Kevin A. Johnson

Professor, Department of Chemistry
Director, Environmental Sciences Program
Southern Illinois University Edwardsville
Edwardsville, IL 62026-1652
618.650.5934; kevjohn@siue.edu

EDUCATION

Institution	*Degree*	*Year*
Clemson University	Ph.D., Environmental Toxicology	1996
University of California Davis	B.S., Environmental Toxicology	1992

PROFESSIONAL EMPLOYMENT

Employer	*Title*	**Term**
Southern Illinois University Edwardsville	Director, Environmental Sciences Program	07/10-Present
Southern Illinois University Edwardsville	Interim Director, Center for STEM	07/09-02/10
Southern Illinois University Edwardsville	Associate Dean, College of Arts and Sciences	08/08-06/10
Southern Illinois University Edwardsville	Professor, Chemistry	07/08-Present
Southern Illinois University Edwardsville	Assistant Dean, College of Arts and Sciences	07/06-07/08
Southern Illinois University Edwardsville	Acting Director, Environmental Sciences Program	07/06-04/07
Southern Illinois University Edwardsville	Associate Professor, Chemistry	07/02-06/08
Southern Illinois University Edwardsville	Director, Environmental Sciences Program	07/03-06/06
Southern Illinois University Edwardsville	Acting Director, Environmental Sciences Program	07/01-06/03
Southern Illinois University Edwardsville	Assistant Director, Environmental Sciences	04/00-6/01
Southern Illinois University Edwardsville	Assistant Professor, Chemistry	08/97-06/02
Washington State University	Postdoctoral Research Associate	08/96-08/97
Clemson University	Instructor/Research Associate	01/96-07/96
Clemson University	Research Assistant	07/92-12/95

RESPONSIBILITIES AS ASSOCIATE DEAN

Associate Dean of Research, Projects, and Personnel (75%, Personnel oversight was transferred to another associate dean in 2009 due to time constraints of my other obligations): Duties include grant solicitations, review and processing; external and internal grant development, review and processing; first point of contact on Graduate School initiatives and graduate programs; coordination of equipment needs (including assessment of College

equipment needs regarding maintenance, repair and replacement); coordination of Instructional Equipment Requests; coordination of space assignment and represent Dean's Office in regards to the new Science Building and renovation project, as well as the new Chemistry, Biological Sciences, and GIS labs in University Park; budget planning meetings and hiring tenure-track and non tenure-track faculty; first point on collective bargaining issues with Human Resources; and oversight of WSIE and the University Museum. In addition to the above, I also spend time working on faculty grants and research activities.

RESPONSIBILITIES AS INTERIM DIRECTOR OF THE CENTER FOR STEM RESEARCH, EDUCATION AND OUTREACH

Interim Director (10% current overload): Responsible for the organization and administration of the institute including all fiscal and personnel-related matters. In addition to the facilitation and management of existing research and outreach activities, the director is expected to generate new projects through external funding sources to advance the institute, university, and region in all STEM areas. The Director is also be responsible for leading, promoting, and collaborating on all grant-related initiatives associated with the institute.

RESPONSIBILITIES AS ACTING/DIRECTOR OR DIRECTOR OF THE ENVIRONMENTAL SCIENCES PROGRAM

Acting Director or Director (50%, former position for six years): As Director of a degree granting Program my duties were essentially the same as that of a Department Chair. As the Program's administrator, my functions included curricular and programmatic development, budget management, faculty development and assignments, and student recruitment, advisement, and retention. As Director of an interdisciplinary program, with faculty holding joint appointments in various Departments, I needed to regularly interact with other Department Chairs in matters related to the Environmental Sciences Program and its faculty members.

AREAS OF RESEARCH SPECIALIZATION

Research interests are in analytical/environmental chemistry and toxicology; more precisely, method development of passive sampling devices, evaluation of factors affecting the bioavailability of contaminants in soils, as well as the extraction and instrumental analysis of contaminants in traditionally difficult matrices. Ongoing project include the use of critical body residues in ecological risk assessments in lieu of standardized toxicity data; Method development of a novel extraction techniques for POPs in turtle blood along the Tennessee River over a five year period and with five different species; Use of turtle blood as a biomonitoring technique for pharmaceuticals and some POPs along the Illinois River; Evaluation of contaminants (pharmaceuticals, personal care products, endocrine disruptors, POPs and others) in water samples looking at such factors as: their levels, removal strategies, and toxicity; their levels in surface waters along the Illinois River; removal efficiencies in three different waste water processing treatments; as well evaluating their aquatic toxicity testing of individual, and mixtures thereof, pharmaceuticals found in both of the above studies; and

Another area of interest is the environmental fate, mass transport, ecotoxicity of insecticide exposure to wildlife, and bioaccumulation of contaminants, as well as the amelioration of co-contaminated point- and non-point source water through the use of vegetative filter strips and/or constructed flow-through wetlands. Several of my research interests are being integrated into collaborative efforts with others at SIUE and the University of Tennessee at Chattanooga

focusing on techniques that can be incorporated together to perform holistic ecological risk assessments and risk reduction.

OTHER RESEARCH EXPERIENCE

Past Research at Southern Illinois University Edwardsville since 08/97
The overall emphasis of my research is in contaminant movement, degradation, and effects in the environment. We have studied factors that affect, and methods to determine, the bioavailability of organic contaminants in soils. This was done in conjunction with the development and/or refinement of a sampling device that will yield estimates of both total and bioavailable contaminant soil concentrations. Other research was conducted in the areas of fate and transport of contaminants, environmental forensics, effectiveness of vegetative filter strips and constructed wetlands as a BMP to remove non-point source pollution, and phytoremediation. We also worked with others at Kansas State University and Texas Tech University on the ecotoxicity of insecticide exposure to neotropical migratory birds.

Postdoctoral Research, Washington State University, 8/96 - 7/97:
A portion of my research efforts were spent further evaluating terrestrial passive sampling, focusing on contaminants in soils of differing properties than those studied in graduate research. The other emphasis was on residue analysis of agrochemicals in minor crops for pesticide registration under EPA's Good Laboratory Practice standards. Work with minor crops involved method development for extraction and instrumental analysis of pesticides in varied and frequently difficult matrices.

Graduate Research, Clemson University, 7/92 - 8/96:
Optimized and validated the use of terrestrial passive sampling devices (PSDs) for the accurate estimation of soil contaminant concentrations using laboratory studies and on-site field assessments. Throughout my graduate career I spent a considerable amount of time developing methods of extraction and analysis for various contaminants, often with analytically sensitive chemicals. I also worked on several other projects, among them: pollutant source identification in an urban stream after storm events; development of methods to evaluate pesticide distributions, analytically and biochemically, in Costa Rican banana plantations; evaluation of the sub-lethal effects of chlorpyrifos on the freshwater invertebrate, *Daphnia Magna*, using pulsed contaminant exposures; and evaluation of mechanisms of organophosphate (OP) toxicity in European starlings using non-lethal methods of detecting and/or monitoring OP exposure to wildlife.

Undergraduate Research, University of California, Davis, 1991 - 1992:
Assisted in the collection, extraction and analysis of samples to evaluate long range atmospheric transport of organophosphate insecticides from California's Central Valley to the Sierra Nevada mountains.

ACADEMIC SERVICE (unrelated to my current position)

University Committees
- Biotechnology Research and Curriculum Committee 2003-current
- BRIDGE (Baccalaureate Reform through Integrated Design of General Education) team (redesigning general education proposal) 2005-2006
- Environmental Quality Board 2000-2003
- Graduate Program Review: Secondary Education 2003-2004
- University Representative for the Morris K. Udall Foundation (scholarship for

Sophomores and Juniors) 2001- current
University Focus Group 2002

College Committees
Biological Scientist Search Committees, 1998-1999, 2001-2002, 2002-2003, 2003-2004
Colloquium Committee, Chair, 2000-2002
Political Scientist Search Committees, 1997-1998, 1998-1999, & 2001-2002
Science Building Committees, 1998-1999, 2005-current
Working group: Increasing Graduate Student Numbers and Enhancing Graduate Programs, 2006-current

Department of Chemistry
Executive Committee, Chair 2003-4 & 2005-6, member 2004-5
Facilities and Instrumentation Committee, Chair, 1997-2007
Annual Peer Merit Review Committee, 2003-2006
Student Assessment and Outreach Committee, 1997-2003
ACS Student Affiliates/Chemistry Club, 1997- 2000 (1998-1999, Advisor)

Environmental Sciences Program
Director, AY03-AY07
Acting Director, AY01-02
Assistant Director, AY00
Curriculum Committee, 1997-current
Admissions Committee, 1997-current
Recruitment, 1997-current

HONORS

Distinguished Research Award, Sigma Xi, 2000.
Outstanding Instructor of the Year, Department of Environmental Toxicology, 1995-96.
Outstanding Ph.D. Candidate of the Year, Department of Environmental Toxicology, 1995-96.
Member of Sigma Xi and Alpha Epsilon Lambda, Professional Honor Societies
Graduated with Honors, UC Davis, College of Agricultural and Environmental Sciences, 1992.

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Adjunct faculty member, Texas Tech University, Department of Toxicology & the Institute of Environmental and Human Health Science, Environmental Toxicology, since 1998.
Adjunct faculty member, University of Tennessee at Chattanooga, since 2005.
American Chemical Society (ACS)
Student Awards Committee Member, Division of Environmental Chemistry
American Soil Science Association, Syngenta Crop Protection Recognition Award Committee
Editorial Board for the Journal of Water, *Air, and Soil Pollution*, since 1998.
Editorial Board for the Journal of *Water, Air, and Soil Pollution-Focus*, since 2000.
European Science Foundation peer reviewer, since 2005.
Illinois State Academy of Sciences (ISAS), member
Serve as a reviewer for the journal, *Environmental Toxicology and Chemistry, since 1997.*
Society of Environmental Toxicology and Chemistry (SETAC), member
Soil Science Society of America (SSSA), member

TEACHING EXPERIENCE AND TRAINING (listed alphabetically)

Analysis of Environmental Contaminants, SIUE, Spring 1999-2008. *Ecological Risk Assessment*, SIUE, Summer 2001 and 2004.
Environmental Chemistry for Secondary Education Teachers, SIUE, Summer 1998.
Environmental Sampling, SIUE, Fall 1998 and 2000. Summers 2001-2004. Fall 2005.
Fate and Transport of Environmental Contaminants, SIUE, Spring 2001
Industrial and Environmental Chemistry, SIUE, Spring 1998.
Instrumental Analysis Laboratory, SIUE, Spring 2004.
Forensic analysis of organophosphorus and carbamate poisoning: A training course for laboratory analysts. Invited by the Argentinean National Service of Food & Agricultural Quality and the Secretary of Natural Resources; Financed by the U. S. Fish and Wildlife Service and the U. S. Department of the Interior. Buenos Aires, Argentina, Fall 1998.
Pollution Ecology, SIUE, Fall 2001.
Principles of Toxicology, SIUE, Spring 1999 and 2000, Falls 2000-2008.
Seminar (Chemistry), Spring and Fall 2006.
Seminar (Environmental Sciences), Spring 2002.
Toxicant Structure and Behavior, SIUE, Fall 1997 and 1998; WSU, Spring 1997.
Instructor, *Analytical Toxicology*, Clemson University, Spring 1996.
Teaching Assistant, *Chemodynamics*, Clemson University, Spring 1995.
Guest Lecturer, *Environmental Fate*, Clemson University, Fall 1994.
Teaching Assistant, *Analytical Toxicology*, Clemson University, Spring 1994.
U.S. EPA Treatment Technologies for Superfund (165.3), 1995.
U.S. EPA Safety & Health Decision-Making for Managers (165.8), 1995.
U.S. EPA Hazardous Materials Incident Response Operations (165.5), 1993.

EXTERNAL GRANTS OR CONTRACTS PENDING

2010-2013. National Institutes of Health. $427,328. "Persistent Pollutants and Cord Blood from Low Birth Weight Babies in St Louis Area." Principle Investigators (all SIUE): Kevin A. Johnson (CHEM/ENSC), Zhi-Qing Lin (BIOL/ENSC), and Marcia Maurer (Dean of the School of Nursing).

EXTERNAL GRANTS OR CONTRACTS AWARDED

2005-2008. US Fish and Wildlife: National Migratory Bird Conservation Act Grants Program. $74,243. "Ecotoxicology of Neotropical Migrant Shorebirds." Principle Investigators: Brett Sandercock (KSU), Mike Hooper (TTU), **Kevin Johnson**, and Richard Lanctot (USFW).
2005-2008. US Fish and Wildlife (Region 6). $117,999. "Ecotoxicology of Migratory Shorebirds." Principle Investigators: Brett Sandercock (KSU), Mike Hooper (TTU), **Kevin Johnson**, and Richard Lanctot (USFW).
2004-2006. National Institute of Health. $178,816. Exposure and effects assessment of residential exposure to PAHs and heavy metals in South Chattanooga, TN." Principle Investigators: Sean Richards (UTC), **Kevin Johnson**, Margaret Kovach (UTC), and Zhi-Qing Lin.

2003-2004. Evergreen Group. $6,000. “Measuring the Dissipation of Diazinon in Pond Water and Sediment Samples.” Principle Investigator: **Kevin Johnson**.

2002-2003. U.S. Fish and Wildlife, U. S. Department of the Interior (Bureau of Reclamations). $4,500. “Degradation rates and site specific environmental fate of chlopyrifos (Lorsban).” Principle Investigator: **Kevin Johnson**.

2002-2005. U.S. Environmental Protection Agency. $119,772. “Frontiers in risk applications and policy.” Principal Investigators: Kevin A. Johnson.

2000-2001. Madison County Soil and Water Conservation District. $4,000. “Pesticide and Nitrate Removal Using Agricultural Vegetative Filter Strips.” Principal Investigators: **Kevin Johnson** and James L.J. Houpis.

1999-2002. Manomet Center for Conservation Sciences. $15,000. “Evaluation of Footwashes, Regurgitations, and Pray items from Cattle Egrets in Wetlands Along the Delaware Bay Region.” Principal Investigator: **Kevin Johnson**.

1999-2000. Madison County Soil and Water Conservation District. $2,000. “Control of Non-Point Sources of Water Contamination through the use of a Vegetative Strip: Assessment of VFS management practices on the Control of a Livestock Non-Point Source.” Principal Investigators: **Kevin Johnson** and James L.J. Houpis.

1998-1999. Lockheed Martin/ Department of Energy. $18,000. “Raccoons (*Procyon Lotor*) as sentinels for polychlorinated biphenyl and heavy metal exposure and effects at the Paducah Gaseous Diffusion Plant, McCracken County, Kentucky” funded through Texas Tech University. Investigator: **Kevin Johnson**.

1998-1999. Madison County Soil and Water Conservation District. $2,000. “Control of Non-Point Sources of Water Contamination through the use of a Vegetative Strip: A Preliminary Assessment of the Control of a Livestock Non-Point Source.” Principal Investigators: **Kevin Johnson** and James L.J. Houpis.

INTERNAL GRANTS OR CONTRACTS AWARDED

2006. Southern Illinois University Edwardsville Excellence in Graduate Education. $3,762. “Graduate Recruitment in the Sciences.” Principle Investigator: **Kevin Johnson.**

2006. Illinois State Board of Higher Education. $2,000. “Ecotoxicity of Neotropical Migratory Shorebirds.” Principle Investigator: **Kevin Johnson.**

2005. Southern Illinois University Edwardsville Excellence in Undergraduate Education. $13,575. “Development of ENSC 220L – a laboratory Distributive NSM course.” Principle Investigators: Bill Retzlaff, **Kevin A. Johnson**, Nicolas Guehlstorf, and Zhi-Qing Lin.

2004. Southern Illinois University Edwardsville Funded University Research. $11,530. “Identification of volatile arsenical compounds produced during phytoremediation using a novel GC-MS technique.” Principle Investigators: **Kevin Johnson** and Zhi-Qing Lin.

2004. Southern Illinois University Edwardsville Competitive Research Equipment Grant. $19,595. “CombiPAL: Headspace, Liquid, and SPME GC Injection System.” Principle Investigator: **Kevin Johnson**.

2003. Southern Illinois University Edwardsville Excellence in Undergraduate Education. $13,919. “The Development of Courses and Implementation of the New Minor in Environmental Sciences.” Principle Investigator: **Kevin Johnson**.

2002. Illinois State Board of Higher Education. $5,000. “Frontiers in Risk Application.” Principle Investigator: **Kevin Johnson**.

2002. Southern Illinois University Edwardsville Excellence in Undergraduate Education. $4,300. “Environmental Collaboration Initiative.” Principle Investigators: Laura Perkins, **Kevin Johnson**, and Bill Retzlaff.

2001. Southern Illinois University Edwardsville Summer Research Fellowship. $3,000. “Evaluation of Differing Vegetation Types to Remove Contaminants in Vegetative Filter Strips.” Principle Investigator: **Kevin Johnson.**

2001. Southern Illinois University Edwardsville Funded University Research. $2,000. “Evaluation of Vegetative Filter Strips for the Remediation of Non-point Source Water Contamination.” Principal Investigator: **Kevin Johnson.**

2001. Southern Illinois University Edwardsville Competitive Research Equipment Grant. $5,475. “Vegetative Filter Strips (VFSs) as a Best Management Practice to Remove Non-Point Source Pollution: 1) Effects of VFS management on efficacy; and 2) Evaluation of differing vegetation of efficacy.” Principal Investigator: **Kevin Johnson**. Co-Principal Investigator: James L.J. Houpis.

2001. Southern Illinois University Edwardsville Competitive Research Equipment Grant. $8,022. “Vegetative Filter Strips (VFSs) as a Best Management Practice to Remove Non-Point Source Pollution: Evaluation of climatic conditions on VFS efficacy.” Principal Investigator: **Kevin Johnson**. Co-Principal Investigator: James L.J. Houpis.

2000-2001. Southern Illinois University Edwardsville Excellence in Graduate Education. $2,624. “Current techniques for the sampling and analysis of Environmental Contaminants.” Principal Investigators: **Kevin Johnson**.

2000-2001. Illinois State Board of Higher Education. $7,158. “Vegetative filter strips for the abatement of non-point pollution.” Principal Investigators: **Kevin Johnson**.

2000. Southern Illinois University Summer Research Fellowship. $6,000. “The use of passive sampling devices and earthworm contaminant accumulation to predict contaminant bioavailability”. Principle Investigator: **Kevin Johnson**.

1999. Southern Illinois University Summer Research Fellowship. $6,000. “The Effects of Contaminant Aging on Sorption, Bioavailability, and Passive Sampler Uptake”. Principle Investigator: **Kevin Johnson**.

1999. Southern Illinois University Graduate Research Fellowship. $500. “Changes in contaminant bioavailability as measured in contaminant uptake by the earthworm (*Eisenia foetida*)”. Principle Investigators: Tracey L. Kress and **Kevin Johnson**.

1999-2000. Southern Illinois University Funded University Research. $1,000. “Evaluation of Vegetative Filter Strips for the Remediation of Non-Point Source Water Contamination.” Principle Investigator: **Kevin Johnson**.

1998-1999. Southern Illinois University Funded University Research. $6,075. “The use of passive sampling devices to monitor subsurface soil contamination.” Principle Investigator: **Kevin Johnson**.

1998. Southern Illinois University Summer Research Fellowship. $6,000. “A novel technique to determine the bioavailability of contaminants in Soil”. Principle Investigator: **Kevin Johnson**.

1998. Southern Illinois University Graduate Research Fellowship. $500. “The bioavailability of Metal Cations in a Georgia Salt Marsh”. Principle Investigators: Tyler Schmitt and **Kevin Johnson**.

1998. Southern Illinois University Graduate School. $2,000. "Soil toxicity to the Earthworm, *Eisenia Foetida*: EC_{50}'s, critical body burdens, and contaminant aging." Principle Investigator: **Kevin Johnson**.

PEER REVIEWED ARTICLES PUBLISHED IN BOOKS (* student coauthor)

*L. Ruppert, Z.-Q. Lin, R. P. Dixon, and K. A. Johnson. 2007. Identification of Volatile Arsenical Compounds Produced During Phytoremediation Using a Novel Sampling and GC-MS Technique. In Zhu, Y., N. Lepp, and R. Naidu, Eds., Biogeochemistry of Trace Elements: Environmental Protection, Remediation, and Human Health, Tsinghua University Press, Beijing, China: pp 873-4. ISBN 978-7-302-15627-7

*P. Upadhyaya, R.P. Dixon, D. Duvernell, K.A. Johnson, and Z-Q Lin. 2007. Selenium Volatilization by Soil Bacteria Isolated from Rhizosphere of Rabbitfoot Grass (Polypogon monspeliensis). In Zhu, Y., N. Lepp, and R. Naidu, Eds., Biogeochemistry of Trace Elements: Environmental Protection, Remediation, and Human Health, Tsinghua University Press, Beijing, China: pp562-3. ISBN 978-7-302-15627-7

PUBLISHED PEER REVIEWED CONFERENCE PROCEEDINGS (* student coauthor)

*Lipe, S., Webb, S, Brewe, D, Johnson, K, and Z-Q Lin. 2005. Biological Transformation and Volatilization of Arsenic in a Soil-Rabbitfoot Grass System. Proceedings of the 8th International Conference on the Biogeochemistry of Trace Elements, Adelaide, Australia. 126-127.

Tryfonas, A.,Tucker, J., Brunkow, P., Johnson, K., Hussein, M., and Z-Q Lin. 2005. Bioaccumulation of Tin in Eggs of the Red-eared Slider (Trachemys scripta elegans) from the Lower Illinois River. Proceedings of the 8th International Conference on the Biogeochemistry of Trace Elements, Adelaide, Australia. 428-429.

Johnson, K. A., Hooper, M. J. and C. P. Weisskopf. 1997. The use of passive sampling devices (PSDs) to determine soil contaminant concentrations. In *Proceedings of the 1996 Pacific Basin Conference on Hazardous Waste*; Kuala Lumpur, Malaysia; November 4-8. pp 517-26.

PUBLICATIONS (* student coauthor)

18. Ruport, L., Dixon, R. P., Lin, Z-Q and K.A. Johnson. Development of a solid phase microfiber extraction sampling technique to monitor volatile organoarsinicals emitted during phytovolatilization. *Environmental International* (submitted)
17. Keller, S., Zhang, T.Q., Webb, S., Brugam, R., Johnson, K. And Z-Q Lin. 2008. Effects of suburban land use on phosphorous fractions and 2 speciation in the upper Peruque Creek, Eastern Missouri. *Wat. Environ. Research*. 80:316-323.
16. *Strum, K.M., Alfara, M., Haase, B., Hooper, M.J., Johnson, K.A., Lanctot, R.B., Lesterhuis, A.J., Lopez, L., Matz, A.C., Morales, C., *Paulson, B., Sandercock, B.K., Tores-Dowdall, J. and M.E. Zaccagnini. 2008. Plasma cholinesterases for monitoring pesticide exposure in neotropical migratory shorebirds. *Ornitologia Neotropical* 19:641-651.
15. *Bikram Shrestha, *Shawn Lipe, Kevin Johnson, Tiequan Zhang, William Retzlaff, and Zhi-Qing Lin. 2006. Soil Hydraulic Manipulation and Organic Amendment for the

Enhancement of Selenium Volatilization in a Soil-Pickleweed System. *Plant and Soil.* 288:189-196.

14. *Tryfonas, A. E., J.K. Tucker, P.E. Brunkow, K.A. Johnson, H.S. Hussein, and Z.-Q. Lin. 2006. Metal accumulation in eggs of the red-eared slider (*Trachemys scripta elegans*) in the Lower Illinois River. *Chemosphere*. 63:39-48.
13. *Smith, P. N., Johnson, K. A., Anderson, T. A. and McMurry. 2003. Environmental Exposure to Polychlorinated Biphenyl among Raccoons (Procyon lotor) at the Paducah Gaseous Diffusion Plant, Western Kentucky. *Environmental Toxicology and Chemistry*. 22:406-416.
12. *Smith, P. N., Bandiera, S. M., Skipper, S. L., Johnson, K. A. and S. T. McMurry. 2003. Environmental Polychlorinated Biphenyl Exposure and Cytochroms P450 in Raccoon (Procyon lotor). *Environmental Toxicology and Chemistry* 22:417-423.
11. *Grabowski, L. A., Houpis, J. L. J., Woods, W. I. and K. A. Johnson. 2001. Seasonal bioavailability of sediment-associated heavy metals along the Mississippi River. *Chemosphere* 45:643-651.
10. *Awata, H., Johnson, K. A. and T. A. Anderson. 2000. Passive sampling devices as surrogates for evaluating bioavailability of aged chemicals in soil. *Toxicological and Environmental Chemistry*. 73:25-42.
9. DeClue, M.E., Johnson, K., Hendrickson, H. and P. Keck. 2000. Stimulate High School Science Fair participation by connecting with a nearby College. *Journal of Chemical Education*. 77:608-609.
8. Naddy, R. B., Johnson, K. A. and S. J. Klaine. 2000. Response of *Daphnia magna* to pulsed exposures of chlorpyrifos. *Environmental Toxicology and Chemistry*. 19:423-431.
7. *Johnson, M., Houpis, J., Johnson, K., Schulz, K., Smith, M. and *G. Paul. 1998. Phytoextraction of cadmium by Pinus taeda. Air and Waste Management Association 98-RAD.02P Pittsburgh, PA. 5p.
6. *Karen, D. J., *Joab, B. M., *Wallin, J. W. and K. A. Johnson. 1998. Partitioning of chlorpyrifos between water and an aquatic macrophyte (*Elodea densa*). *Chemosphere*, 37:1579-1586.
5. Mortensen, S. R., Johnson, K. A., Weisskopf, C. P., Hooper, M. J., Lacher, T. and R. J. Kendall. 1998. Avian exposure to pesticides in Costa Rican banana plantations. *Bulletin of Environmental Contamination and Toxicology*, 60:562-568.
4. Johnson, K. A., Harper, F. D. and C. P. Weisskopf. 1997. Solid-phase extraction of aldicarb and its metabolites from water and soil. *Journal of Environmental Quality*, 26:1435-1438.
3. Lacher, T. E., Mortensen, S. R., Johnson, K. A. and R. J. Kendall. 1997. Pesticide use and wildlife risk on banana plantations. *Pesticide Outlook*, 8:24-28.
2. Johnson, K. A. (1996). Passive sampling of soil chemical vapors for contaminant characterization. Ph.D. dissertation. Clemson University, Clemson, S.C.
1. Johnson, K. A., Naddy, R. B. and C. P. Weisskopf (1995). Passive sampling devices for rapid determination of soil contaminant distributions. *Toxicological and Environmental Chemistry*, **51**:31-44.

INVITED PRESENTATIONS (* student coauthor)

16. Johnson, K. A. Risk Assessment of Polycyclic Aromatic Hydrocarbons in South Chattanooga, TN. Tongji University, Shanghai, China. July 2007.
15. Johnson, K. A. A Sampling and GC-MS Technique for the Identification of Volatile Arsenical Compounds Emitted During Phytoremediation**.** St. Louis University, April 2007.
14. Johnson, K. A. Ecological Risk Assessment of Polycyclic Aromatic Hydrocarbons in South Chattanooga, TN. Missouri Baptist University, March 2007.
13. Johnson, K. A. Identification of Volatile Arsenical Compounds Emitted During Phytoremediation Using a Novel Sampling and GC-MS Technique. University of Missouri, St. Louis, February 2007.
12. Johnson, K. A. Critical Body Residues in Earthworms: *Traditional Toxicity Testing vs. Reality*. SIUE School of Pharmacy, January 2007.
11. Johnson, K. A. Ecological Risk Assessment of Polycyclic Aromatic Hydrocarbons in South Chattanooga, TN: Implications on Human Health. California State University Chico, December 2006.
10. Johnson, K. A. A potential biomimetic sampling tool for site-specific assessments. Seminar, Texas Tech University, 2002.
9. Johnson, K. A., *Kress K. L, and *C.C. Friedel. Passive sampling devices as tools in assessing site specific contaminant bioavailability. Presentation at the Twenty-Second Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD. 2001.
8. Johnson, K.A. Contaminant Characterization by Passive Sampling Devices: Theory, Application, and Possibilities. Invited Seminar at Indiana State University. 2000.
7. Johnson, K.A. Hazardous waste sites: Activity vs. accuracy. SIUE Sigma Xi Chapter. Distinguished Research Award. 2000.
6. Johnson, K.A. Prioritization of hazardous waste site remediations SIUE College of Arts and Sciences, Spring Colloquium, 2000.
5. *Smith, P. N., Johnson, K.A., and S. T. McMurry. Raccoon exposure to polychlorinated biphenyls (PCBs). Wildlife Applications in Remediation Decision-Making, Denver, CO, 1999.
4. Johnson, K. A. and C. P. Weisskopf. The use of passive sampling devices for the assessment of soil pesticide residues. Platform presentation in ACS's Young Scientists Award Symposium, San Francisco, CA, 1997.
3. Johnson, K. A., Hooper, M. J. and C. P. Weisskopf. The use of passive sampling devices (PSDs) to determine soil contaminant concentrations. Poster presentation at the Pacific Basin Conference on Hazardous Waste, Kuala Lumpur, Malaysia, 1996.
2. Johnson, K. A. and C. P. Weisskopf. Passive sampling of soil vapors for contaminant characterization. Seminar presentation to the U. S. Army and the U. S. Fish and Wildlife Service at the Rocky Mountain Arsenal, Denver, CO, 1996.
1. Johnson, K. A., Naddy, R. B. and C. P. Weisskopf. Use of terrestrial passive sampling devices in assessment of soil contamination. Platform presentation at the Second Annual International Semipermeable Membrane Devices Workshop and Symposium, Columbia, Missouri, 1994.

PRESENTATIONS (* student coauthor)

65. Renfrew, R., Fry, D.M., Mineau, P., Saavedra, A.M., Johnson, K.A. and M. J. Hooper. Wintering Bobolink Populations and Their Vulnerability to Rice Pesticides. Oral Presentation at the Twenty-Eighth Annual Meeting of the Society of Environmental Toxicology and Chemistry, Milwaukee, WI, 2007.
64. *Strum, K.M., Sandercock, B.K., Hooper, M.J., Johnson, K.A., Zaccagnini, M.E., Lanctot, R.B., Torres-Dowdall, J. and M. Alfaro. Is exposure to cholinesterasE-inhibIting pesticides related to shorebird habitat use on the non-Breeding grounds**?** Oral Presentation at the Twenty-Eighth Annual Meeting of the Society of Environmental Toxicology and Chemistry, Milwaukee, WI, 2007.
63. *Strum, K.M., Alfaro, M., Hooper, M. J., Johnson, K.A., Lanctot, R.B., Sandercock, B.K., Torres-Dowdall, J. and M.E. Zaccagnini. Monitoring migratory shorebird exposure to cholinesterase-inhibiting pesticides. 125th Stated Meeting of the American Ornithologist's Union, Laramie, WY, 2007.
62. *Huff, D., *Poulter-Miller, S., Johnson, K. and Z.-Q. Lin. Co-application of Biosolids and Drinking Water Treatment Residuals Increases Arsenic Bioavailability in Amended Agricultural Soil. Presentation at the 4th International Phytotechnologies Conference, Denver, CO, 2007.
61. *Poulter-Miller, S. B., Zhang, T. Q., Smith, M., Brugam, R. B., Johnson, K. A., and Z.-Q. Lin. Co-application of Biosolids and Drinking Water Treatment Residues in Agricultural Soil: Effects on Leachate Phosphorus. Illinois State Academy of Sciences 100th Annual Meeting, Springfield, IL, 2007.
60. *Strum, K.M., Alfaro, M., Haase, B., Hooper, M.J., Johnson, K.A., Lanctot, R.B., Lesterhuis, A.J., Lopez, L., Matz, A.C., Morales, C., Paulson, B., Sandercock, B.K., Torres-Dowdall, J. and M.E. Zaccagnini. Is exposure to cholinesterasE-inhibIting pesticides on the non-Breeding grounds contributing to shorebird population decLines? Oral Presentation at the Neotropical Ornithological Congress (VIII), Maturin,Venezuela. 2007.
59. *Sapp, J. F., Wilson, T., Richards, S. and K. A. Johnson. Chlorinated insecticides, PCBs, and PBDEs in plasma collected from riverine turtles of the Tennessee River near Chattanooga, TN. Oral Presentation at the Twenty-Seventh Annual Meeting of the Society of Environmental Toxicology and Chemistry, Montreal. 2006.
58. *Campbell, M., *Hussar, E., Johnson, K., Lin, ZQ, *Morris, C. and S. Richards. Exposure Assessment Using Small Mammals as Surrogates for Human Exposure to Polycyclic Aromatic Hydrocarbons and Metals. Poster Presentation at the Twenty-Seventh Annual Meeting of the Society of Environmental Toxicology and Chemistry, Montreal. 2006.
57. *Hussar, E., *Morris, C, *Campbell, M., Lin, ZQ, Richards, S. and K.A. Johnson. Are South Chattanoogan residents and wildlife at risk to locally occurring contaminants: 1. Exposure Assessment. Poster Presentation at the Twenty-Sixth Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD. 2005.
56. *Morris, C, *Hussar, E., *Campbell, M., Lin, ZQ, Richards, S. and K.A. Johnson Are South Chattanoogan residents and wildlife at risk to locally occurring contaminants: 2. Hazard Assessment. Poster Presentation at the Twenty-Sixth Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD. 2005.
55. *Paulson, B., Sandercock, B.K., and K.A. Johnson. Dynamic sonicator-assisted extraction for organophosphates and carbamate insecticides from avian tissue and gut contents. Poster Presentation at the Twenty-Sixth Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD. 2005.

54. *Burcea , L, *Friedel C.C., *Bhattarai, D.B., Brunkow, P.E. and K. A. Johnson. Critical body residues in earthworms (*Eisenia foetida*): effects of soil concentration,aging and soil type. Poster Presentation at the Twenty-Sixth Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD. 2005.
53. Johnson, K.A., *Friedel, C.C., and D. Bhattarai. Effect of contaminant soil concentration and aging on earthworm critical body residues. Poster Presentation at the Twenty-fourth Annual Meeting of the Society of Environmental Toxicology and Chemistry, Austin, TX. 2003.
52. Johnson, K.A., * Bhattarai, D. and * C.C. Friedel. Potential use of critical body residues in ecotoxicological risk assessments. Illinois State Academy of Sciences 95th Annual Meeting, Normal, IL, 2003.
51. *Friedel, C.C. and K.A. Johnson. Determining changes in the bioavailability and extractability of dieldrin in aged soil with passive sampling devices and traditional assays. Illinois State Academy of Sciences 95th Annual Meeting, Normal, IL, 2003.
50. *Bala, I., *Vermillion, B., Johnson, K.A., Brugam, R.B, and W.A. Retzlaff. Stable isotopic analysis to estimate nitrate contamination in Horseshoe Lake. Illinois State Academy of Sciences 95th Annual Meeting, Normal, IL, 2003.
49. *Friedel, C.C. and K.A. Johnson. The potential use of an alternative sampling method for contaminant characterization and site-specific toxicity of contaminated soils. Illinois State Academy of Sciences 94th Annual Meeting, Edwardsville, IL, 2002.
48. *Parker, T.C., *Schmitt, T., Houpis, J.L.J. and K.A. Johnson. The effectiveness of management practices on the efficiency of vegetative filter strips in reducing non-point source pollution. Illinois State Academy of Sciences 94th Annual Meeting, Edwardsville, IL, 2002.
47. *Cole, C.L., Houpis, J.L.J., Johnson, K.A. and W.A. Retzlaff. Using stable isotopes to evaluate the effectiveness of a filter strip. Illinois State Academy of Sciences 94th Annual Meeting, Edwardsville, IL, 2002.
46. *Vissa, S., Brugam, R.B., Retzlaff, W.A., Johnson, D.A., Houpis, J.L.J and R. Sankaran. Uptake of cadmium by *Pinu taeda*. Illinois State Academy of Sciences 94th Annual Meeting, Edwardsville, IL, 2002.
45. *Shrestha, D., Smith, M., Johnson, K.A. and W.A. Retzlaff. Effects of cadmium on the physiology of Populus deltoides and its potential use in phytoremediation. Illinois State Academy of Sciences 94th Annual Meeting, Edwardsville, IL, 2002.
44. *Buen. R., Schaefer, J., Ezeji, V., Shabangi, M., Shaw, M. and K.A. Johnson. Chemistry club on campus and in the community: Activities of the 2001-2002 SIUE student affiliates chapter. Illinois State Academy of Sciences 94th Annual Meeting, Edwardsville, IL, 2002.
43. *Biswas, S., Johnson, K.A., Retzlaff, W. and M. Smith. Effects of zinc tolerance in the floodplain species, *Populas deltoides*. Illinois State Academy of Sciences 94th Annual Meeting, Edwardsville, IL, 2002.
42. *Friedel, C.C. and K.A. Johnson. Using Passive Sampling Devices as Biological Surrogates to Determine Contaminant Bioavailability. Poster Presentation at the Twenty-Second Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD. 2001.
41. *Parker, T.C., *Schmitt, T., Houpis, J.L.J. and K. A. Johnson. The role of management practices on vegetative filter strips efficacy in reducing non-point source pollution.

Poster Presentation at the Twenty-Second Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD. 2001.

40. *Marchese, B., Houpis, J.L.J,, Johnson, K. A., Schulz, K. and M. Smith. Genotypic differences in physiologic response to zinc uptake in *Pinus taeda*. Illinois State Academy of Sciences 93rd Annual Meeting, Macomb, IL, 2001.
39. *Sankaran, R., Houpis, J.L.J., Johnson, K.A. and M. Smith. Effects of cadmium on physiological and morphological processes of *Pinus taeda* (Loblolly pine). Illinois State Academy of Sciences 93rd Annual Meeting, Macomb, IL, 2001.
38. *Friedel, C.C and K. A. Johnson. Measuring Decreasing Bioavailability with Passive Sampling Devices and Standardized Assays. Southern Illinois University Edwardsville. Probst Lecture Research Poster. 2001.
37. Shaw, M. A., *Zipfel, K., *Zipfel, T., *Buen, R., Johnson, K. A., and M. Shabangi. Chemistry club on campus and in the community: Activities of the 2000-2001 SIUE Student Affiliates Chapter. Poster Presentation at the 221st ACS National Meeting, 2001.
36. Johnson, K. A., Houpis, J. L. J. and *T. Schmitt. Vegetative filter strip effectiveness for the control of non-point source pollution from a feed lot. Presentation at the Twenty-First Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nashville, Tennessee. 2000.
35. *Friedel, C. C. and K. A. Johnson. Measuring decreasing bioavailability with passive sampling devices and standardized assays. Poster Presentation at the Twenty-First Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nashville, Tennessee. 2000.
34. Johnson, K. A. and *T. L. Kress. Measuring changes in earthworm uptake and passive sampling devices with contaminant aging. Presentation at the Twenty-First Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nashville, Tennessee. 2000.
33. *Marchese, B., Houpis, J., Johnson, K., Schulz, K. and Smith, M. Physiological Analysis of Loblolly Pine for Potential Use in Zinc Remediation. Presentation at the Twenty-First Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nashville, Tennessee. 2000.
32. *Sankaran, R.P., Johnson, K.A., Houpis, J.L. and Smith, M. Seasonal Effects Of Cadmium On Key Morphological and Physiological Processes of Pinus Taeda . Poster Presentation at the Twenty-First Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nashville, Tennessee. 2000.
31. Johnson, K. A., *Friedel, C. C. and *T. L. Kress. The Use of Passive Samplers to Determine Soil Contaminant Levels and Monitor Changes in Contaminant Bioavailability with Aging. Sixth Annual International Semipermeable Membrane Workshop and Symposium, Columbia, MO, 2000.
30. *Friedel, C. C. and K. A. Johnson. Measuring declining bioavailability in aging soils with passive samplers and earthworms. Regional American Chemical Society Meeting, Elsa, IL, 2000.
29. Johnson, K. A., *Friedel, C.C. and *T. L. Kress. Passive sampling devices for the assessment of soil contaminant residues. Illinois State Academy of Sciences 92nd Annual Meeting, Rock Island, IL, 2000.

28. *Kress, T. L. and K. A. Johnson. Measures of contaminant bioavailability: a comparison of earthworm bioaccumulation and passive sampling device uptake. Illinois State Academy of Sciences 92nd Annual Meeting, Rock Island, IL, 2000.
27. *Friedel, C. C. and K. A. Johnson. Toxicity and bioavailability of dieldrin contaminated soils. Illinois State Academy of Sciences 92nd Annual Meeting, Rock Island, IL, 2000.
26. *Marchese, B., Houpis, J. L. J., Johnson, K. A., Schulz, K. and M. Smith. Physiological analysis of loblolly pine for potential use in zinc remediation. Illinois State Academy of Sciences 92nd Annual Meeting, Rock Island, IL, 2000.
25. *Sankaran, R., Johnson, K. A., Houpis, J. L. J., and M. Smith. Direct effects of cadmium on the physiological processes of *pinus teada* (loblolly pine). Illinois State Academy of Sciences 92nd Annual Meeting, Rock Island, IL, 2000.
24. *Rieger, C., Brugam, R., Stueber, A., and K. A. Johnson. Phosphorus and eutrophication in Cougar Lake, Madison County, IL. Illinois State Academy of Sciences 92nd Annual Meeting, Rock Island, IL, 2000.
23. *Deming, T. L., Johnson, K. A., and R. Brugam. Cycling of manganese and sulfide in Cougar Lake (Madison Co., IL). Illinois State Academy of Sciences 92nd Annual Meeting, Rock Island, IL, 2000.
22. *Abendroth, M. T., Stueber, A. M. and K. A. Johnson. Nitrate and atrazine discharge at two karst springs in Southwestern Illinois: Relations with spring hydrology and biodiversity. Geological Society of America, Indianapolis, IN, 2000.
21. *Smith, P. N., Johnson, K. A. and S. T. McMurry. Raccoon exposure to polychlorinated biphenyls. Wildlife Applications in Remediation Decision-Making, Denver, CO, 1999.
20. *Smith, P. N., Bandiera, S. M., Skipper, S. L., Johnson, K. A. and S. T. McMurry. Exposure and physiological responses of raccoons to polychlorinated biphenyls on wildlife management areas in Western Kentucky, USA. Wildlife Society National Conference, Austin, TX, 1999.
19. *Westhoff, J., *Arness, J., *Bleier, R., *Burgess, M., Shaw, M. and K. Johnson. Chemistry club on campus and in the community: Activities of the 1998-1999 SIUE Student Affiliates Chapter. Poster Presentation at the 219th ACS National Meeting, 1999.
18. *Johnson, M., Houpis, J., Johnson, K., Schulz, K., Smith, M. and *G. Paul. Phytoremediation of cadmium and zinc by trees. Illinois State Academy of Sciences Annual Meeting, Chicago, IL, 1998.
17. *Grabowski, L., Houpis, J., Johnson, K., Woods, B. and R. Brugam. Bioavailability of sediment-associated heavy metals to benthic organisms along the Mississippi River flood plain. Illinois State Academy of Sciences Annual Meeting, Chicago, IL, 1998.
16. *Johnson, M., Houpis, J., Johnson, K., Schulz, K., Smith, M. and G. Paul. Phytoremediation of cadmium by Pinus taeda. Air and Waste Management Association Annual Meeting, San Diego, CA, 1998.
15. *Grabowski, L., Houpis, J., Johnson, K., Woods, B. and R. Brugam. Bioavailability of sediment-associated heavy metals along the Mississippi River flood plain during the Spring. Air and Waste Management Association Annual Meeting, San Diego, CA, 1998.
14. Johnson, K. A., Hoff, D. and C. P. Weisskopf. The use of terrestrial passive sampling devices to determine dieldrin soil concentrations. Presentation at the Eighteenth Annual Meeting of the Society of Environmental Toxicology and Chemistry, San Francisco, CA, 1997.

13. Johnson, K. A. and C. P. Weisskopf. Terrestrial passive sampling device composition: Affects on performance and uptake rates in laboratory studies. Presentation at the Fourth Annual International Semipermeable Membrane Workshop and Symposium, Kansas City, MO, 1996.
12. Johnson, K. A., Hooper, M. J. and C. P. Weisskopf. The use of semipermeable membrane devices (SPMDs) to determine soil contaminant concentrations. Presentation at the Sixth Annual SETAC-Europe Meeting, Taorimina, Sicily, 1996.
11. Johnson, K. A and C. P. Weisskopf. Investigation of factors affecting terrestrial passive sampling device performance and uptake rates in laboratory chambers. Poster presentation at the Sixteenth Annual Meeting of the Society of Environmental Toxicology & Chemistry, Vancouver, BC, 1995.
10 .Naddy, R. B., Johnson K. A. and S. J. Klaine. Effects of pulsed exposures of chlorpyrifos on a freshwater invertebrate, *Daphnia magna*. Poster presentation at the Sixteenth Annual Meeting of the Society of Environmental Toxicology, Vancouver, British Columbia, 1995.
9. Hooper, M. J., Hunt, K. A. and K. A. Johnson. Organophosphate insecticides in American Kestrels (*Falco sparverius*): Toxicity, toxicokinetics, and field applications. Presentation at the Raptor Research Foundation Annual Meeting, Duluth, Minnesota, 1995.
8. Hunt, K., Padilla, S., Bryant, K., Goldstein, M., Johnson, K., Parker, M. and M. Hooper. Muscarinic acetylcholine receptor (mAChR) density in nestling starlings during chronic dosing with diazinon. Poster presentation at the 34th Annual Meeting of the Society of Toxicology, Washington D.C., 1995.
7. Mashburn, W. E., Johnson, K. A., Weisskopf, C. P. and R. L. Dickerson. Rapid analytical and biological assessment of PCB contamination. International Congress on Hazardous Waste: Impact on human and ecological health, ATSDR, Atlanta, Georgia, 1995.
6. Mashburn, W. E., Johnson, K. A., Weisskopf, C. P. and R. L. Dickerson. Rapid assessment of chemical contamination and toxicity equivalents at a hazardous waste site. Presented at the Fifteenth Annual Meeting of the Society of Environmental Toxicology, Denver, Colorado, 1994.
5. Mortensen, S. M., Johnson, K. A., Weisskopf, C. P., Hooper, M. J., Lacher, T. E. and R. J. Kendall. Pesticide distribution and exposure to birds in Costa Rican banana plantations. Poster presentation at the Fifteenth Annual Meeting of the Society of Environmental Toxicology, Denver, Colorado, 1994.
4. Hunt, K. A., Mortensen, S. R., Johnson, K. A., Weisskopf, C. P. and M. J. Hooper. Age-dependent toxicity and response of America kestrels to diazinon exposure. Poster presentation at the Fifteenth Annual Meeting of the Society of Environmental Toxicology, Denver, Colorado, 1994.
3. Naddy, R. B., Johnson, K. A. and S. J. Klaine. Determining the bioavailability of dieldrin to freshwater isopods using behavioral and toxicological endpoints. Poster presentation at the Fifteenth Annual Meeting of the Society of Environmental Toxicology, Denver, Colorado, 1994.
2. Weisskopf, C. P., Johnson, K. A. and F. A. Harper. The chemical technician in the academic environmental research laboratory. Presentation at the 207th American Chemical Society National Meeting, San Diego, California, 1994.
1. Johnson, K. A., Naddy, R. B., Klaine, S. J. and C. P. Weisskopf. Characterization of a hazardous waste site using passive sampling devices. Presentation at the Fourteenth

Annual Meeting of the Society of Environmental Toxicology and Chemistry, Houston, Texas, 1993.