induced Stream Bank Failure on Total Sediment Load to Streams”, May 2005)
- Sri Harsha Pulijala (MS, University of Mississippi, Thesis Topic: “Evaluation of a Pesticide Transport Model in Subsurface Drainage, Runoff, and Leaching Environments”, August 2005)
- John Stofleth (MS, University of Mississippi, Thesis Topic: “The Hyporheic Zone: Physical and Ecological Processes in Small Sand-Bed Streams”, May 2005)

Research Committee Member for Completed Graduate Students (6):

- Ryan Woolbright (M.S. Advisor: Dr. Greg Hanson, Completed December 2008)
- Aaron Mittelstet (M.S. Environmental Science, Advisor: Dr. Mike Smolen, Thesis Topic: “Water Policies for Surface Water and Ground Water Connections”, Completed August 2009)
- Mike White (Ph.D., Oklahoma State University, Advisor: Dr. Dan Storm, Dissertation Topic: “Adapting a Complex Hydrologic Model as a Simple Agricultural Phosphorus Management Tool”, Completed December 2007)
- Robbie Kroger (Ph.D., University of Mississippi, Department of Biology, University of Mississippi, “Nutrient Assimilation, Flow through and Deposition in Vegetated Ditches under Variable Hydrological Regimes”, Completed February 2007)
- Honghai Qi (Ph.D., University of Mississippi, National Center for Computational Hydroscience and Engineering, University of Mississippi, “Optimized Land Use Planning of Integrated Watershed Management under Uncertainty”, Completed January 2007)
- Amey Tilak (M.S., University of Mississippi, “Synthesis of Manganese Oxide Coatings for Adsorption of Trace Metals, Completed May 2006)

Thesis and Dissertation:

- “Modeling of Stream/Aquifer Interaction during Alluvial Well Depletion”, Department of Civil Engineering, Colorado State University, Fort Collins, CO, May 2003 (Advisor: Dr. Deanna Durnford)
- “Image Use in the Characterization of Field Parameters: Incorporation of Remote Sensing with Hydrologic Simulation Modeling”, Department of Agricultural

Engineering, Texas A&M University, College Station, TX, May 2000 (Advisor: Dr. Stephen Searcy)

Peer-Reviewed Publications in Refereed Journals:

Total Publications in Refereed Journals: **37**, Total Publications since 2003 (University of Mississippi and Oklahoma State University): **33**, Total Publications Published or Accepted for Publication since July 2006 (Oklahoma State University): **26**

1. Lindow, N., and G.A. Fox. Seepage erosion in fluvio-marine stream bank material. *Earth Surface Processes and Landforms* (Accepted for Publication, June 23, 2009).
2. Guzman, J., **G.A. Fox**, R. Malone, and R. Kanwar. Escherichia coli transport from surface applied manure to subsurface drains through artificial biopores. *Journal of Environmental Quality* (Accepted for Publication, June 10, 2009).
3. Garbrecht, K., **G.A. Fox**, J. Guzman, and D. Alexander. 2009. Pathogen transport through soils: Bioretention cell removal efficiency. *Transactions of the ASABE* 52(2): 481-486.
4. Poletika, N.N., P.N. Coody, **G.A. Fox**, G.J. Sabbagh, S.C. Dolder, and J. White. 2009. Chlorpyrifos and atrazine removal from runoff by vegetated filter strips: Experiments and predictive modeling. *Journal of Environmental Quality* 38(3): 1042-1052.
5. Sabbagh, G.J., **G.A. Fox**, A. Kamanzi, B. Roepke, and J.Z. Tang. 2009. Effectiveness of vegetative filter strips in reducing pesticide loading: Quantifying pesticide trapping efficiency. *Journal of Environmental Quality* 38(2): 762-771.
6. Fuchs, J.W., **G.A. Fox**, D.E. Storm, C. Penn, and G.O. Brown. 2009. Subsurface transport of phosphorus in riparian floodplains: Influence of preferential flow paths. *Journal of Environmental Quality* 38(2): 473-484.
7. **Fox, G.A.**, and G.J. Sabbagh. 2009. Comment on "Major Factors Influencing the Efficacy of Vegetated Buffers on Sediment Trapping: A Review and Analysis". *Journal of Environmental Quality* 38(1): 1-3.
8. Chu-Agor, M., G.V. Wilson, and **G.A. Fox**. 2008. Numerical modeling of bank instability by seepage erosion undercutting of layered streambanks. *Journal of Hydrologic Engineering* 13(12): 1133-1145.
9. **Fox, G.A.**, G. Thelin, G.J. Sabbagh, J.W. Fuchs, and I. Kelly. 2008. Estimating watershed level nonagricultural pesticide use from golf courses using geospatial methods. *Journal of the American Water Resources Association* 44(6): 1363-1372, DOI: 10.1111/j.1752-1688.2008.00229.x.
10. Cancienne, R., **G.A. Fox**, and A. Simon. 2008. Influence of seepage undercutting on the root reinforcement of streambanks. *Earth Surface Processes and Landforms* 33(11): 1769-1786, DOI: 10.1002/esp.1657.
11. Chu-Agor, M.L., **G.A. Fox**, R. Cancienne, and G.V. Wilson. 2008. Seepage caused tension failures and erosion undercutting of hillslopes. *Journal of Hydrology* 359 (3-4): 247-259, DOI: 10.1016/j.jhydrol.2008.07.005.
12. Akay, O., **G.A. Fox**, and J. Simunek. 2008. Numerical simulation of flow dynamics during macropore/subsurface drain interaction using HYDRUS. *Vadose Zone Journal* 7(3): 909-918, DOI: 10.2136/vzj2007.0148.
13. Stofleth, J.M., F.D. Shields, Jr. and **G.A. Fox**. 2008. Hyporheic and total storage exchange in small sand-bed streams. *Hydrological Processes* 22: 1885-1894, DOI: 10.1002/hyp.6773.

14. **Fox, G.A.**, G.J. Sabbagh, K.W. Rojas, and R. Malone. 2007. Modeling parent and metabolite fate and transport in subsurface drained fields with directly connected macropores. *Journal of American Water Resources Association* 43(6): 1359–1372.
15. **Fox, G.A.**, Chu-Agor, M., and G.V. Wilson. 2007. Erosion of noncohesive sediment by groundwater seepage flow: Experiments and numerical modeling. *Soil Science Society of America Journal* 71(6): 1822-1830.
16. Akay, O. and **G.A. Fox**. 2007. Experimental investigation of direct interconnectivity between macropores and subsurface drains during infiltration. *Soil Science Society of America Journal* 71(5): 1600-1606.
17. **Fox, G.A.**, G.V. Wilson, A. Simon, E. Langendoen, O. Akay, and J.W. Fuchs. 2007. Measuring streambank erosion due to ground water seepage: Correlation to bank pore water pressure, precipitation, and stream stage. *Earth Surface Processes and Landforms* 32(10): 1558-1573.
18. **Fox, G.A.**, S.H. Pulijala, and G.J. Sabbagh. 2007. Influence of rainfall distribution on simulations of atrazine, metolachlor, and isoxaflutole/metabolite transport in subsurface drained fields. *Journal of Agricultural and Food Chemistry* (Special Symposium on Pesticide Environmental Exposure Assessment) 55(14): 5399-5407, DOI: 10.1021/jf063753z.
19. Sabbagh, G.J., **G.A. Fox**, L. Ma, R.W. Malone, E. Arthur, and D. Dyer. 2007. Modeling pesticide fate and nonideal transport from a slow-release, pesticide treated seed in a laboratory soil column. *Transactions of the ASABE* 50(2): 523-532.
20. Wilson, G.V., R. Periketi, **G.A. Fox**, S. Dabney, D. Shields, and R.F. Cullum. 2007. Seepage erosion properties contributing to streambank failure. *Earth Surface Processes and Landforms* 32(3): 447-459.
21. **Fox, G.A.** and L. Gordji. 2007. Consideration for unsaturated flow beneath a streambed during alluvial well depletion. *Journal of Hydrologic Engineering – ASCE* 12(2): 139-145.
22. **Fox, G.A.** 2007. Estimating streambed conductivity: guidelines for stream-aquifer analysis tests. *Transactions of the ASABE* 50(1): 107-113.
23. **Fox, G.A.**, J.W. Fuchs, V.F. Medina, and K. Atapattu. 2007. Capture and retainment of airborne particulates using emulsions: Potential for post-detonation dirty bomb cleanup. *Journal of Environmental Engineering* 133(3): 255-262.
24. **Fox, G.A.**, G.V. Wilson, R.K. Periketi and B.F. Cullum. 2006. A sediment transport model for seepage erosion of streambanks. *Journal of Hydrologic Engineering – ASCE* 11(6): 603-611.
25. **Fox, G.A.**, G.J. Sabbagh, W. Chen, and M. Russell. 2006. Comparison of uncalibrated Tier II ground water screening models based on conservative tracer and pesticide leaching. *Pest Management Science* 62(6): 537-550.
26. Caviness, K., **G.A. Fox**, and P.N. Deliman. 2006. Modeling the Big Black River: Comparison of water quality models. *Journal of the American Water Resources Association (JAWRA)*: 42(3): 617-627.
27. **Fox, G.A.** and V.F. Medina. 2005. Evaluating factors affecting the permeability of emulsions used to stabilize radioactive contamination from a radiological dispersive device. *Environmental Science and Technology* 39(10): 3762-3769.
28. **Fox, G.A.** and R. Metla. 2005. Analysis of surface soil properties from digital aerial images using principal components analysis, soil line, and regression models. *Soil Science Society of America Journal* 69: 1782-1788.
29. **Fox, G.A.**, R. Malone, G.J. Sabbagh and K. Rojas. 2004. Interrelationship of macropore flow and subsurface drainage: Influence on conservative tracer and pesticide transport. *Journal of Environmental Quality* 33(6): 2281-2289.

30. **Fox, G.A.** 2004. Evaluation of a stream aquifer analysis test using analytical solutions and field data. *Journal of the American Water Resources Association (JAWRA)* 40(3): 755-763.
31. **Fox, G.A.**, G.J. Sabbagh, S.W. Searcy, and C. Yang. 2004. Evaluation of an automated soil line identification routine. *Soil Science Society of America Journal* 68(4): 1326-1331.
32. **Fox, G.A.**, G.J. Sabbagh, and S.W. Searcy. 2003. Radiometric normalization of multi-temporal images using a soil line transformation routine. *Transactions of ASAE* 46(3): 851-859.
33. **Fox, G.A.** and D.S. Durnford. 2003. Unsaturated hyporheic zone flow in stream/aquifer conjunctive systems. *Advances in Water Resources* 26(9): 989-1000.
34. **Fox, G.A.**, P. DuChateau, and D.S. Durnford. 2002. Analytical model for aquifer response incorporating distributed pumping-induced stream leakage. *Ground Water* 40(4): 378-384.
35. **Fox, G.A.** and G.J. Sabbagh. 2002. Estimates of soil organic matter from red and near-infrared remotely sensed data using a soil line Euclidean distance technique. *Soil Science Society of America Journal* 66(6): 1922-1928.
36. Sabbagh, G.J. and **G.A. Fox**. 1999. Statistical method for evaluation of a water table management model. *Transactions of ASAE* 42(3): 713-719.
37. **Fox, G. A.** 1998. Investigation of High Plains management practices with the APEX modeling system. *Texas A&M University Undergraduate Journal of Science* 2(1): 9-16.

Peer-Reviewed Publications in Review (1):

1. Chu-Agor, M.L., G.A. Fox, and G.V. Wilson. A seepage erosion sediment transport function and geometric headcut relationships for predicting seepage erosion undercutting. *Journal of Hydrology (In Review, HYDROL8276)*.

Manuscripts in Preparation (5):

1. Heeren, D.M., Heeren, D.M., R. Miller, G.A. Fox, D.E. Storm, C.J. Penn, and T. Halihan. Preferential flow path effects on subsurface contaminant transport in alluvial floodplains. *Transactions of the ASABE (In Preparation)*.
2. Munoz-Carpena, R., G.A. Fox, and G.J. Sabbagh. Input factor importance and uncertainty in predicting pesticide surface runoff reduction with vegetative filter strips. *Journal of Environmental Quality (In Preparation)*.
3. Fox, G.A., R. Munoz-Capena, and G.J. Sabbagh. Influence of Flow Concentration on Input Factor Importance and Uncertainty in Predicting Pesticide Surface Runoff Reduction by Vegetative Filter Strips. *Journal of Hydrology (In Preparation)*.
4. Heeren, D.M., G.A. Fox, M.L. Chu-Agor, and G.V. Wilson. Predicting streambank seepage flows: Sensitivity to soil properties and layering. *In Preparation*.
5. Fox, G.A. and G.V. Wilson. Understanding the Role of Seepage in Erosion: Status and Research Needs. *Soil Science Society of America Journal (In Preparation)*.

Publications in Technical Press (2):

1. **Fox, G.A.**, R. Kanwar, and R. Malone. 2008. Earthworms and E. coli: A Perilous Combination for Drain Flow Water Quality. *Resource* 15(6): 22-24.
2. **Fox, G.A.**, and D.S. Durnford. 2003. Stream Aquifer Analysis Tests: Estimating Aquifer and Streambed Permeability. *Colorado Water* 20(3): 5-7.

Conference Proceedings (31):

1. Mittlestat, A., M.D. Smolen, and **G.A. Fox**. 2009. Using MODFLOW to compare management alternatives for a river alluvial aquifer. ASABE Annual International Conference, Reno, NV, June 21-25, 10 pages.
2. Agor, M.L., **G.A. Fox**, and G.V. Wilson. 2009. Incorporating Seepage Processes into a Streambank Stability Model. ASABE Annual International Conference, Reno, NV, June 21-25, 10 pages.
3. Heeren, D.M., R. Miller, **G.A. Fox**, D.E. Storm, C.J. Penn, and T. Halihan. 2009. Preferential Flow Path Effects on Subsurface Contaminant Transport in Alluvial Floodplains. ASABE Annual International Conference, Reno, NV, June 21-25, 10 pages.
4. Guzman, J., **G.A. Fox**, and C.J. Penn. 2009. The influence of organic matter on E. coli soil sorption. ASABE Annual International Conference, Reno, NV, June 21-25, 10 pages.
5. Heeren, D.M., **G.A. Fox**, M. Chu-Agor, and G. V. Wilson. 2009. Predicting Streambank Seepage Flows: Sensitivity to Soil Properties and Layering. American Society of Civil Engineers Environmental Water Resources Institute Annual Meeting, Kansas City, MO, May 17-21, 2009, 10 pages (CD-ROM).
6. Chu-Agor, M.L., **G.A. Fox**, and G.V. Wilson. 2009. Seepage Erosion Sediment Transport Function and Geometric Headcut Relationships for Predicting Streambank Seepage Undercutting. American Society of Civil Engineers Environmental Water Resources Institute Annual Meeting, Kansas City, MO, May 17-21, 2009, 10 pages (CD-ROM).
7. **Fox, G.A.** 2008. Surface water and groundwater interactions: Investigating the connections. Centennial Session on Advances in Soil and Water Engineering, R.W. Skaggs (ed.), 2008 ASABE Annual International Meeting, June 30, 2008, 2 pages.
8. Guzman, J., and **G.A. Fox**. 2008. The role of drainage system and Macropore Interconnectivity in Soil Pathogen Transport. ASABE Paper No. 083768. St. Joseph, Mich.: ASABE.
9. Chu-Agor, M.L., R.M. Cancienne, **G.A. Fox**, and G.V. Wilson. 2008. Slope failure mechanisms due to seepage: Three-dimensional soil block experiments. ASABE Paper No. 083771. St. Joseph, Mich.: ASABE.
10. Cancienne, R.M., and **G.A. Fox**. 2008. Laboratory experiments on three-dimensional seepage erosion undercutting of vegetated banks. ASABE Paper No. 084107. St. Joseph, Mich.: ASABE.
11. Fuchs, J.W., **G.A. Fox**, D. Storm, C. Penn, and G.O. Brown. 2008. Subsurface transport of phosphorus in riparian floodplains: Tracer and phosphorus transport experiments. ASABE Paper No. 084614. St. Joseph, Mich.: ASABE.
12. **Fox, G.A.**, R. Kanwar, J. Guzman, C.K. Hoang, R.W. Malone, T. Moorman, and C. Pederson. 2008. *E. coli* Fate and Transport in Macroporous Soils: Short-Circuiting to the Subsurface. American Society of Civil Engineers Environmental Water Resources Institute Annual Meeting, Honolulu, HI, May 12-17, 2008, 10 pages (CD-ROM).
13. **Fox, G.A.**, M.L. Chu-Agor, R.M. Cancienne, G.V. Wilson. 2008. Seepage erosion mechanisms of bank collapse: Three-dimensional seepage particle mobilization and undercutting. American Society of Civil Engineers Environmental Water Resources Institute Annual Meeting, Honolulu, HI, May 12-17, 2008, 10 pages (CD-ROM).
14. **Fox, G.A.**, M. Chu-Agor, and G.V. Wilson. 2007. Seepage erosion: A significant mechanism of stream bank failure. *Proceedings of the American Society of Civil Engineers (ASCE) World Environmental and Water Resources Congress 2007*, May 15-19, Tampa, FL, 14 pages (CD-ROM).

15. **Fox G.A.**, M. Chu-Agor, and G.V. Wilson. 2007. Erosion of noncohesive sediment by groundwater seepage flow: Experiments and numerical modeling. ASABE Paper No. 072235, St. Joseph, Mich.: ASABE.
16. **Fox, G.A.**, O. Akay, R.W. Malone, L. Ma, and G.J. Sabbagh. 2007. An improved express fraction for modeling macropore/subsurface drain interconnectivity. ASABE Paper No. 072139, St. Joseph, Mich.: ASABE.
17. Agor, M.L., G.V. Wilson, **G.A. Fox**. 2007. Numerical modeling of bank instability by groundwater seepage flow. ASABE Paper No. 072117, St. Joseph, Mich.: ASABE.
18. Akay, O. and **G.A. Fox**. 2006. Experimental investigation of direct connectivity between macropores and subsurface drains during infiltration. *Proceedings of the American Society of Civil Engineers (ASCE) World Environmental and Water Resources Congress 2006*, May 21-25, Omaha, NE, 10 pages (CD-ROM).
19. Stofleth, J., F.D. Shields, and **G.A. Fox**. 2005. Hyporheic and total storage exchange in small sand-bed streams. *Proceedings of the American Society of Civil Engineers (ASCE) World Environmental and Water Resources Congress 2005*, May 15-19, Anchorage, AK, 12 pages (CD-ROM).
20. **Fox, G.A.**, G.V. Wilson, R. Periketi, and R.F. Cullum. 2005. Developing a sediment transport model for the seepage erosion of streambank sediment. *Proceedings of the American Water Resources Conference*, Nov 7-10th, Seattle, WA, 4 pages (CD-ROM).
21. **Fox, G.A.**, G.V. Wilson, R. Periketi, L. Gordji, and R.F. Cullum. 2005. The role of subsurface water in contributing to streambank erosion. *Proceedings of the US-China Workshop on Advanced Computational Modeling in Hydroscience and Engineering*, August 2-5, Oxford, Mississippi, USA, 10 pages (CD-ROM).
22. Caviness, K., **G.A. Fox**, and P.N. Deliman. 2005. Modeling the Big Black River: Evaluation of a simplistic water quality model. *Proceedings of the Third Conference on Watershed Management to Meet Water Quality Standards and Emerging TMDL (Total Maximum Daily Load)*, March 5-10, Atlanta, GA, 10 pages (CD-ROM).
23. **Fox, G.A.**, R. Malone, G.J. Sabbagh and K. Rojas. 2004. Simulating the interaction between macropores and subsurface drains with RZWQM. *Proceedings of the International Workshop on Applications, Enhancements, and Collaborations of ARS RZWQM and GPFARM Models*. USDA-ARS Research Great Plains Systems Research Unit: Fort Collins, Colorado, pp. 41-44.
24. Stofleth, J., F.D. Shields, and **G.A. Fox**. 2004. Organic carbon concentrations in the hyporheic zone: A tool for measuring the effectiveness of stream restoration. *Proceedings of the American Society of Civil Engineers (ASCE) Conference of the Water and Environmental Resources Institute*, June 27-July 1, Salt Lake City, Utah, 12 pages (CD-ROM).
25. **Fox, G.A.** 2003. Estimating streambed and aquifer parameters from a stream/aquifer analysis test. *Proceedings of the 23rd Annual Geophysical Union Hydrology Days*, ed. J.A. Ramirez, 68-79.
26. **Fox, G.A.** 2003. Improving MODFLOW's RIVER package for unsaturated stream/aquifer flow. *Proceedings of the 23rd Annual Geophysical Union Hydrology Days*, ed. J.A. Ramirez, 56-67.
27. **Fox, G.A.** 2002. Unsaturated hyporheic zone flow in analytical models for stream/aquifer interaction. ASAE-CIGR Meeting Paper No. 022212. St. Joseph, Mich.: ASAE.
28. **Fox, G.A.** 2002. Analytical model for saturated/unsaturated hyporheic zone flow due to alluvial well depletions. *Proceedings of the American Water Resources*

Association Specialty Conference on Surface Water/Ground Water Interactions. ed. J.F. Kenny, 479-484.

29. **Fox, G.A.** and D.S. Durnford. 2002. Effect of aquifer parameter uncertainty on analytical estimates of streambed conductance using STRMAQ. *Proceedings of the 22nd Annual Geophysical Union Hydrology Days*, ed. J.A. Ramirez, 86-97.
30. **Fox, G.A.** and D.S. Durnford. 2001. Investigation of analytical and numerical models for simulating surface water/groundwater interaction. *Proceedings of the 21st Annual Geophysical Union Hydrology Days*, April 2-5, Fort Collins, CO, 58-69.
31. Sabbagh, G.J., **G.A. Fox**, and K.D. Robbins. 1998. Determination of localized statistical parameters for disaggregation modeling. ASAE International Convention: 980027, Orlando, Florida.

Conference Oral/Poster Presentations with Published Abstracts (Presenter in Bold):

1. **Malone, R.W.**, M. Shipitalo, L. Ma, L. Ahuja, G.A. Fox, G.J. Sabbagh, and S. Logsdon. 2009. "Simulation models, macropores, tillage, and rainfall intensity role in pesticide transport through soil". ACS Agrochemicals Division International Research Award Symposium, August 2009.
2. Miller, R., D. Heeren, **G.A. Fox**, D.E. Storm, and T. Halihan. 2009. "Use of Electrical Resistivity to Map Potential Preferential Flow Paths". ASABE Annual International Conference, Reno, NV, June 21-25.
3. **Mittlestat, A.**, M.D. Smolen, D. Adams, and G.A. Fox. 2009. "The Impact of Alternative Water Policies on Interconnected Ground Water and Surface Water Resources". ASABE Annual International Conference, Reno, NV, June 21-25.
4. **Hoang, C.K.**, G.A. Fox, R. Kanwar, R. Malone, and J. Guzman. 2009. "Role of macropores on pathogen transport: Field experiments". ASABE Annual International Conference, Reno, NV, June 21-25.
5. Miller, R., **D.M. Heeren**, G.A. Fox, D. Storm, and T. Halihan. 2009. "Use of Geophysical Techniques to Map Subsurface Preferential Flow Paths in Riparian Floodplains", American Society of Civil Engineers Environmental Water Resources Institute Annual Meeting, Kansas City, MO, May 17-21, 2009.
6. **Smolen, M.D.**, G.A. Fox, and D.S. Storm. 2009. "Introduction to Hydrology". Sovereignty Symposium 2009 – Land, Wind and Water, Oklahoma City, OK, June 3-4, 2009.
7. **Guzman, J.**, and G.A. Fox. 2009. "Macropore Flow and Subsurface Drain Interconnectivity: E. coli Transport Experiments", American Society of Civil Engineers Environmental Water Resources Institute Annual Meeting, Kansas City, MO, May 17-21, 2009.
8. **Fox, G.A.**, D.E. Storm, D.M. Heeren, R. Miller, C. Penn, and T. Halihan. 2009. "Subsurface Transport of Phosphorus through Preferential Flow Paths in Riparian Floodplains", 2009 Arkansas Annual Research & Watershed Conference, Fayetteville, AR, April 14, 2009.
9. **Heeren, D.M.**, G.A. Fox, J. W. Fuchs, R. Miller, D. E. Storm, T. Halihan, C. J. Penn, G. O. Brown. 2009. "Subsurface Transport of Phosphorus in Alluvial Floodplains", 20th Annual Oklahoma State University Research Symposium, Stillwater, OK, 19 February 2009.
10. **Guzman, J.**, and G.A. Fox. 2009. "Transport of E. coli to Subsurface Drains through Directly Connected Macropores", 20th Annual Oklahoma State University Research Symposium, Stillwater, OK, 18 February 2009.

11. **Chu-Agor, M.L.**, and G.A. Fox. 2009. "Incorporating Seepage Erosion Processes into Streambank Stability Models", 20th Annual Oklahoma State University Research Symposium, Stillwater, OK, 18 February 2009.
12. **Fox, G.A.**, R. Malone, R. Kanwar, T. Moorman, J. Guzman, C.H. Huang, and C. Pederson. 2009. Role of directly connected macropores in pathogen transport to subsurface drainage. 2009 USDA-CSREES National Water Conference, St. Louis, MO, February 9, 2009.
13. **Guzman, J.**, and G.A. Fox. 2009. Laboratory column experiments on the transport of *E. coli* to subsurface drains by macropore flow. 2009 USDA-CSREES National Water Conference, St. Louis, MO, February 11, 2009.
14. Chu-Agor, M.L., **G.A. Fox**, G.V. Wilson, A. Simon, and E. Langendoen. 2009. "Improving a Streambank Stability Model for Seepage Processes: An Improved River Restoration Tool", USDA National Water Conference, St. Louis, MO, 10-12 February 2009.
15. Heeren, D.M., **G.A. Fox**, J. W. Fuchs, R. Miller, D. E. Storm, T. Halihan, C. J. Penn, G. O. Brown. 2009. "Subsurface Transport of Phosphorus in Alluvial Floodplains", USDA National Water Conference, St. Louis, MO, 10-12 February 2009.
16. **Fox, G.A.** 2008. Subsurface transport of phosphorus to streams. 6th Annual Oklahoma Water Resources Research Institute Oklahoma Water Symposium, Oklahoma City, OK, October 28-30, 2008.
17. **Garbrecht, K.**, and G.A. Fox. 2008. Pathogen transport through bioretention cell soils. 6th Annual Oklahoma Water Resources Research Institute Oklahoma Water Symposium, Oklahoma City, OK, October 28-30, 2008.
18. **Heeren, D.M.**, G.A. Fox, and M. Chu-Agor. 2008. Evaluating the role of groundwater mechanisms in streambank failure with the BSTEM model. 6th Annual Oklahoma Water Resources Research Institute Oklahoma Water Symposium, Oklahoma City, OK, October 28-30, 2008.
19. **Guzman, J.**, and G.A. Fox. 2008. Transport of *E. coli* by biopores and mesopores: A rapid pathway to the subsurface. 6th Annual Oklahoma Water Resources Research Institute Oklahoma Water Symposium, Oklahoma City, OK, October 28-30, 2008.
20. **Wilson, G.V.**, G.A. Fox, and M.L. Chu-Agor. 2008. Seepage erosion impacts on edge-of-field gully erosion and streambank failure. American Water Resources Association, 2008 Summer Specialty Conference: "Riparian Ecosystems and Buffers: Working at the Water's Edge", June 30 – July 2, 2008, Virginia Beach, VA.
21. **Fox, G.A.**, M.L. Chu-Agor, G.V. Wilson, A. Simon, and E. Langendoen. 2008. An improved computational tool capable of considering seepage erosion dynamics in bank stability. 2008 ASCE EWRI Conference, River and Watershed Restoration Poster Session, Honolulu, HI, 13 May 2008.
22. **Garbrecht, K.M.**, G.A. Fox, and G.E. Brown. 2008. Evaluation of pathogen retainment and removal in bioretention cells. 2008 ASCE EWRI Conference, Oklahoma State University-Woolpert Scholars Session on Urban Stormwater Management, Honolulu, HI, 15 May 2008.
23. **Fox, G.A.**, G.V. Wilson, A. Simon, E. Langendoen, M.L. Chu-Agor, and R. Cancienne. 2008. Recent advances in laboratory experiments, field measurements, and numerical modeling. USDA National Water Conference, Reno, NV, 3-7 February.
24. **Fox, G.A.**, R. Kanwar, R. Malone, T. Moorman, J. Guzman, C.H. Hoang, and C. Pederson. 2008. Role of directly connected macropores in the transport of *E. coli* to subsurface drainage. USDA National Water Conference, Reno, NV, 3-7 February.

25. **Sima, A.**, T. Halihan, K. Thompson, G. Fox, and D. Storm. 2008. Transient electrical resistivity imaging of a phosphorus/Rhodamine tracer test, Tahlequah, OK. GSA South-Central Section Meeting, Hot Springs, Arkansas, 30 March-1 April.
26. **Fuchs, J.W.**, G.A. Fox, D. Storm, C. Penn, and G.O. Brown. 2007. Potential for the subsurface transport of phosphorus in riparian floodplains: Tracer and phosphorus transport experiments. 5th Annual Oklahoma Water Resources Research Institute Water Symposium, Oklahoma City, OK, October 23-25, 2007.
27. **Cancienne, R.**, M.L. Chu-Agor, G.A. Fox, and G.V. Wilson. 2007. Soil block experiments investigating three-dimensional seepage erosion phenomena. 5th Annual Oklahoma Water Resources Research Institute Water Symposium, Oklahoma City, OK, October 23-25, 2007.
28. **Chu-Agor, M.L.** and G.A. Fox. 2007. An improved computational tool capable of considering seepage erosion dynamics in bank stability. 5th Annual Oklahoma Water Resources Research Institute Water Symposium, Oklahoma City, OK, October 23-25, 2007.
29. White, M., **D. Storm**, P. Busted, H. Zhang, M. Smolen, G.A. Fox, and C. Penn. 2007. A quantitative phosphorus index for conservation and nutrient management plan development. 5th Annual Oklahoma Water Resources Research Institute Water Symposium, Oklahoma City, OK, October 23-25, 2007.
30. White M., **D. Storm**, H. Zhang, C. Penn, P. Busted, M. Smolen, and G.A. Fox. 2007. Proposed updates to the Soil and Water Assessment Tool (SWAT) phosphorus model. SERA-17 Annual Meeting, Fayetteville, AR, June 11-13, 2007.
31. White M., **D. Storm**, P. Busted, H. Zhang, M. Smolen, G.A. Fox, and C. Penn. 2007. Quantitative P index development to meet numeric water quality standards. SERA-17 Annual Meeting, Fayetteville, AR, June 11-13, 2007.
32. **Chu-Agor, M.L.**, and G.A. Fox. 2007. Numerical modeling of bank instability by seepage erosion. Oklahoma State University Research Week, Stillwater, OK, February 22, 2007.
33. **Fox, G.A.**, G.V. Wilson, A. Simon, and E. Langendoen. 2007. Field observations and measurement of streambank seepage erosion. 2007 USDA National Water Quality Conference, Savannah, GA, January 28-31, 2007.
34. Chu-Agor, M.L., **G.A. Fox**, and G.V. Wilson. 2007. Numerical modeling of streambank instability by seepage erosion. 2007 USDA National Water Quality Conference, Savannah, GA, January 28-31, 2007.
35. **Fox, G.A.**, G.V. Wilson, and A. Simon. 2006. Field and laboratory verification of seepage erosion sediment transport models. Symposium--Sediment Pollution from River Bank Erosion: Characterization and Budget, Soil Science Society of America Annual Meeting, Indianapolis, IN, November 15, 2006.
36. Wilson, G.V., **G.A. Fox**, and A. Simon. 2006. Seepage erosion induced streambank failure: Experimental and numerical analysis. Symposium--Sediment Pollution from River Bank Erosion: Characterization and Budget, Soil Science Society of America Annual Meeting, Indianapolis, IN, November 15, 2006.
37. **Tilak, A.**, C. Williford, G.A. Fox, and T. Sobecki. 2006. Synthesis of manganese oxide coatings for adsorption of trace metals from ground water. American Institute of Chemical Engineers Annual Meeting, San Francisco, CA, November 17, 2006.
38. **Fox, G.A.**, S.H. Pulijala, and G.J. Sabbagh. 2006. Influence of assumed rainfall intensity and duration on simulations of pesticide transport in artificially subsurface drained fields. Division of Agrochemicals, American Chemical Society Annual Meeting, Atlanta, GA, March 23-26, 2006.
39. Sabbagh, G.J., **G.A. Fox**, L. Ma, R. Malone, E. Arthur, and D. Dyer. 2006. Modeling the fate and nonideal transport of pesticide from a slow-release, pesticide treated seed

- in a laboratory soil column. Division of Agrochemicals, American Chemical Society Annual Meeting, Atlanta, GA, March 23-26, 2006.
40. Akay, O. and **G.A. Fox**. 2006. Interconnectivity of macropores and subsurface drainage: Influence on breakthrough curves. USDA National Water Quality Conference, San Antonio, TX, February 5-9, 2006.
 41. **Dunford, D.S.**, G. Miller, **G.A. Fox**, J. Stednick, B. Sanford, J. Watt, J. Altenhofen, V. Flory, and M. Halstead. 2006. Managed recharge for stream augmentation. USDA National Water Quality Conference, San Antonio, TX, February 5-9, 2006.
 42. **Fox, G.A.**, G.V. Wilson, and R. Periketi. 2005. Simulating the erosion of streambanks by lateral, subsurface flow. 35th Annual Mississippi Water Resources Conference, Jackson, MS, April 26-27, 2005.
 43. **Fox, G.A.**, and V.F. Medina. 2005. Use of emulsions to stabilize radioactive contamination from a dirty bomb. Association for Environmental Health and Sciences, 15th Annual West Coast Conference on Soils, Sediments, and Water, San Diego, CA, March 14-17, 2005.
 44. **Attapatu, K.**, G.A. Fox, and V.F. Medina. 2005. Use of emulsions for capturing airborne particulate radioactive contamination from a dirty bomb. 2005 Mississippi Academy of Sciences 69th Annual Meeting, Oxford, MS, February 18, 2005.
 45. **Fox, G.A.** 2005. Modeling the interrelationship between macropores and subsurface drainage for pesticide transport. USDA National Water Quality Conference, San Diego, CA, February 7, 2005.
 46. **Wilson, G.V.**, R. Periketi, G.A. Fox, and R.F. Cullum. 2004. Seepage erosion properties contributing to streambank failure. ASA/CSSA/SSSA Annual Conference, Seattle, WA, December 1, 2004.
 47. **Stofleth, J.**, F.D. Shields, and G.A. Fox. 2004. Quantifying hyporheic and total storage exchange in small sand-bed streams. American Water Resources Association (AWRA) Annual Conference, Orlando, FL, November 4, 2004.
 48. **Fox, G.A.**, G.J. Sabbagh, and S.H. Pulijala. 2004. Modeling the impact of subsurface drainage on pesticide loss to adjacent streams. American Water Resources Association (AWRA) Annual Conference, Orlando, FL, November 3, 2004.
 49. **Fox, G.A.**, G.V. Wilson, and R.K. Periketi. 2004. Importance of lateral, subsurface erosion on total sediment load to streams in northern Mississippi. Soil and Water Conservation Society 2004 Annual Conference, St. Paul, Minnesota, July 24-28, 2004.
 50. **Fox, G.A.** 2001. "Advances in the analytical modeling of stream/aquifer interaction." 5th Annual Colorado State University Student Water Symposium, November 7-9, Fort Collins, CO.
 51. **Fox, G.A.** 2000. "Image Use in the Characterization of Field Parameters: Incorporation of Remote Sensing with Hydrologic Simulation Modeling", 5th Annual EPA STAR Graduate Fellowship Conference, July 9-12, Washington, D.C.
 52. **Fox, G.A.** 1999. "Incorporation of Remote Sensing with Hydrologic Simulation Modeling", 4th Annual EPA STAR Graduate Fellowship Conference, June 21-24, Washington, D.C.

Invited Presentations:

1. "Groundwater Seepage as a Contributor to Streambank Erosion and Failure", Invited Presentation at National Conference titled From Dust Bowl to Mud Bowl: Conservation Measures and the Future of Reservoirs, National Interdisciplinary Conference, September 14-16, 2009, Kansas City, MO.

2. Basics of Hydrology: A 45-minute Spiel on Water”, Basic Water Science Seminar, Oklahoma City, OK, May 14, 2009.
3. “Subsurface Transport of Phosphorus through Preferential Flow Paths in Riparian Floodplains”, 2009 Arkansas Annual Research & Watershed Conference, Fayetteville, AR, April 14, 2009.
4. “Subsurface Transport of Phosphorus in Riparian Floodplains”, Oklahoma Scenic Rivers Commission Board Meeting, Tahlequah, OK, February 17, 2009
5. “Understanding the key drivers for effective mitigation of run-off with vegetative buffer strips”, Presentation at AIM: Advancing Intelligent Mitigation – A European Crop Protection Agency workshop on managing potential diffuse contamination sources of plant protection products, October 22, 2008, Brussels, Belgium.
6. “Contaminant Transport to Subsurface Drains through Directly Connected Macropores”, Presentation to Bayer CropScience Modeling Team, October 20, 2008, Monheim, Germany
7. “Subsurface Transport of Phosphorus in Riparian Floodplains”, Presentation to Oklahoma Water Resources Research Institute, Water Resources Advisory Board, August 1, 2008, Oklahoma City, OK
8. “Surface and Ground Water Interaction: Investigating the Connections”, Centennial Session on Advances in Soil and Water Engineering, American Society of Agricultural and Biological Engineering Annual International Meeting, June 30, 2008
9. “Surface and Ground Water Interaction: Implications for Contaminant Fate and Transport”, Presentation at a joint Iowa State University and USDA-ARS National Soil Tilth Laboratory Seminar as part of Big XII Faculty Fellowship, April 22, 2008
10. “Pathogen Transport to Subsurface Drains through Macropores”, Presentation to Biosystems and Agricultural Engineering Graduate Seminar, Oklahoma State University, March 5, 2008
11. “Quantifying the Importance of Subsurface Flow Induced Erosion on Sediment Load to Streams”, Presentation to USDA CSREES NRI Project Director’s Meeting, Reno, NV, February 4, 2008
12. “Numerical Modeling of Bank Instability by Groundwater Seepage Flow”, Presentation to USDA-ARS National Sedimentation Laboratory, Oxford, MS, January 21, 2008
13. “Potential for Subsurface Transport of Phosphorus through Riparian Floodplains”, Presentation to Oklahoma Water Resources Research Institute, Water Resources Advisory Board, January 11, 2008, Stillwater, OK
14. “Research at Surface Water/Ground Water Interfaces: Implications for Contaminant Mobilization and Transport”, Presentation to US EPA Kerr Research Laboratory in Ada, OK, May 9, 2007
15. “Numerical Modeling of Bank Instability by Ground Water Seepage Erosion”, Presentation to USDA-ARS National Sedimentation Laboratory, January 3, 2007
16. “Seepage Erosion Induced Streambank Failure: Experimental and Numerical Analysis”, Symposium--Sediment Pollution from River Bank Erosion: Characterization and Budget, Soil Science Society of America Annual Meeting, Indianapolis, IN, November 15, 2006.
17. “Uncalibrated Modeling of Tracer and Pesticide Leaching to Ground Water using the Root Zone Water Quality Model (RZWQM)”, US Environmental Protection Agency (US EPA) Office of Pesticide Programs (OPP) Exposure Modeling Work Group (EMWG), Washington, D.C., July 21, 2005
18. “Modeling field pesticide dissipation studies: What to measure in the field?”, Presentation to Bayer CropScience Environment Exposure Group, Kansas City, MO, August 12, 2005

19. "Simulating the interaction between macropores and subsurface drains with RZWQM", International Workshop on Applications, Enhancements, and Collaborations of ARS RZWQM and GPFARM Models, USDA-ARS Great Plains System Research Unit, Fort Collins, Colorado, April 22, 2007
20. "Initial Evaluation of Emulsions for Stabilizing Radioactive Contamination from a Radiological Dispersive Device", Presentation to the U.S. Army Corps of Engineers, Engineer Research and Development Center, Waterways Experiment Station, August 5, 2004
21. "Using Emulsions to Capture Particulate Matter from a Dirty Bomb", Presentation to Environmental Security Initiative Research Team, U.S. Army Corps of Engineers, Engineer Research and Development Center, January 11, 2005
22. "Current advances in modeling stream/aquifer interaction: An update on stream/aquifer interaction research at Colorado State University", Colorado Water Congress Workshop on Senate Bill 03-073. Denver, Colorado, May 22, 2003
23. "Stream/Aquifer Analysis Tests: Evaluating Analytical Solutions for Alluvial Well Depletion", University of Mississippi, Department of Civil Engineering Graduate Student Seminar, September 11, 2003

Professional Activities:

- American Water Resources Association (AWRA):
 - Hydrology and Watershed Management Technical Committee (2003-2005)
 - Reviewer for *Journal of the American Water Resources Association*
- Association of Ground Water Scientists and Engineers (AGWSE):
 - Reviewer for *Ground Water Journal* (2003-2005)
 - 2005 Recognition for Outstanding Review of a Journal Manuscript
- American Society of Civil Engineers (ASCE)
 - Designer and Coordinator of the 2004 ASCE Deep South Regional Conference Environmental Competition
 - River Restoration Technical Committee Meeting (2005-Present)
 - Chaired Sessions on Bank Stability Analysis at 2007 and 2008 ASCE-EWRI Conference in Tampa, FL and Honolulu, HI
 - Moderator for Large-Scale River Restoration Session at 2007 ASCE-EWRI Conference in Tampa, FL
 - Moderator for Watershed Processes Session at 2007 ASCE-EWRI Conference in Tampa, FL
 - Reviewer for *Journal of Hydrologic Engineering*, *Journal of Hydraulic Engineering* and *Journal of Fluid Mechanics*
- American Society of Agricultural and Biological Engineers (ASABE):
 - 2007-2008 Oklahoma State University Student Club Junior Faculty Advisor
 - 2008-2009 Oklahoma State University Student Club Senior Faculty Advisor
 - SW-22 (Erosion Control Group) Technical Committee Member (2002-Present)
 - SW-224 (Pollution by Sediment) Technical Committee Member (2007-Present)
 - Chair and Moderator of Technical Session on Streambank Stability at 2008 Annual International Meeting in Providence, RI
 - Chair of Session on Stream Sediment Dynamics for 2009 Annual International Meeting in Reno, NV
 - SW-23 (Drainage Group) Technical Committee Member (2007-Present) – Chair of Invited Session on Preferential Flow in Subsurface Drained Fields for 2008 Annual International Meeting

SW-21 (Hydrology Group) Technical Committee Member (2007-Present),
Elected Secretary for 2010-2011
BE-22 Ecological Engineering Technical Committee Member (2007-Present)
Reviewer for *Transactions of the ASABE*
Soil Science Society of America (SSSA):
Associate Editor for *Journal of Environmental Quality* (2008-2010)
Reviewer for *Soil Science Society of America Journal*, *Journal of Environmental Quality* and *Vadose Zone Journal*
Member of Oklahoma Stream Team

Research Recognition:

Highlighted as a success story of the USDA National Needs Fellowship Program
(http://www.csrees.usda.gov/funding/nmf/pdf/usda_nnf_success_story_fox.pdf)
Research on subsurface phosphorus transport highlighted in Oklahoma Water Resources
Research Institute's AQUAhoman Newsletter (Volume IV, Issue III, June-
September 2008, pp 3-4)
Research on *E. coli* transport through macroporous soils highlighted in ASABE Resource
Magazine (September 2008)
Research program featured on DASNR brochure featuring faculty members hired under
2nd Century Initiative
Invited presentation to special session at the 2008 Annual International Meeting of the
American Society of Agricultural and Biological Engineers (ASABE) – Panel on
Advances in Soil and Water Engineering (Organized by Dr. Wayne Skaggs),
Only Invited Panelist below rank of Professor
Nominee for the 2009 ASABE National Young Researcher Award
2008 Big XII Faculty Fellow for Collaborative Research with Iowa State University
2008 Publication titled “Numerical Simulation of Flow Dynamics during Macropore-
Subsurface Drain Interactions using HYDRUS” published in August issue of
Vadose Zone Journal selected by the technical editors to be highlighted in the
November Crop Society of America News magazine
2007 Publication titled “Erosion of Noncohesive Sediment by Groundwater Seepage
Flow: Experiments and Numerical Modeling” published in November/December
issue of *Soil Science Society of America Journal* selected by the SSSAJ technical
editors for promotion of SSSAJ-published science
2007 Publication in *Earth Surface Processes and Landforms* (Fox, G.A., G.V. Wilson, A.
Simon, J.W. Fuchs, E. Langendoen, J.W. Fuchs, and O. Akay. 2007. Measuring
streambank erosion due to ground water seepage: Correlation to bank pore water
pressure, precipitation, and stream stage. *Earth Surface Processes and Landforms*
32(10): 1558-1573, DOI: 10.1002/esp.1490) was included in a Virtual Issue, “a
collection of Water Resources hot papers that have been compiled in an online
special issue”
2006 publication “Uncalibrated modeling of conservative tracer and pesticide leaching to
groundwater” in *Pest Management Science* will be featured on a joint Integrated
Pest Management/NRCS On-Line Toolkit (Notified in July 2008)
Invited to write a review article by Technical Editor of the Soil Physics Division of the
Soil Science Society of America Journal on seepage erosion processes (August
2008)

University, College, and Department Committee Activities:

Member of the DASNR 2nd Century Initiative Environmental Quality and Waste Management (EQ&WM) Team and Ecosystem Management, Conservation, and Restoration Committee - Coordinator/Chair for Stream Restoration/Rehabilitation subgroup of both teams

2007-Present ABET Chair for Department of Biosystems and Agricultural Engineering – Led Committee to Develop Self-Study Report for Fall 2009 Visit

2007-2008 College of Engineering, Architecture, and Technology (CEAT) Engineering Accreditation Committee

2007-2008 College of Engineering, Architecture, and Technology (CEAT) Course Oversight Committee for Technical Writing Monitoring

2007-2008 BAE Tenure, Promotion and Review Committee – Assistant-Professor Representative

2007-Present Coordinator for Soil and Water Conservation FFA Career Development Event – Designed and directed a written contest and two skills challenges (GPS and Water Infiltration contests) for 43 high school students (April 21, 2008)

Faculty Search Committee for Water Resources/Low-Impact Development Faculty Position (November 2007-July 2008)

Oklahoma State University ASABE Student Club Junior Faculty Advisor (March 2007-March 2008)

Oklahoma State University ASABE Student Club Senior Faculty Advisor (March 2008-March 2009)

2008 Poster Session Chair for Oklahoma Water Resources Research Institute's (OWRRI) Oklahoma Water Research Symposium

Teaching Activities (see Summary Tables for Course Enrollments/Evaluations):

Oklahoma State University:

Data Analysis in Biosystems Engineering (BAE 1012, Oklahoma State University, Fall 2006, Fall 2007, Fall 2008)

Hydrology (BAE 4313, Oklahoma State University, Fall 2006, Fall 2007, Fall 2008)

Introduction to River Restoration (BAE 6520, Oklahoma State University, Summer 2007)

Low-Impact Development (BAE 4400, Oklahoma State University, Fall 2007 and Spring 2008)

Fluvial Hydraulics (BAE 6333, Oklahoma State University, Spring 2008)

Environmental Contaminant Transport (BAE 6520, Oklahoma State University, Spring 2007 and Spring 2008; ENGR 645, University of Mississippi, Spring 2005)

University of Mississippi:

Environmental Engineering (CE 471, University of Mississippi, Fall 2003, 2004, 2005)

Environmental Water Resources (CE 472, University of Mississippi, Spring 2004, 2005, 2006)

Environmental Hydraulics and Hydrology (ENGR 597, University of Mississippi, Spring 2004)

Fluid Mechanics (ENGR 323, University of Mississippi, Fall 2004, 2005)

Fundamentals of Engineering (ENGR 402, University of Mississippi, Spring 2005, 2006)

Colorado State University:

Engineering Dynamics (ENGR 261, Colorado State University, Summer 2002)

Instructional/Teaching Awards/Recognition:

- 2009 Alpha Epsilon Distinguished Service Award for Outstanding Teaching and Service to Students of the Biosystems and Agricultural Engineering Department (Oklahoma State University)
- 2008 Alpha Epsilon Distinguished Service Award for Outstanding Teaching and Service to Students of the Biosystems and Agricultural Engineering Department (Oklahoma State University)
- 2004-2005 University of Mississippi, Highest Ranked Teaching Evaluations of All School of Engineering, Engineering Science Courses for 2004-2005 School Year: ENGR 323 - Fluid Mechanics, Spring 2005 (3.7/4.0 Ranking)

Undergraduate Scholars Development:

- Advisor to 2008-2009 Woolpert Scholar (Rachel Carson, Undergraduate, Department of Biosystems and Agricultural Engineering) – Research on impacts of flow releases from detention basins on downstream channel degradation
- Advisor to 2007-2008 Woolpert Scholar (Karl Garbrecht, Undergraduate, Department of Biosystems and Agricultural Engineering) – Research on pathogen transport in bioretention cells for low-impact development
- Supervised a 2006 Honors Contract for Kevin Stunkel (Freshman, Biosystems and Agricultural Engineering Department) for BAE 1012 – Data Analysis in Biosystems Engineering, Separate data analysis project and written report on seepage flow and erosion data collected from two Mississippi streams
- Advisor for Undergraduate Honors Thesis at University of Mississippi for Kaumudi Atapattu (“Capture of Airborne Particulate Following a Dirty Bomb Attack”)

Service Activities Related to Teaching/Instruction:

- BAE ABET Chair for Engineering Accreditation Committee (2007-Present), Led ABET BAE Committee to Develop Self-Study Report for Fall 2009 ABET Visit
- 2007-2009 College of Engineering, Architecture, and Technology (CEAT) Course Oversight Committee for Technical Writing Monitoring
- Oklahoma State University Student Chapter of the American Society of Agricultural and Biological Engineers Senior Faculty Advisor (2008-2009)
- Oklahoma State University Student Chapter of the American Society of Agricultural and Biological Engineers Junior Faculty Advisor (2007-2008)
- 2007-2009 Coordinator of Future Farmers of America (FFA) Soil and Water Conservation Career Development Event for State of Oklahoma – 2007, 2008, Designed and directed a written contest and two skills challenges
- Judge for the Graduate and Professional Student Government Association (GPSGA) Research Symposium – Environmental Science Paper Presentation Judge in 2007, Environmental Science Poster Presentation Judge in 2008
- 2007 Faculty Interviewer for CEAT Scholars
- Presented Kennedy Family and Greg and Kristen Hart Scholarships at the 2008 ASABE Student Banquet and Presented E.W. Schroeder Scholarship at 2007 ASABE Banquet
- Designer and Coordinator of the 2004 ASCE Deep South Regional Conference Environmental Competition

University of Mississippi Chi Epsilon National Honor Society Student Advisor (2003-2006)

Course Development/Improvement:

Developed new graduate course (BAE 5343) from independent study course on Environmental Contaminant Transport at Oklahoma State University (2008-Present)

Improved curriculum by incorporating laboratory exercises into BAE 4313 (Hydrology) to demonstrate measurement of critical hydrologic parameters (2008)

Developed new course (ENGR 402) on review of Engineering Fundamentals as Preparatory Course for the Fundamentals of Engineering (FE) Exam at University of Mississippi (2004-2006)

Developed an Interdisciplinary Water Resources Seminar Course at University of Mississippi (2005-2006)

Summary of Course Enrollment/Evaluations for Oklahoma State University Courses:

Course	Semester	Lecture/ Laboratory	Enrollment, Credit Hours	Overall Instructor Rating (4.0 Scale)	Overall Course Rating (4.0 Scale)
BAE 1012	Fall 2006	Lecture and 3 Lab Sections	32, 64	Lecture: 3.74; Labs: 3.63, 3.82, 3.80	Lecture: 3.44; Labs: 3.56, 3.36, 3.60
	Fall 2007	Lecture and 2 Lab Sections	25, 50	Lecture and Labs: 3.86	Lecture and Labs: 3.71
	Fall 2008	Lecture and 2 Lab Sections	34, 68	Lecture and Labs: 3.90	Lecture: 3.60; Labs: 3.55
BAE 4313	Fall 2006	Lecture	5, 15	4.00	3.80
	Fall 2007	Lecture	7, 21	4.00	3.67
	Fall 2008	Lecture	9, 27	4.00	3.71
BAE 4400*	Fall 2007	Lecture	1, 1	No Evaluations	
	Spring 2008	Lecture	1, 2	No Evaluations	
BAE 5343	Spring 2009	Lecture	To be Offered in Spring 2009		
BAE 6333	Spring 2008	Lecture	6, 18	3.2	3.4
BAE 6520 [†]	Spring 2007	Lecture	5, 15	4.00	3.75
	Spring 2008	Lecture	2, 6	No Evaluations	
BAE 6520 [‡]	Summer 2007	Lecture	3, 9	No Evaluations	

[†] Course titled "Environmental Contaminant Transport" and officially approved as BAE 5343 in Spring 2008.

[‡] Course titled "Introduction to River Engineering".

* Course titled "Low-Impact Development" and was part of the Woolpert Scholars program.

Summary of Course Enrollment/Evaluations for University of Mississippi Courses:

Course	Semester	Lecture/Laboratory	Enrollment, Credit Hours	Overall Instructor Rating (4.0 Scale)
CE 471	Fall 2003	Lecture	26, 78	3.36
	Fall 2004	Lecture	14, 42	3.50
	Fall 2005	Lecture	26, 78	No Evaluations [†]
CE 472	Spring 2004	Lecture	7, 21	3.00
	Spring 2005	Lecture	7, 21	3.86
	Spring 2006	Lecture	22, 66	No Evaluations [†]
ENGR 323	Fall 2004	Lecture	21, 63	3.70
	Fall 2005	Lecture	43, 129	No Evaluations [†]
ENGR 402	Spring 2005	Lecture	26, 26	3.38
	Spring 2006	Lecture	34, 34	No Evaluations [†]
ENGR 597	Spring 2004	Lecture	10, 30	No Evaluations
	Fall 2005	Lecture	7, 7	No Evaluations
ENGR 598	Spring 2004	Lecture	30, 30	No Evaluations
ENGR 645	Spring 2005	Lecture	10, 30	3.30

[†] Evaluation data not available at time of leaving the University of Mississippi.