Song S. Qian
Department of Environmental Sciences
The University of Toledo

EDUCATION

Ph.D. Environmental Sciences. 1995. Duke University
M.S. Statistics. 1995. Duke University
M.S. Environmental Systems Engineering. 1988. Nanjing University, Nanjing, China
B.S. Engineering. 1985. Tsinghua University, Beijing, China

PROFESSIONAL EXPERIENCE

Assistant professor, July, 2012 to present
Department of Environmental Sciences, The University of Toledo, 2801 W. Bancroft Street, Toledo, OH 43606

Senior Scientist, January to July, 2012
Center for Ecological Sciences Tetra Tech, Inc. 1 Park Ave. RTP, NC

Senior Consultant, August to December 2011
Cardno-ENTRIX, Inc. 5400 Glenwood Ave., G-03 Raleigh, NC

Associate Research Professor, June 2004 to August 2011
Nicholas School of the Environment, Duke University, Durham, NC 27708-0328

Associate, March 2000 - June 2004
The Cadmus Group, Inc., 6330 Quadrangle Drive, Suite 180, Chapel Hill, NC 27517

Adjunct Assistant Professor, March 2001 - June 2004
Duke University, Nicholas School of the Environment, Durham, NC 27708

Visiting Scientist, September 2000 - December 2000
Water Resources Research Institute of the University of North Carolina, Raleigh, NC 27695-7912

Assistant Professor, January 1997 - May 2000
Environmental Sciences and Resources Program, Portland State University, Portland, OR 97207

Postdoctoral Research Associate, January - December 1996
Duke University Wetland Center, Box 90333, Durham, NC 27208

Instructor: 1993 and 1996
School of the Environment, Duke University, Durham, NC 27708

Research Engineer, 1989 - 1990
South China Research Institute for Environmental Sciences, National Environmental Protection Agency, Guangzhou, China.

Lecturer, 1988 to 1989
Department of Environmental Sciences, Nanjing University, Nanjing, China .

Guest Associate Research Fellow, 1987 to 1989.
Research Laboratory of Systems Ecology of Chinese Academy of Science.

International Visitor, 1986 to 1987.
Department of Civil Engineering, Tufts University, Medford, MA

TEACHING

Courses taught at The University of Toledo (∗∗: new course in 2014-2015 academic year)

- EEES2150-002 Biodiversity (annual, fall semester)
- EEES6400/8400 Advanced Biostatistics (annual, Fall 2013, 2014, Spring 2015)
- EEES6650/8650 Statistical Modeling in Environmental Sciences (annual Spring 2013, 2014)
- EEES6980/8980-007 Applications of Bayesian statistics in environmental and ecological studies (Spring 2014, new course, every other year)
- ∗∗ EEES4160/5160 Advanced Environmental Data Management (annual, fall semester)
- ∗∗ EEES6980/8980-002 Statistical Issues in Measuring and Reporting Microcystin Concentrations in Drinking Water (Fall 2015)

Graduate Student Mentoring:

- Mentor:
  –Farnaz Nojavan A., PhD, Duke University, 2014. Dissertation title: Bayesian Statistical Analysis in Coastal Eutrophication Models: Challenges and Solutions
  –Michaela Margida, PhD, in progress, research project: Modeling spatiotemporal nutrient source distribution in the Maumee River basin
  –Stephen Timmons, MS, in progress, thesis title:
  –Stephanie Nummer, MS, in progress, thesis title: Assessing the effect of conservation practices in reducing N and P loss from agricultural fields
- Co-mentor (with C. Mayer):
  –Mark DuFour, PhD, in progress, dissertation title:
  –Casey Yanos, MS, in progress, thesis project
  –Holly Embky, MS, in progress, thesis project:
  –Marty Simonson, MS, in progress, thesis project:
- Dissertation/thesis committee:
  Yun Jian (PhD, Duke, 2015), Zetao Ouyang (PhD, Michigan State), Mathew Snyder (PhD, DES), Phoenix Golnick (MS, DES), Eliza S. Deutsch and Grace Rachid (PhD, American University of Beirut)

RESEARCH

My main research interests are:

- Nutrient loading to Lake Erie using Bayesian SPARROW (funded by EPA)
- Comparisons of fish population survey methods (funded by ODNR)
- Comparisons of Lake Erie water quality monitoring methods (funded by UM)
- Phenological responses to climate change (proposal under preparation)
- The effect of conservation practices in controlling nutrient loss from agriculture fields (funded by IPNI)
- Assessing water quality compliance using regional and local water quality monitoring data (proposal under preparation)
- Assessing the spatiotemporal distribution of microcystin concentrations in Lake Erie (funded by NOAA/CILER)

Grants and Awards (∗∗: in 2014-2015 academic year, ∗: since joining UT)

External Funded Projects

1. ∗∗ Title: Grass-carp spawning potential in the Sandusky River basin
   Investigators: S. Qian (PI), C. Mayer (Co-PI)
   Funding Agency: USGS-CESU
   Project Amount: $100,059 (2015-2016)

2. ** Title: Survey and experimental approaches quantifying the effect of shoreline vegetation on the coastal fish community
   Investigators: C. Mayer (PI), S. Qian (Co-PI)
   Funding Agency: Ohio Department of Natural Resources
   Project Amount: $53,808 (phase I, 2015-2016)
3. ** Title: Model development for supporting mitigating Western Lake Erie harmful and nuisance algal blooms
   Investigators: S. Qian (PI)
   Funding Agency: NOAA-CILER
   Project Amount: $61,544 (2015-2016)
4. ** Title: Foodweb Structure and Trophic TransferAcross Lake Erie's Productivity Gradients
   Investigators: C. Mayer (PI), S. Qian (Co-PI)
   Funding Agency: USGS-CESU
   Project Amount: $93,933 (2014-15)
5. ** Title: Hydroacoustic determination of distribution and abundance of Lake Erie walleye
   Investigators: C. Mayer (PI), S. Qian (Co-PI)
   Funding Agency: Ohio Division of Wildlife
   Project amount: $62,550 (2014), $59,345 (2015)
6. * Assessing the Effects of Conservation Practices and Fertilizer Application Methods on Nitrogen and Phosphorus Loss from Farm Fields – A Meta Analysis
   Investigator: S. Qian
   Funding Agency: International Plant Nutrition Institute
   Project Amount: $55,840 (2014-15)
7. * Title: A Bayesian Hierarchical Modeling Approach for Comparing Water Quality Measurements from Different Sources
   Investigators: S. Qian (PI) and T. Bridgeman (Co-I)
   Funding Agency: University of Michigan Water Center
   Project Amount: $50,000 (2014-2015)
8. * Title: Internal and External Nutrient Fluxes to Western Lake Erie
   Investigators: T. Bridgeman (PI), S. Qian (Co-PI), R. Becker (Co-PI), Y.Seo (Co-I), C. Mayer (Co-I)
   Funding Agency: US EPA
   Project Amount: $164,042 (2013-2015)
9. Title: The Development of Modeling Approaches for the National Water Quality Assessment Program Effects of Urbanization on Stream Ecosystems (EUSE) Topical Study
   Investigators: S.S. Qian and K.H. Reckhow
   Funding Agency: USGS Project Amount: $ 233,000 (2010-2012)
10. Title: The Development of Modeling Approaches for the National Water Quality Assessment Program Effects of Urbanization on Stream Ecosystems (EUSE) Topical Study,
    Investigators: Song S. Qian and K.H. Reckhow
    Funding agency: USGS (cooperative agreement)
    Project amount: $ 232,892 (2008-2010)
11. Title: Using Bayesian networks and satellite imagery to implement transparent decision-making and adaptive management
    Investigators: Kenneth H. Reckhow, Jon Goodall, Song S. Qian
    Funding Agency: EPA ORD's Advanced Monitoring Initiative (AMI)
    Project Amount: $ 250,000 (2007-2009)
12. Title: Understanding Ecological Thresholds in Aquatic Systems Through Retrospective Analysis,
    Investigators: C.J. Richardson and S.S. Qian
    Funding Agency: EPA STAR Project Amount:$278,876 (2006-2007)

13. Title: A nonparametric Bayesian approach for quantifying herbicide exposure in streams
Investigators: S.S. Qian and Y. Pan
Funding Agency: EPA STAR
Project Amount: $167,000 (1999 - 2002)
14. Title: Modeling mercury fish tissue concentrations in the southeastern US
Investigators: S. Qian (PI)
Funding Agency: EPA/The Cadmus Group, Inc. Project Amount: $16,000 (1999)

Internally Funded Projects

1. ** Title: Modeling spatiotemporal nutrient source distribution in the Maumee River basin
Investigators: S. Qian (PI)
Funding Agency: University of Toledo
Project Amount: $28,000 (2015)
2. ** Title: Teaching environmental statistics in the US and in China
Investigators: S. Qian (PI)
Funding Agency: Kohler International Awards, The University of Toledo
Project Amount: $1,500 (2015)
3. * Title: Scales and Levels in Ecological and Environmental Data Analysis and Modeling A Bayesian Hierarchical Modeling Approach
Investigators: S. Qian (PI)
Funding Agency: University of Toledo Summer Fellowship Program
Project Amount: $12,000 (2013)

Awards

1. Outstanding Teaching Award in Science and Engineering, Portland State University, 2000.
2. Faculty development award, Portland State University, 2000

Publications (**: during 2014-2015 academic year, *: since joining UT, †: my graduate student, ‡: other student and work as a result of my teaching)

1. ** S.S. Qian, C.A. Stow, and Y.K. Cha (2015) Implications of Stein's paradox for environmental standard compliance assessment. *Environmental Science and Technology.* 49, 5913-5920.
2. ** S.S. Qian (2015) The frequency component of water quality criterion compliance assessment should be data driven. *Environmental Management*, doi:10.1007/s00267-015-0493-1
3. ** S.S. Qian, R.J. Miltner (2015) A continuous variable Bayesian networks model for water quality modeling: A case study of setting nitrogen criterion for small rivers and streams in Ohio, USA. *Environmental Modelling and Software*, 69: 14-22.
4. ** J. Yun †, S.S. Qian (2015) A hierarchical model for estimating longterm trend of atrazine concentration in the surface water of the contiguous US. *Journal of American Water Resources Association.* DOI:10.1111/jawr.12284
5. * S.S. Qian, T.F. Cuffney (2014) A hierarchical zero-inflated model for species compositional datafrom individual taxon responses to community response. *Limnology and Oceanography: Methods* 12, 498-506.
6. * J.J. Sherman ‡, A.M. Maran ‡, C.D. Collier ‡, M.R. Snyder ‡, P.C. Golnick ‡, S.S. Qian (2014) Re: M. Song, Y. Guan,"The environmental efficiency of Wanjiang demonstration area: A Bayesian estimation approach" [Ecol. Indic. 36 (2014) 5967]. *Ecological Indicators* 45, 648-649.
7. * H.M.H. Siersma, C.J. Foley, C.J. Nowicki, S.S. Qian, D.R. Kashian (2014) Trends in the distribution and abundance of *Hexagenia* spp. in Saginaw Bay, Lake Huron, 1954-2012: Moving towards recovery? *Journal of Great Lakes Research* 40, 156-167.

8. ∗ F. Nojavan A †, S.S. Qian, H.W. Paerl, K.H. Reckhow, E.A. Albright (2014) A study of anthropogenic and climatic disturbance of the New River Estuary using a Bayesian belief network. *Marine Pollution Bulletin* 83, 107-115.
9. ∗ Qian, S.S. (2014) Statistics in ecology is for making a "principled" argument. *Landscape Ecology* 29, 937-939.
10. ∗ C.A. Stow, Y.K. Cha and S.S. Qian (2014) A Bayesian hierarchical model to guide development and evaluation of substance objectives under the 2012 Great Lakes Water Quality Agreement. *Journal of Great Lakes Research*, 40: 49-55.
11. ∗ M.R. DuFour†, J..J. Pritt, C.M. Mayer, C.A. Stow, S.S. Qian (2014) Bayesian hierarchical modeling of larval walleye (Sander vitreus) abundance and mortality: accounting for temporal and spatial variability on a large river. *Journal of Great Lakes Research*. 40: 29-40.
12. ∗ S.S. Qian (2014) Ecological threshold and environmental management: A note on statistical methods for detecting thresholds. *Ecological Indicators* 38, 192-197.
13. ∗ C.A. Stow, J. Dyble, D.R. Kashian, T.H. Johengen, K.P. Winslow, S.D. Peacor, S.N. Francoeur, A.M. Burtner, D. Palladino, N. Morehead, D. Gossiaux, Y. Cha, S.S. Qian, D. Miller (2014) Phosphorus targets and eutrophication objectives in Saginaw Bay: A 35 year assessment. *Journal of Great Lakes Research* 40, 4-10.
14. ∗ X. Hou, L. Ying, Y. Chang, S.S. Qian, Y. Zhang (2014) Modeling of nonpoint source nitrogen pollution from 1979 to 2008 in Jiaodong Peninsula, China *Hydrological Processes* 28, 3264-3275.
15. ∗ I. Alameddine †, S. Karmakar, S.S. Qian, H.W. Paerl, K.H. Reckhow (2013) Optimizing an estuarine water quality monitoring program through an entropybased hierarchical spatiotemporal Bayesian framework. *Water Resources Research* 49 (10), 6933-6945
16. ∗ T.F. Cuffney and S.S. Qian (2013) A critique of the use of indicator-species scores for identifying thresholds in species responses. *Freshwater Science* 32 (2), 471-488
17. ∗ W.J. Arendt, S.S. Qian, K.A. Mineard (2013) Population decline of the Elfin-woods Warbler Setophaga angelae in eastern Puerto Rico. *Bird Conservation International*, 2013, 1-11.
18. ∗ X Hou, T Wu, L Yu, S Qian (2013) Characteristics of multi-temporal scale variation of vegetation coverage in the Circum Bohai Bay Region, 1999-2009. *Acta Ecologica Sinica* 32 (6), 297-304
19. ∗ S.S. Qian (2012) On model coefficient estimation using Markov chain Monte Carlo simulations: A potential problem and the solution *Ecological Modelling*, 247, 302-306.
20. W.L. Bauerle, R. Oren, D.A. Way, S.S. Qian, P.C. Stoy, P.E. Thornton, J.D. Bowden, F.M. Hoffman, R.F Reynolds (2012), Photoperiodic regulation of the seasonal pattern of photosynthetic capacity and the implications for carbon cycling, *Proceedings of the National Academy of Sciences*, 109(22): 8612-8617.
21. S.S. Qian, T.F. Cuffney, and G. McMahon (2012), Multinomial regression for analyzing macroinvertebrate assemblage composition data, *Freshwater Science*, 31 (3), 681-694.
22. B.D. Best, P.N. Halpin, A.J. Read, E. Fujioka, C.P. Good, E.A. LaBrecque, R.S. Schick, J.J. Roberts, L.J. Hazen, S.S. Qian, D.L. Palka, L.P. Garrison, W.A. McLellan (2012) Online cetacean habitat modeling system for the US east coast and Gulf of Mexico, *Endangered Species Research*, 18:1-15.
23. S.S. Qian and T.F. Cuffney (2012) To threshold or not to threshold? That is the question. *Ecological Indicators* 15 (1), 1-9.
24. TF Cuffney, SS Qian, RA Brightbill, JT May, IR Waite (2011) Response to King and Baker: limitations on threshold detection and characterization of community thresholds, *Ecological Applications*, 21 (7), 2840-2845.
25. TF Cuffney, R Kashuba, SS Qian, I Alameddine, YK Cha, B Lee, JF Coles, G McMahon (2011) Multilevel regression models describing regional patterns of invertebrate and algal responses to urbanization across the USA, *Journal of the North American Benthological Society*, 30 (3), 797-819.

26. R. Wu †, S.S. Qian, F. Hao, H. Cheng, D. Zhu, and J. Zhang (2011) Modeling Contaminant Concentration Distributions in China's Centralized Source Waters. *Environmental Science and Technology*, 45(14): 60416048.

27. T.F. Cuffney, R. Kashuba, S.S. Qian, I. Alameddine, Y.K. Cha, B. Lee, J.F. Coles, and G. McMahon (2011) Multilevel regression models describing regional patterns of invertebrate and algal responses to urbanization across the USA. *Journal of the North American Benthological Society* 30(3): 797-819.

28. I. Alameddine, S.S. Qian, and K.H. Reckhow (2010). A Bayesian changepoint–threshold model to examine the effect of TMDL implementation on the flow-nitrogen concentration relationship in the Neuse River basin. *Water Research* 45(1): 51-62.

29. Z. Zhang and X. Yu and S.S. Qian and J. Li (2010) Spatial variability of soil nitrogen and phosphorus of a mixed forest ecosystem in Beijing, China, *Environmental Earth Sciences*, 60(8): 1783-1792.

30. N. Li and Z. Fu and X. Zhang and S.S. Qian (2010) Assessing the Risk of Hydroxybenzene Contamination in Fish Raised on a Chinese Aquaculture Farm, *Human and Ecological Risk Assessment*, 16: 212-224.

31. S.S. Qian, T.F. Cuffney and I. Alameddine and G. McMahon and K.H. Reckhow (2010) On the Application of Multilevel Modeling in Environmental and Ecological Studies, *Ecology*, 91(2): 355-361.

32. S.S. Qian and J.K. Craig and M.M. Baustian and N.N. Rabalais (2009) A Bayesian hierarchical modeling approach for analyzing observational data from marine ecological studies, *Marine Pollution Bulletin*, 58(12): 1916-1921.

33. A.D. Gronewolda, S.S. Qian, R.L. Wolpert, and K.H. Reckhow (2009) Calibrating and validating bacterial water quality models: A Bayesian approach, *Water Research*, 43(10): 2688-2698.

34. K.H. Reckhow, S.S. Qian, D. Hammel (2009) A multilevel model of the impact of farm-level BMPs on phosphorus runoff. *Journal of the American Water Resources Association*, 45(2): 369377.

35. C.J. Richardson, S.S. Qian, P. Vaithiyanathan, Panchabi, R.S. King, R.G. Qualls, and C.A. Stow (2008) Response to Comment on "Estimating Ecological Thresholds for Phosphorus in the Everglades", *Environmental Science and Technology*, 42(17): 6772-6773.

36. B. Poulter, S.S. Qian and N.L. Christensen (2008) Determinants of coastal treeline and the role of abiotic and biotic interactions, *Plant Ecology* (2008), pp. DOI 10.1007/s11258-008-9465-3

37. D. Harmel, S.S. Qian, K.H. Reckhow, P. Casebolt (2008) The MANAGE Database: Nutrient Load and Site Characteristic Updates and Runoff Concentration Data, *Journal of Environmental Quality*, 37: 2403-2406.

38. K.K. Karanth, R.A. Kramer, R.A., S.S. Qian, N.L. Christensen (2008) Examining conservation attitudes, perspectives, and challenges in India. *Biological Conservation* 141:2357-2367.

39. B. Poulter, N.L. Christensen, N.L., S.S. Qian (2008) Tolerance of *Pinus taeda* and *Pinus serotina* to low salinity and flooding: Implications for equilibrium vegetation dynamics. *Journal of Vegetation Science* 19: 15-22.

40. A.S. Friedlaender, W.R. Fraser, D. Patterson, S.S. Qian (2008) and P.N. Halpin, The effects of prey demography on humpback whale (Megaptera novaeangliae) abundance around Anvers Island, Antarctica, *Polar Biology*, 31(10): 1217-1224.

41. C.J. Richardson, R.S. King, S.S. Qian, P. Vaithiyanathan, R.G. Qualls, and C.A. Stow (2007) Estimating ecological thresholds for phosphorus in the Everglades. *Environmental Science and Technology*, DOI: 10.1021/es062624w.

42. C.E. Sellinger, C.A. Stow, E.C. Lamon, and S.S. Qian (2007) Recent water level declines in the Lake Michigan-Huron system, *Environmental Science and Technology* DOI: 10.1021/es070664+.

43. Arhonditsis, G.B., Qian, S.S., Stow, C.A., Lamon, E.C., and Reckhow, K.H. (2007) Eutrophication risk assessment using Bayesian calibration of process-based models: Application to a mesotrophic lake. *Ecological Modelling*, 208: 215-229.

44. Qian, S.S. and K.H. Reckhow (2007) Combining model results and monitoring data for water quality assessment, *Environmental Science and Technology*, 41, 5008-5013.

45. Qian, S.S. and Shen, Z. (2007) Ecological applications of multilevel analysis of variance, *Ecology*, 88(10): 2489-2495.

46. Lamon, E.C. and Qian, S.S. (2007) Regional scale stressor-response models in aquatic ecosystems. *Journal of American Water Resources Association*, 44(3):771-781.

47. Stow, C.A., Reckhow, K.H., Qian, S.S., Lamon, E.C., Arhonditsis, G.B., Borsuk, M.E. and Seo, D. (2007) Evaluating water quality model uncertainty for adaptive TMDL implementation. *Journal of American Water Resources Association*, 43(6):1499-1507.

48. Malve, O. and Qian, S.S. (2006) Estimating nutrients and chlorophyll a relationships in Finnish Lakes. *Environmental Science and Technology*, 40(24):7848-7853.

49. Qian, S.S. and R.E. Lyon (2006) Characterization of background levels of contaminants using a mixture of normal distributions, *Environmental Science and Technology*, 40(19): 6021-6025.

50. Stow, C.A., K.H. Reckhow, and S.S. Qian (2006) A Bayesian approach to retransformation bias in transformed regression, *Ecology*, 87(6):1472-1477.

51. Friedlaender, A.S., Halpin, P.N., Qian, SS, Lawson, GL, Weibe, PH, Thiele, D., and Read, A.J. (2006) Whale distribution in relation to prey abundance and oceanographic processes in shelf waters of the Western Antarctic Peninsula. *Marine Ecology Progress Series*, 317:297-310.

52. Redfern, J.V., Ferguson, M.C., Becker, E.A., Hyrenbach, K.D., Good, C., Barlow, J., Kaschner, K., Baumgartner, M.F., Forney, K.A., Ballance, L.T., Fauchald, P., Halpin, P., Hamazaki, T., Pershing, A.J., Qian, S.S., Read, A., Reilly, S.B., Torres, L., and Werner, F. (2006) Techniques for cetaceanhabitat modeling, *Marine Ecology Progress Series*, Vol. 310: 271-295.

53. Qian, S.S., K.G. Linden, M. Donnelly (2005) A Bayesian analysis of mouse infectivity data to evaluate the effectiveness of using ultraviolet light as a drinking water disinfectant. *Water Research*, (39):4229-4239.

54. Qian, S.S., K.H. Reckhow, J. Zhai, G. McMahon (2005) Nonlinear regression modeling of nutrient loads in streams – a Bayesian approach *Water Resources Research*, 41(7):W07012.

55. Stow, C.A., Qian, S.S., and Craig, J.K. (2005) A Declining Threshold for Hypoxia in the Gulf of Mexico. *Environmental Science and Technology*, 39, 716-723.

56. Lamon, E.C., Qian, S.S., and Richter, D. (2004) Temporal changes in the stream flow vs. sediment concentration relationship in the Yadkin River, NC, USA. *Journal of the American Water Resources Association*, 40(5):1219-1229.

57. Qian, S.S., Schulman, A., Koplos, J., Kotros, A., and Kellar, P. (2004) A Hierarchical Modeling Approach for Estimating National Distributions of Chemicals in Public Drinking Water Systems. *Environmental Science and Technology*, 38:1176-1182.

58. Stow, C.A., Lamon, E.C., Qian, S.S., Schrank, C.S. (2004) Will Lake Michigan Lake Trout Meet the Great Lakes Strategy 2002 PCB Reduction Goal?, *Environmental Science and Technology*, 38:359-363.

59. Qian, S.S., Donnelly, M., Schmelling, D.C., Messner, M., Linden, K.G., and Cotton, C. (2004) Ultraviolet Light Inactivation of Cryptosporidium and Giardia in Drinking Water: A Bayesian Meta-Analysis. *Water Research*, 38:317-326.

60. Qian, S.S., M. Lavine. (2003) Setting Standards for Water Quality in the Everglades *Chance*, 16(3):10-16.

61. Qian, S.S., Y. Pan, and R. King (2004) Soil Total Phosphorus Threshold in the Everglades: A Bayesian Changepoint Analysis for Multinomial Response Data, *Ecological Indicators*, 4: 29-37.

62. Qian, S.S., R. King, and C.J. Richardson (2003) Two Statistical Methods for the Detection of Environmental Thresholds *Ecological Modelling*, 166:87-97.

63. McMahon, G., Alexander, R.B., and Qian, S.S. (2003) Support of TMDL Programs Using Spatially Referenced Regression Models. *ASCE Journal of Water Resources Planning and Management*. 129(4):315-329.

64. Qian, S.S., C.A. Stow, and M. Borsuk (2003) On Bayesian inference using Monte Carlo Simulation *Ecological Modelling*, 159:269-277.

65. Qian, S.S., W. Warren-Hicks, J. Keating, D.R.J. Moore, and R.S. Teed (2001) A Predictive Model of Mercury Fish Tissue Concentrations for the Southeastern United States, *Environmental Science and Technology*, 35(5): 941-947.

66. Qian, S.S., M.E. Borsuk and C. A. Stow (2000) Seasonal and Long-Term Nutrient Trend Decomposition along a Spatial Gradient in the Neuse River Watershed, *Environmental Science and Technology*, 34:4474-4482.

67. Qian, S.S., M.L. Lavine and C.A. Stow (2000) Bayesian nonparametric binary response regression models with application in environmental management, *Environmental and Ecological Statistics* 7(1):75-89.

68. Qian, S.S. and C.W. Anderson (1999) Exploring factors controlling the variability of pesticide concentrations in the Willamette River Basin using tree-based models, *Environmental Science and Technology*, 33(19):3332-3340.

69. Richardson, C.J. and S.S. Qian (1999) Long-term phosphorus assimilative capacity in freshwater wetlands: a new paradigm for sustaining ecosystem structure and function, *Environmental Science and Technology*, 33(10):1545-1551.

70. Qian, S.S., K.H. Reckhow (1998) Modeling phosphorus trapping in wetlands using nonparametric Bayesian analysis, *Water Resources Research*, 34(7):1745-1754.

71. Stow, C.A. and S.S. Qian (1998) A size-based probabilistic assessment of PCB exposure from Lake Michigan fish consumption, *Environmental Science and Technology*, 32:2325-2330.

72. Qian, S.S. (1997) Estimating the area affected by agricultural runoff in an Everglades wetland: a comparison of Bayesian kriging and universal kriging (with discussion), *Environmental and Ecological Statistics*, 4(1): 1-29.

73. Qian, S.S. (1997) An illustration of model structure identification, *Journal of American Water Resources Association* 33(4): 811-824.

74. Qian, S.S. (1997) Water quality model structure identification using dynamic linear modeling: River Cam case study revisited, *Water Science and Technology*, 36(5): 27-34.

75. Qian, S.S. and C.J. Richardson (1997) Estimating the long-term phosphorus accretion rate in the Everglades: a Bayesian approach with risk assessment, *Water Resources Research*, 33(7): 1681-1688.

76. C.J. Richardson, S.S. Qian, C.B. Craft, and G.R. Qualls (1997) Predictive models for phosphorus retention in Wetlands, *Wetlands Ecology and Management* 4: 159-175.

77. Reckhow, K.H., and S.S. Qian (1994), Modeling wetland phosphorus trapping using generalized additive models, *Water Resources Research*, Vol. 30 (11): 3105-3114.

78. Qian, S. and L. C. Brown (1990) DO uncertainty with correlated inputs, *Journal of Environmental Engineering Division*, ASCE, Vol. 116 (6): 11641180.

Books and Book Chapters

79. ** Qian, S.S. (2016) *Environmental and Ecological Statistics with R.* (2nd Ed) Chapman and Hall/CRC Press.

80. Qian, S.S. (2012) Analytical Options for Estimating Ecological Thresholds: Statistical Considerations. In: R.A. Gitzen, J.J. Millspaugh, A.B. Cooper, and D.S. Licht, (Eds.) *Design and Analysis of Long-term Ecological Monitoring Studies*, Cambridge University Press. 2012. pp. 279-297.

81. Qian, S.S. (2010) *Environmental and Ecological Statistics with R*. Chapman and Hall/CRC Press. (Published in August 2009)
82. Qian, S.S. and Pan, Y. (2006) Historical soil total phosphorus concentration in the Everglades. In Burk, A.R. (Ed), *Focus on Ecological Research*. Nova Science Publishers, New York, 2006, pp131-150.
83. Qian, S.S. and Richardson, C.J. (2008) Spatial Distributions of Total Phosphorus and Phosphorus Accretion Rate in the Everglades Soils. *In* Richardson, C.J. (ed.) *The Everglades Experiments: Lessons for Ecosystem Restoration*. Springer-Verlag, New York, 2008.
84. Richardson, C.J. and Qian, S.S. (2008) Long-Term Phosphorus Assimilative Capacity (PAC) in the Everglades. *In* Richardson, C.J. (ed.) *The Everglades Experiments: Lessons for Ecosystem Restoration*. Springer-Verlag, New York, 2008.
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SERVICE

- Department computation committee
- Department program assessment committee (MS/PhD program)
- Faculty search committee, Department of Mathematics and Statistics (2015)
- Associate Editor – Journal of the American Water Resources Association (since 2013)
- Statistics Editor – Tree Physiology (since 2012)
- Editor, Environmental and Ecological Data Analysis and Modeling, a book series to be published jointly by Wiley and China Higher Education Press (since 2011)
- Manuscript and grant proposal review –

  Manuscript review for *BioScience, Canadian Journal of Civil Engineering, Canadian Journal of Fisheries and Aquatic Sciences, Ecological Applications, Ecology, Ecosystems, Environmental Engineering Science, Environmental Research Letters, Environmental Science and Technology, Hydrological Processes, Journal of Agricultural, Biological, and Environmental Statistics, Journal of American Water Resources Association, Journal of Endangered Species Research, Journal of Environmental Quality, Journal of Environmental Engineering, Journal of Environmental Management, Journal of Great Lakes Research, Journal of Hydrological Engineering, Journal of the North American Benthological Society, Journal of Water Resources Planning and Management, Lake and Reservoir Management, Landscape Ecology, PlosOne, Tree Physiology, Water Research, Water Resources Research*

  Grant proposal review for National Science Foundation,
  Department of Environmental Quality, State of Oregon,
  Environmental Services, City of Portland, Oregon,
  South Florida Water Management District,
  Maryland Seagrant,
  Water Resources Research Institute of the University of North Carolina,
  Corporative Analysis of Marine Ecosystem Organization,
  Ohio Water Resources Research Institute Program

SOCIETY MEMBERSHIPS

American Water Resources Association, American Statistical Association, American Association for the Advancement of Science, Society of Freshwater Science, American Society of Limnology and Oceanography