

C. MARJORIE AELION

Dean, School of Public Health and Health Sciences
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EDUCATION

- 1988 Ph.D. University of North Carolina, Chapel Hill
Gillings School of Global Public Health
Department of Environmental Sciences and Engineering
- 1983 S.M.C.E. Massachusetts Institute of Technology
Department of Civil Engineering
Parsons Laboratory for Environmental Science and Engineering
- 1980 B.S. University of Massachusetts, Amherst, *Summa cum Laude*
Department of Environmental Sciences

LEADERSHIP PROGRAMS ATTENDED

- Deans' Institute, Association of Academic Colleges and Universities, Washington, DC, Jan 21-24, 2015
Harvard Negotiation Institute, Harvard Law School, Cambridge, MA, June 9-13, 2014
American Council on Education, 75th National Leadership Forum for Women Administrators, Washington, DC, June 23-25, 2010
Higher Education Resource Services (HERS) Bryn Mawr Summer Institute, Bryn Mawr, PA, June 20-July 15, 2009

EMPLOYMENT AND RESEARCH EXPERIENCE

- 1/2009-present Dean, School of Public Health and Health Sciences, University of Massachusetts, Amherst
- 2006-2008 Associate Dean for Research, Arnold School of Public Health, University of South Carolina, Columbia
- 2003-2006 Graduate Director, Environmental Health Sciences Department, University of South Carolina, Columbia
- 2002 Visiting Professor, University of Wageningen, the Netherlands
- 2002 Visiting Professor, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland.
- 2001-2008 Professor, Environmental Health Sciences, University of South Carolina
- 1999-2000 Assistant Director, Marine Science Program, University of South Carolina
- 1997-2001 Associate Professor, Environmental Health Sciences, University of South Carolina
- 1991-1997 Assistant Professor, Environmental Health Sciences, University of South Carolina
- 1997 Visiting Scientist, Chelyabinsk State Technical University, Chelyabinsk, Russia
- 1995 Visiting Scientist, Irkutsk State University, Irkutsk, Russia
- 1995-2008 Associated Faculty, School of the Environment, University of South Carolina
- 1993-2008 Associated Faculty, Marine Science Program, University of South Carolina
- 1991-1994 Faculty Appointment, U.S. Geological Survey, Columbia, SC
- 1988-1991 Hydrologist, U.S. Geological Survey, Water Resources Division, Project Chief
- 1983-1984 Research Assistant in Peru, South America, NSF funded to R.B. Thomas, University of Massachusetts, Amherst, MA

AWARDS & HONORS

- 2015-2018 Member, Science Advisory Board, U.S. Environmental Protection Agency, Washington, DC
- 2015-pres. Member, Science Advisory Board, Water Innovation Network for Sustainable Small Drinking Water Systems (WINSSS), EPA National Center 2015-present
- 2014 Harriet Hylton Barr Distinguished Alumni Award for Commitment and Service to Public Health, Gillings School of School of Global Public Health, University of North Carolina, Chapel Hill
- 2011 Invited Member, American Public Health Association, Public Health Delegation to Cuba, Havana, Cuba, May 8-13, 2011
- 2009 Distinguished Alumnus Award, Department of Environmental Sciences and Engineering, Gillings School of Global Public Health, University of North Carolina, Chapel Hill
- 2006 Invited Member, National Academies, National Research Council, Vietnam Education Foundation, Fellows Review, Hanoi and Ho Chi Minh City, Vietnam
- 2006 Invited External, University of Toronto, Department of Geology, Toronto, Canada
- 2002 Educational Foundation Research Award for Health Sciences, University of South Carolina
- 2002 Fulbright Scholar, University of Wageningen, Department of Soil Chemistry, the Netherlands
- 2002 International Agricultural Center Research Fellowship, Netherlands Ministry of Agriculture, Nature Management and Fisheries, The Netherlands
- 2001 Research Award for Outstanding Scholarly Research, Norman J. Arnold School of Public Health, University of South Carolina
- 1998 James A. Keith Excellence in Teaching Award, The School of Public Health, University of South Carolina
- 1993 National Science Foundation Presidential Faculty Fellow, 1 of 15 Awarded Nationally in all Engineering Disciplines
- 1993 Delta Omega Honorary Society, elected member, University of South Carolina
- 1988 Dissertation Fellowship, University of North Carolina
- 1988 Graduate Student Travel Award, University of North Carolina
- 1984-1986 N.C. Board of Governors' Fellowship in Science and Technology, University of North Carolina
- 1980-1981 Fulbright Advanced Student Scholar, Institut d'Études Marines, Université de Bretagne Occidentale, Brest, France

OFFICES HELD

- Member, Science Advisory Board, Water Innovation Network for Sustainable Small Drinking Water Systems (WINSSS), EPA National Center 2015-present
- Member, Board of Directors (elected), Association of Schools and Programs of Public Health (ASPPH; formally the Association of Schools of Public Health), 2013-2015 and re-elected 2015-2017
- Secretary/Treasurer (elected), ASPPH, 2013-2015 and re-elected 2015-2017
- Chair, Finance Committee, ASPPH 2013-present
- Member, Board Governance Committee, ASPPH, 2013-present
- Member, Executive Committee for the Institute of Applied Life Sciences, University of Massachusetts Amherst, 2013-present
- Member, Advisory Board, Institute for Computation Biology, Biostatistics and Bioinformatics (ICB³), University of Massachusetts Amherst, 2013-present
- Member, Board of Massachusetts Biologics Laboratories, Inc. Worcester, MA, 2011-present
- Member, Task Force, Framing the Future, the Second 100 Years of Education for Public Health, ASPPH, 2011-present
- Vice-Chair, Global Health Core Competency Development Project, Association of Schools of Public Health (ASPH), 2010-2011

Co-Chair, Capacity Building Workgroup, Global Health Core Competency Development Project, ASPH, 2010-2011

Trained Site Visitor, Council on Education for Public Health (CEPH), 2008

Member, Diversity Committee, ASPPH, 2009-present

Member, Education Committee, ASPPH, 2011-present

Member, Global Health Committee, ASPPH, 2011-present

Member (elected), Board of the Carolinas Society of Environmental Toxicology and Chemistry 2008

Member, Planning Committee, Associate Deans for Research and Finance retreat, Chicago, IL, ASPH, April 2-4, 2008

Member, Awards Committee, Society of Environmental Toxicology and Chemistry, 2007-2009

Member, Student Services Committee, Association for Environmental Engineering and Science Professors, 2005-2007

Program Coordinator for USC, EPA National Network for Environmental Management Studies Fellowship Program, 2002-2009

Past President, President, and President Elect, Mu chapter of Delta Omega Honorary Society, 1999-2002

Past President, President, S.C. Chapter of the Association for Women in Science 1997-1999

Secretary, S.C. Chapter of the Association for Women in Science 1996-1997

Member, American Society for Microbiology, Selection Committee for Faculty Fellowship Program 1996-1998; Member, Selection Committee for Undergraduate Research Fellowship Program, 1994-1998

Treasurer, N.C. Chapter of the Association for Women in Science 1986-1987

ACADEMIC MEETINGS ATTENDED

Centennial Annual Meeting of the Association of Academic Colleges and Universities, Liberal Education, Global Flourishing, and the Equity Imperative, Washington, DC, Jan 21-24, 2015

The 99th Annual Meeting of the Association of Academic Colleges and Universities, The Quality of U.S. Degrees, Innovations, Efficiencies, and Disruptions – To What Ends, Atlanta, GA, Jan 23-26, 2013

2012 NIH Summit on the Science of Eliminating Health Disparities, Building a Healthier Society, Integrating Science, Policy and Practice, National Harbor, MD, Dec 17-19, 2012

The 98th Annual Meeting of the Association of Academic Colleges and Universities, Shared Futures Difficult Choices, Reclaiming a Democratic Vision for College Learning, Global Engagement, and Success, Washington, DC, Jan 25-28, 2012

COUNCIL ON EDUCATION FOR PUBLIC HEALTH ACCREDITATION SITE VISITOR

University of Washington School of Public Health, April 8-10, 2013

Oregon State University School of Public Health, November 18-20, 2013

Université de Montréal, École de Santé Publique, Montreal, Canada, November 2-3, 2015

GRANTS AWARDED

2010-2014 National Institutes of Health, National Institute of Environmental Health Sciences, R01, \$1,286,034 (direct costs). *Methods to Detect Maternal Exposures and Child Outcomes*. Multiple P.I.s, Aelion, Lawson, and McDermott

2009-2013 National Institutes of Health, National Institute of Environmental Health Sciences, R21, 1,230,625 (total costs). *Use of a Community-University Partnership to Eliminate Environmental Stressors*. P.I. Wilson, Co-Investigators/Consultants Aelion, Fraser-Rahim, Hardin, Svendsen, and Williams

2005-2009 National Institutes of Health, National Institute of Environmental Health Sciences, R01, \$1,365,638 (direct costs). *Methods to Detect Maternal Exposures and Child Outcomes*. Multiple P.I.s, McDermott, Aelion and Lawson

2007-2008 National Institutes of Health, National Institute of Environmental Health Sciences, R01, Supplement \$55,732 (direct costs). *Methods to Detect Maternal Exposures and Child Outcomes*. P.I. McDermott, Co-P.I.s Aelion and Lawson

- 2005-2008 USC Environmental Research Incentive Grant (ERIG), \$74,648. *Predicting biodegradation of phenanthrene using stable carbon isotopes: Incorporation of mathematical modeling*. P.I. Aelion; Co-P.I.s Flora, Prokopenko, Goni
- 1993-2008 National Oceanic and Atmospheric Administration, Office of Oceanic Research Programs, \$813,515, *Urbanization and Southeastern Estuarine Systems*. P.I. Aelion, Director, Porter
- 2000-2006 National Oceanic and Atmospheric Administration, \$960,000. *Role of Groundwater in the Biogeochemical Cycles of Carbon, Nitrogen and Phosphorus in SC and GA Coastal Waters*. Director Joye (UGa); P.I. Aelion, \$218,714
- 2000-2006 National Oceanic and Atmospheric Administration, \$617,359. *Development of a GIS-based Data Management and Spatial Modeling Program to Characterize Sources and Effects of Natural Parameters and Anthropogenic Impacts to Coastal Ecosystems*. P.I. Porter; Co-P.I.s Aelion, Siewicki
- 2002-2006 Department of Energy, \$305,942. *Manufacture and Field Testing of Macroencapsulated Buffers for Enhanced Remediation of Environmental Contamination*, P.I. Aelion, Co-P.I. Flora
- 2005-2006 Dean's Faculty Scholars in Public Health Preparedness, Center for Public Health Preparedness, \$20,000. *Computer Module on Accidental and Planned Releases of Hazardous Chemicals*. P.I. Aelion
- 2005-2006 USC Environmental Research Incentive Grant (ERIG), \$149,961. *NIEHS SuperFund Basic Research Program Center Grants Competition: Community and Environmental Health Risks Associated with SuperFund Sites in Southeastern Coastal Systems*. P.I. Vena and Chandler, Co-P.I.s Aelion and others.
- 1999-2003 National Science Foundation, \$226,184. *Isotopic and Geochemical Analysis of Microbial Processes in Uncontaminated and Contaminated Ground Water and Sediment*. P.I. Aelion; Co-P.I. Stone
- 1999-2002 Hazardous Waste Management Research Fund, \$118,737 (direct costs). *Assessment of Natural Attenuation of Groundwater Contamination using Innovative Field Monitoring Techniques*. P.I. Aelion
- 1999-2001 National Science Foundation, \$318,255. *Acquisition of Irm-GC-MS Instrumentation for Global Biogeochemical Research*. P.I. Goni; Co-P.I.s Aelion, Thunell, Howell, Williams, Kohn, Prokopenko, Benner, Morris
- 1999-2001 S.C. Department of Health and Environmental Control, \$50,355 (direct costs). *S.C. Special Drinking Water/Groundwater Quality Study*. P.I. Aelion
- 1997-2001 Department of Energy, \$235,430. *Use of Microcapsules in In Situ Permeable Barriers for pH Control of Groundwater*. Aelion P.I.; Co-P.I. Flora
- 1999-2000 South Carolina Research Institute, \$21,300. *Watershed Nutrient Dynamics: Issues in Wastewater Allocation, Nonpoint Source Pollution Control, and Wetland Exchanges*. P.I. McKellar; Co-P.I.s Aelion, Porter, Tufford
- 1993-1999 National Science Foundation, \$500,000. *Biological Decontamination of Groundwater Aquifers*. P.I. Aelion
- 1998 Azur Environmental Grant Program, \$10,000. *Research Instrumentation Award*. P.I. Aelion
- 1995-1997 National Research Council, Collaborative Research in Sectoral Policy, Office of International Affairs, Office for Central Europe and Eurasia, \$2,200. Travel Grant to Russia for Collaborative Environmental Research. P.I. Aelion
- 1995 Lexington Medical Center, Lexington, S.C., \$4,500. *Environmental Assessment for Medical and Hazardous Waste*. P.I. Aelion
- 1993 NSF Faculty Enhancement Workshop, *Techniques in Water Resources Sciences*, \$1,500. U.S. Geological Survey National Training Center, Denver, CO., July 12-23, 1993. P.I. Aelion
- 1993-1994 University of South Carolina, Instructional Innovation Grant, \$2080. P.I. Aelion

- 1992-1994 S.C. Department of Health and Environmental Control, and Hazardous Waste Management Research Fund, \$303,501 (direct costs). *In-Situ Stripping and Bioremediation of Petroleum-Derived Contamination in Soil and Groundwater*. P.I. Widdowson; Co-P.I.s Aelion, Ray, Reeves
- 1992 National Geographic Society, Committee for Research and Exploration, Geography of Fresh Water Initiative, \$23,162 (direct costs). *Assessment of Natural Process Technologies to Treat Fresh Water Contamination*. P.I. Aelion
- 1991-1994 Hazardous Waste Management Research Fund, \$114,257 (direct costs). *Field Demonstration of in situ Bioremediation of Subsurface Jet Fuel Contamination: Microbial Processes and Contaminant Fate, Hanahan, South Carolina*. P.I. Aelion
- 1991-1993 U.S. Environmental Protection Agency, \$30,000. *Use of Nitrate for Bioremediation of a JP-4 Jet Fuel Spill in a Shallow Aquifer at Hanahan, South Carolina*. P.I. Aelion

PUBLICATIONS

Books

- Aelion, C.M., P. Höhener, D. Hunkeler and R. Aravena (Eds.). 2010. *Environmental Isotopes in Biodegradation and Bioremediation*, Taylor and Francis, Boca Raton, FL.
- Magar, V.S., T.M. Vogel, C.M. Aelion and A. Leeson (Eds.). 2001. *Innovative Methods in Support of Bioremediation*, Battelle Press, Columbus, OH.

Peer-reviewed Articles and Book Chapters (names of students or former students are underlined)

- Davis, H.T., C.M. Aelion, J. Liu, J.B. Burch, B. Cai, A.B. Lawson, S. McDermott. 2016. Potential sources and racial disparities in the residential distribution of soil arsenic and lead among pregnant women. *Science of the Total Environment* 551-552:622-630. DOI:10.1016/j.scitotenv.2016.02.018.
- Hong, J., Y. Wang, S. McDermott, B. Cai, C.M. Aelion, J. Lead. 2016 The use of a physiologically-based extraction test to assess relationships between bioaccessible metals in urban soil and neurodevelopmental conditions in children. *Environmental Pollution* 212:9-17. DOI:10.1016/j.envpol.2016.01.0801.
- Cai, B., A.B. Lawson, S. McDermott, C.M. Aelion. 2016. A Bayesian semiparametric approach with change points for spatial ordinal data. *Statistical Methods in Medical Research* 25:644-658. DOI: 10.1177/0962280212463415.
- Aelion, C.M., C.O. Airhihenbuwa, S. Alemagno, R.W. Amler, D.K. Arnett, A. Balas, S. Bertozzi, and others. 2016. The US Cancer Moonshot initiative. *Lancet* 17:e178-e180.
- Aelion, C.M., A.C. Gubrium, F. Aulino, E.L. Krause, T.L. Leatherman. 2015. Bridging graduate education in public health and the liberal arts. *American Journal of Public Health*. 105:S1:S78-82. DOI:10.2105/AJPH.2014.302467.
- Aelion, C.M., H.T. Davis, A.B. Lawson, B. Cai, S. McDermott. 2014. Temporal and spatial variation in residential soil metal concentrations: Implications for exposure assessments. *Environmental Pollution* 185:365-368. DOI:10.1016/j.envpol.2013.10.018.
- Onicescu, G., A.B. Lawson, S. McDermott, C.M. Aelion, B. Cai. 2014. Bayesian importance parameter modeling of misaligned predictors: soil metal measures related to residential history and intellectual disability in children. *Environmental Science and Pollution Research* 21:10775-10786. DOI: 10.1007/s11356-014-3072-8.
- Davis, H.T., C.M. Aelion, A.B. Lawson B. Cai, S. McDermott. 2014. Associations between land cover categories, soil concentrations of arsenic, lead and barium, and population race/ethnicity and socioeconomic status. *Science of the Total Environment* 490:1051-1056.
- Carroll, R., A. Lawson, D. Voronca, C. Rotejanaprasert, J. Vena, C.M. Aelion, D. Kamen. 2014. Spatial environmental modeling of autoantibody outcomes among an African American population. *International Journal of Environmental Research and Public Health* 11:2764-2779. DOI:10.3390/ijerph110302764.

- McDermott, S, W. Bao, C.M. Aelion, B. Cai, A.B. Lawson. 2014. Does the metal content in soil around a pregnant woman's home increase the risk for low birth weight for her infant? *Environmental Geochemistry and Health* 36:1191-1197. DOI 10.1007/s10653-014-9617-4.
- McDermott S., W. Bao, X. Tong, B. Cai, A.B. Lawson, C.M. Aelion. 2014. Are different soil metals near the homes of pregnant women associated with mild and severe intellectual disability in children? *Developmental Medicine and Child Neurology* 56:888-897. DOI 10.1111/dmcn.12442.
- Cai, B., A.B. Lawson, S. McDermott and C.M. Aelion. 2013. A Bayesian semiparametric approach with change points for spatial ordinal data. *Statistical Methods in Medical Research* 0(0): 1-15. DOI:10.1177/0962280212463415.
- Aelion, C.M. H.T. Davis, A.B. Lawson, B. Cai and S. McDermott. 2013. Associations between soil lead concentrations and populations by race/ethnicity and income-to-poverty ratio in urban and rural areas. *Environmental Geochemistry and Health* 35:1-12. DOI 10.1007/s10653-012-9472-0.
- Aelion, C.M. H.T. Davis, A.B. Lawson, B. Cai and S. McDermott. 2012. Associations of estimated residential soil arsenic and lead concentrations and community-level environmental measures with mother-child health conditions in South Carolina. *Health and Place* 18:774-781.
- McDermott, S., W. Bao, C.M. Aelion, B. Cai and A. Lawson. 2012. When are fetuses and young children most susceptible to soil metal concentrations of arsenic, lead and mercury? *Spatial and Spatio-temporal Epidemiology* 3:265-272.
- Cai, B., A.B. Lawson, S. McDermott and C.M. Aelion. 2011. Variable selection for spatial latent predictors under Bayesian spatial model. *Statistical Modelling* 11:535-555.
- McDermott, S., J. Wu, B. Cai, A.B. Lawson and C.M. Aelion. 2011. Probability of intellectual disability is associated with soil concentrations of arsenic and lead. *Chemosphere* 84:31-38.
- Höhener, P. and C.M. Aelion. 2010. Chapter 1. Fundamentals of Environmental Isotopes and Their Use in Biodegradation. In *Environmental Isotopes in Biodegradation and Bioremediation*, Aelion, C.M., P. Höhener, D. Hunkeler and R. Aravena (Eds.). Taylor and Francis, Boca Raton, FL.
- Aelion, C.M. and S.A. Mancini. 2010. Chapter 5. Isotopes and Aerobic Degradation. In *Environmental Isotopes in Biodegradation and Bioremediation*, Aelion, C.M., P. Höhener, D. Hunkeler and R. Aravena (Eds.). Taylor and Francis, Boca Raton, FL.
- Aelion, C.M. and R.S. Norman. 2010. Chapter 10. Isotopic Labeling in Environmental and Biodegradation Studies. In *Environmental Isotopes in Biodegradation and Bioremediation*, Aelion, C.M., P. Höhener, D. Hunkeler and R. Aravena (Eds.). Taylor and Francis, Boca Raton, FL.
- Aelion, C.M. 2010. Chapter 11. Combined Use of Radiocarbon and Stable Carbon Isotopes in Environmental and Degradation Studies. In *Environmental Isotopes in Biodegradation and Bioremediation*, Aelion, C.M., P. Höhener, D. Hunkeler and R. Aravena (Eds.). Taylor and Francis, Boca Raton, FL.
- Liu, Y., S. McDermott, A.B. Lawson, and C.M. Aelion. 2010. The relationship between mental retardation and developmental delays in children and the levels of arsenic, mercury and lead in soil samples taken near their mother's residence during pregnancy. *International Journal of Hygiene and Environmental Health* 213:116-123. PMC2836425
- Kim, J.-I., A. Lawson, S. McDermott and C.M. Aelion. 2010. Bayesian spatial modeling of disease risk in relation to multivariate environmental risk fields. *Statistics in Medicine* 29:142-157. PMC3004226
- Aelion, C.M. and U. Wartinger. 2010. Sulfide inhibition of nitrate removal in coastal sediments. *Estuaries and Coasts* 33:798-803.
- Aelion, C.M. and M. Engle. 2010. Evidence for acclimation of N cycling to episodic N inputs in anthropogenically-affected intertidal salt marsh sediments. *Soil Biology and Biochemistry* 42:1006-1008.
- Aelion, C.M., M.R. Engle and H. Ma. 2010. Use of ¹⁵N natural abundance and N species concentrations to assess N-cycling in constructed and natural coastal wetlands. *Applied and Environmental Soil Science* Doi:10.1155/2010/371259, pp.1-9.
- Zhen, H., S. McDermott, A. Lawson and C.M. Aelion. 2009. Are clusters of mental retardation correlated with clusters of developmental delay? *Geospatial Health*. 4:17-26.

- Aelion, C.M., H.T. Davis, Y. Liu, A.B. Lawson and S. McDermott. 2009. Validation of Bayesian kriging of arsenic, chromium, lead and mercury in surface soils based on internode sampling. *Environmental Science and Technology* 43:4432-4438. PMC2755059
- Davis, H.T., C.M. Aelion S. McDermott and A.B. Lawson. 2009. Identifying natural and anthropogenic sources of metals in urban and rural soils using GIS-based data, PCA, and spatial interpolation. *Environmental Pollution* 157:2378-2385. PMC2694234
- Kim, J.-I., A.B. Lawson, S. McDermott and C.M. Aelion. 2009. Variable selection for spatial random field predictors under a Bayesian mixed hierarchical spatial model. *Spatial and Spatio-temporal Epidemiology* 1:95-102. PMC2838397
- Aelion, C.M. and U. Warttinger. 2009. Low sulfide concentrations affect nitrate transformations in freshwater and saline coastal retention pond sediments. *Soil Biology and Biochemistry* 41:735-741.
- Aelion C.M., H.T. Davis, S. McDermott and A.B. Lawson. 2009. Soil metal concentrations and toxicity: Associations with distances to industrial facilities and implications for human health. *Science of the Total Environment* 407:2216-2223. PMC2676061
- Aelion, C.M., H.T. Davis, J.R.V. Flora, B. Kirtland and M. Amidon. 2009. Application of encapsulation (pH-sensitive polymer and phosphate buffer macrocapsules): A novel approach to remediation of acidic ground water. *Environmental Pollution* 157:186-193.
- Davis, H.T. and C.M., Aelion. 2009. Chapter 5. Neurological Impacts of Exposure to High and Low Environmental Concentrations of Arsenic in Drinking Water and Soils. In *Environmental Health Risks: Lead Poisoning and Arsenic Exposure*. J.A. Gosselin and I.M. Fancher (Eds.). Nova Science Publishers, Inc., Hauppauge, NY, pp. 35-88.
- Aelion, C.M. and B.S. Jayasinghe. 2009. Chapter 7. Analytical Techniques to Measure Arsenic and Arsenic Species in Environmental and Biological Samples. In *Environmental Health Risks: Lead Poisoning and Arsenic Exposure*. J.A. Gosselin and I.M. Fancher (Eds.). Nova Science Publishers, Inc., Hauppauge, NY, pp. 107-127.
- Liu, L., B. Baker, J.R.V. Flora and C.M. Aelion. 2008. Kinetics of acidic macrocapsules in controlling the pH of groundwater. *Environmental Engineering Science* 25: 1-8.
- Aelion C.M., H.T. Davis, S. McDermott and A.B. Lawson. 2008. Metal concentrations in rural topsoil in South Carolina; Potential for human health impact. *Science of the Total Environment* 402:149-156. PMC2631568.
- Zhen, H., A. B. Lawson, S. McDermott, A. Pande Lamichhane and M. Aelion. 2008. A spatial analysis of mental retardation of unknown cause and maternal residence during pregnancy. *Geospatial Health* 2:173-182.
- Aelion, C.M. and J.R.V. Flora. 2008. Evaluating alkaline microcapsules for pH control and reductive dechlorination of trichloroethylene in sediment. *International Journal of Environmental Technology and Management* 9:3-19.
- Flora, J.R.V., B. Baker, D. Wybenga, H. Zhu and C.M. Aelion. 2008. Preparation of acidic and alkaline macrocapsules for pH control. *Chemosphere* 70:1077-1084. PMID:17854857.
- Aelion, C.M. and H.T. Davis. 2007. Use of a general toxicity test to predict heavy metal concentrations in residential soils. *Chemosphere* 67:1043-1049. PMID:7140621.
- Smalling, K.L. and C.M. Aelion. 2006. Reply to comments on "Biological and chemical transformation of atrazine in coastal aquatic sediments" by C. Marjorie Aelion and Kelly Smalling. *Chemosphere* 65:1442-1443.
- Smalling, K. and C.M. Aelion. 2006. Biological and chemical transformation of atrazine in coastal aquatic sediments. *Chemosphere* 62:188-196. PMID:16125751.
- Aelion, C.M. and K. Tuerk. 2005. Technology development for environmental problems of the Southeastern United States. *International Journal of Environmental Technology and Management* 5:183-202.
- Tuerk, K.J.S. and C.M. Aelion. 2005. Microbial nitrogen removal in a developing suburban estuary along the South Carolina coast. *Estuaries* 28:364-372.

- Ma, H. and C.M. Aelion. 2005. Ammonium production during microbial nitrate removal in soil microcosms from a developing marsh estuary. *Soil Biology & Biochemistry* 37:1869-1878.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. 2005. Assessing in situ mineralization of recalcitrant organic compounds in vadose zone sediments using $\delta^{13}\text{C}$ and ^{14}C measurements. *Journal of Contaminant Hydrology* 76:1-18.
- Flora, J.R.V., C.M. Aelion, B. Baker, L. Liu and D.Q. Wybenga. 2005. Manufacture and testing of macroencapsulated buffers for pH control. Proceedings of the First International Conference on Environmental Science and Technology 2005 (II), W.G. Lyon, J. Hong and R.K. Reddy (Eds.). American Science Press, New Orleans, LA, pp. 45-50.
- Smalling, K. and C.M. Aelion. 2004. Distribution of atrazine into three chemical fractions: Impact of sediment depth and organic carbon content. *Environmental Toxicology and Chemistry* 23:1164-1171.
- Aelion, C.M. and B.C. Conte. 2004. Susceptibility of residential wells to VOC and nitrate contamination. *Environmental Science & Technology* 38:1648-1653.
- Aelion, C.M. and K. Tuerk. 2003. Major Environmental Problems facing the Southeastern Region. In: *Technology Transfer and Commercialization: Environment, Energy, and Economic Issues*. R.K. Jain and S. Kaur (Eds.), R.C. Byrd National Technology Transfer Center, Wheeling Jesuit University, Inc., TEPC-2003-6, Dec. 2003, pp. 25-94.
- Liu, L., J.R.V. Flora and C.M. Aelion. 2003. Theoretical analysis of the influence of process parameters on the use of an encapsulated phosphate buffer to control pH in a soil column. *Journal of Environmental Science and Health B Part A* 38:2825-2844.
- Kirtland, B.C., C.M. Aelion, P.A. Stone and D. Hunkeler. 2003. Isotopic and geochemical assessment of in situ biodegradation of chlorinated hydrocarbons. *Environmental Science & Technology* 37:4205-4212.
- Aelion, C.M. 2003. Soil Contamination Monitoring. In Theme 6.38 Environmental Monitoring, H.I. Inyang and J.L. Daniels, Honorary Theme Editors, in *Encyclopedia of Life Support Systems (EOLSS), Encyclopedia of Environmental and Ecological Sciences, Engineering and Technology Resources*, United Nations Educational, Scientific and Cultural Organization (UNESCO), Eolss Publishers Co., Ltd. Oxford, UK. [<http://www.eolss.net>].
- Liu, L., C.M. Rust, J.R.V. Flora and C.M. Aelion. 2002. Mathematical modeling of encapsulated buffer performance in sand columns. *ASCE Journal of Environmental Engineering* 128:1128-1138.
- Rust, C.M., C.M. Aelion and J.R.V. Flora. 2002. Laboratory sand column study of encapsulated buffer release for potential in situ pH control. *Journal of Contaminant Hydrology* 54:81-98.
- Liu, L.B., Flora, J.R.V. and Aelion, C.M. 2002. Sensitivity Analysis of Encapsulated Buffer Performance in Soil Columns. Proceeding of a Special Joint Conference of Universities Council on Water Resources (UCOWR), Environmental & Water Resources Institute of ASCE (EWRI), U.S. Army Corps of Engineers Institute for Water Resources (CEIWR), and National Ground Water Association (NGWA), Traverse City, MI, pp. 25-32.
- Aelion, C.M. and P.P. Mathur. 2001. Atrazine biodegradation to deisopropylatrazine and deethylatrazine in coastal sediment of different land uses. *Environmental Toxicology and Chemistry* 20:2411-2419.
- Kirtland, B.C., C.M. Aelion and M.A. Widdowson. 2001. Long-term AS/SVE for petroleum removal in low permeability Piedmont saprolite. *Journal of Environmental Engineering* 127:134-144.
- Aelion, C.M. and J.N. Shaw. 2000. Denitrification in South Carolina (USA) Coastal Plain aquatic sediments. *Journal of Environmental Quality* 29:1696-1703.
- Aelion, C.M. and B.C. Kirtland. 2000. Physical versus biological hydrocarbon removal during air sparging and soil vapor extraction. *Environmental Science & Technology* 34:3167-3173.
- Aelion, C.M. 2000. Natural Remediation of Radionuclides. In *Natural Remediation of Environmental Contaminants: Its Role in Ecological Risk Assessment and Risk Management*. C.M. Swindoll, R.G. Stahl, Jr. and S.J. Ells (Eds.). SETAC Press, Society of Environmental Toxicology and Chemistry. pp. 273-295. Book received the STC 2001 Florida Technical Communication Competition Merit award from the Society of Technical Communications.

- Kirtland, B.C., C.M. Aelion and P.A. Stone. 2000. Monitoring natural attenuation of petroleum using a novel in situ respiration method in low-permeability sediment. *Bioremediation Journal* 4:187-201.
- Aelion, C.M. and B.C. Kirtland. 2000. Air Sparging, Soil Vapor Extraction, and Bioremediation in Low Permeability Soils. In *Remediation Engineering of Contaminated Soils*. D.L. Wise, D.J. Trantolo, E.J. Cichon, H.I. Inyang, and U. Stottmeister (Eds.); Marcel Dekker, Inc. New York. pp. 261-278.
- Kirtland, B.C. and C.M. Aelion. 2000. Petroleum mass removal from low permeability sediment using air sparging /soil vapor extraction. impact of continuous or pulsed operation. *Journal of Contaminant Hydrology* 41:367-383.
- Rust, C.M., C.M. Aelion and J.R.V. Flora. 2000. Control of pH during denitrification in subsurface sediment microcosms using encapsulated phosphate buffer. *Water Research* 34:1447-1454.
- Long, S.C. and C.M. Aelion. 1999. Metabolite formation and toxicity measurements in evaluating bioremediation of a jet-fuel-contaminated aquifer. *Applied Biochemistry and Biotechnology*. 76:79-97.
- Aelion, C.M. and D.C. Cresci. 1999. Impact of land use on microbial transformations of atrazine. *Journal of Environmental Quality* 28:683-691.
- Vanukuru, B., J.R.V. Flora, M. Petrou and C.M. Aelion. 1998. Control of pH during denitrification using an encapsulated phosphate buffer. *Water Research* 32:2735-2745.
- Aelion, C.M., B.C. Kirtland and P.A. Stone. 1997. Radiocarbon assessment of aerobic petroleum bioremediation in the vadose zone and groundwater at an AS/SVE site. *Environmental Science & Technology* 31:3363-3370.
- Aelion, C.M., J.N. Shaw and M. Wahl. 1997. Impact of suburbanization on ground water quality and denitrification in coastal aquifer sediments. *Journal of Experimental Marine Biology and Ecology* 213:31-51.
- Kawaguchi, T., A.J. Lewitus, C.M. Aelion and H.N. McKellar. 1997. Can urbanization limit iron availability to estuarine algae? *Journal of Experimental Marine Biology and Ecology* 213:53-69.
- Aelion, C.M. 1997. Environmental Contamination and Site Remediation. In *Environmental Quality, Innovative Technologies, and Sustainable Economic Development, A NAFTA Perspective*, E.J. Macari and F.M. Saunders, (Eds.); ASCE American Society of Civil Engineers, New York; pp.23-27.
- Widdowson, M.A., O.R. Haney, H.W. Reeves, C.M. Aelion and R.P. Ray. 1997. Multilevel soil-vapor extraction test for heterogeneous soil. *ASCE Journal of Environmental Engineering* 123:160-168.
- Aelion, C.M. 1996. Impact of aquifer sediment grain size on petroleum hydrocarbon distribution and biodegradation. *Journal of Contaminant Hydrology* 22:109-121.
- Aelion, C.M., J.N. Shaw, M.A. Widdowson, R.P. Ray and H.W. Reeves. 1996. Simplified methods for monitoring contaminated ground water and soil vapor. *Journal of Soil Contamination* 5:225-241.
- Kawaguchi, T., C.M. Aelion, H.N. McKellar, M. Moore and S. Shetti. 1996. Automated field and laboratory methods for simultaneous determination of anions and cations in water and soil extracts. *American Environmental Laboratory* 8:15-16.
- Long, S.C., C.M. Aelion, D.C. Dobbins and F.K. Pfaender. 1995. A comparison of microbial community characteristics among petroleum-contaminated and uncontaminated subsurface soil samples. *Microbial Ecology* 30:297-307.
- Aelion, C.M., M.A. Widdowson, R.P. Ray, H.W. Reeves and J.N. Shaw. 1995. Biodegradation, vapor extraction, and air sparging in low-permeability soils. In *In Situ Aeration: Air Sparging, Bioventing, and Related Remediation Processes*, Hinchee, R.E., Miller, R.N., and Johnson, P.C. (Eds.); Battelle Press, Columbus, OH; pp. 127-134.
- Widdowson, M.A., C.M. Aelion, R.P. Ray and H.W. Reeves. 1995. Soil vapor extraction pilot study at a Piedmont UST site. In *In Situ Aeration: Air Sparging, Bioventing, and Related Remediation Processes*, Hinchee, R.E., Miller, R.N., and Johnson, P.C. (Eds.); Battelle Press, Columbus, OH; pp 455-461.
- Widdowson, M.A., R.R. Ray, H.W. Reeves and C.M. Aelion. 1995. Integrated Site Characterization for SVE Design. In *Characterization, Containment, Remediation, and Performance in*

- Environmental Geotechnics*, Vol. 2. Y. B. Acar and D. E. Daniel (Eds.), *American Society of Civil Engineers*, New York; pp. 1291-1305.
- Widdowson, M.A., R.R. Ray, H.W. Reeves, C.M. Aelion and K.D. Holbrooks. 1995. Investigation of soil venting-based remediation at a UST site in the Appalachian Piedmont. In *Bioremediation of Pollutants in Soil and Water*, B.S. Schepart, (Ed.); American Society for Testing and Materials, *ASTM STP 1235*, Philadelphia; pp. 135-148.
- Kawaguchi, T., M.H. Wahl, C.M. Aelion and H.N. McKellar. 1994. Organically-bound ferrous iron (Org.-Fe(II)) as an indicator of ecosystem health: A comparison of suburbanized and forested streams in the Southeastern U.S. *Journal of Environmental Science & Health A* 29:1761-1776.
- Aelion, C.M. Spring 1994. Bioremediation: A Natural Process Technology to Treat Freshwater Contamination. *P₂SC, Pollution Prevention in South Carolina II* (1):12-17.
- Aelion, C.M. May 1994. Between the Before and After: Degradation Needs More Proof than Before and After Sampling. *Soils*:38-42.
- Aelion, C.M. and S.C. Long. 1994. Heterogeneity in Contaminant Concentration and Microbial Activity in Subsurface Sediments. In *Hydrocarbon Bioremediation*, Hinchee, R.E., Alleman, B.C., Hoeppel, R.E. and Miller, R.N. (Eds.); Lewis Publishers, Boca Raton, FL; pp. 192-200.
- Robertson, J. F., C.M. Aelion and D.A. Vroblesky. 1993. Distribution of volatile organic compounds in soil vapor in the vicinity of the Defense Fuel Supply Point, Hanahan, South Carolina. U.S. Geological Survey, *Water-Resources Investigations Report* 93-4176; pp. 24.
- Bradley, P.M., C.M. Aelion and D.A. Vroblesky. 1992. Influence of environmental factors on denitrification in sediment contaminated with JP-4 jet fuel. *Ground Water* 30:843-848.
- Dobbins, D.C., C.M. Aelion and F.K. Pfaender. 1992. Subsurface, terrestrial microbial ecology and biodegradation of organic chemicals: A review. *Critical Reviews in Environmental Control* 22:67-136.
- Vroblesky, D.A., J.F. Robertson, M. Fernandez and C.M. Aelion. 1992. The permeable-membrane method of passive-gas collection. Book 11 of the Series, *Ground Water Management*. Water Well Journal Publishing Co., Dublin, OH; pp. 3-16.
- Aelion, C.M. and P.M. Bradley. 1991. Aerobic biodegradation potential of subsurface microorganisms from a jet fuel-contaminated aquifer. *Applied and Environmental Microbiology* 57:57-63.
- Widdowson, M.A. and C.M. Aelion. 1991. Application of a Numerical Model to the Performance and Analysis of an *In Situ* Bioremediation Project. In *In Situ Bioreclamation, Applications and Investigations for Hydrocarbon and Contaminated Site Remediation*, Hinchee, R.E. and Olfenbittel, R.F., Eds.; Butterworth-Heinemann: Stoneham, MA; pp. 227-244.
- Aelion, C.M., D.C. Dobbins and F.K. Pfaender. 1989. Adaptation of aquifer microbial communities to the biodegradation of xenobiotic compounds: Influence of concentration and preexposure. *Environmental Toxicology and Chemistry* 8:75-86.
- Swindoll, C.M., C.M. Aelion, O. Jiang, S.C. Long and F.K. Pfaender. 1988. Aerobic biodegradation of natural and xenobiotic compounds by subsurface microbial communities. *Environmental Toxicology and Chemistry* 7:291-299.
- Swindoll, C.M., C.M. Aelion and F.K. Pfaender. 1988. Influence of mineral and organic nutrients on aerobic biodegradation and the adaptation response of subsurface microbial communities. *Applied and Environmental Microbiology* 54:212-217.
- Aelion, C.M., C.M. Swindoll and F.K. Pfaender. 1987. Adaptation to and biodegradation of xenobiotic compounds by microbial communities from a pristine aquifer. *Applied and Environmental Microbiology* 53:2212-2217.
- Aelion, C.M. and S.W. Chisholm. 1985. Effect of temperature on growth and ingestion rate of *Favella* sp. *Journal of Plankton Research* 7:821-830.

INVITED CONFERENCE ORGANIZER, KEYNOTE SPEAKER AND MODERATOR

Aelion, C.M. Invited participant, MIT Path of Professorship Workshop, Cambridge, MA, November 21, 2015; November 19, 2016.

- Aelion, C.M. Invited Moderator, Faculty Development and Mentoring Undergraduate Public Health Students, Fourth Annual Undergraduate Education for Public Health Summit, New Orleans, LA, November 15, 2014.
- Aelion, C.M. and P. Kostecki, Conference Directors, Sustainable Remediation 2011, State of the Practice. Green Chemistry, Human Health, Environmental Response. University of Massachusetts, Amherst, June 1-3, 2011.
- Aelion, C.M., Scientific Advisory Board, Sustainable Remediation 2011, State of the Practice. Green Chemistry, Human Health, Environmental Response. University of Massachusetts, Amherst, June 1-3, 2011.
- Aelion, C.M. and H. Henry, Moderators, Session 13: Human Health Impacts and Issues. Sustainable Remediation 2011, State of the Practice. Green Chemistry, Human Health, Environmental Response. University of Massachusetts, Amherst, June 1-3, 2011.
- Aelion, C.M. The State of the Environment in the Southeastern United States. Tech Transfer 2003, Conference and Workshop, Innovative Technology Evaluation and Commercialization, U.S. Environmental Protection Agency, Kiawah Island, SC, July 28-29, 2003.
- Aelion, C.M., Invited Participant and Moderator at the National Science Foundation's Second Invitational Conference on Reform in Mathematics and Science Education, Joining Forces: Spreading Successful Strategies. Washington, D.C., February 23-25, 1995.

SESSION ORGANIZER AND CHAIR

- Aelion, CM (Chair and Organizer) and H. Mielke (Co-Chair and Organizer), *Toxic substances in Urban and Rural Environments; Ecosystem Approaches to Human and Wildlife Consequences*. 30th Annual Meeting, Society of Environmental Toxicology and Chemistry, New Orleans, LA, November 19-23, 2009.
- Aelion, CM (Chair and Organizer) and H. Mielke (Co-Chair and Organizer), *Toxic Substances in Rural and Urban Environments: Implications for Human Health*. 29th Annual Meeting, Society of Environmental Toxicology and Chemistry, Tampa, FL, November 16-20, 2008.
- Aelion, C.M. (Co-Chair and Organizer) and B. Sherwood Lollar (Co-Chair and Organizer), *Microbial Ecology of Reductive Dechlorination and the pH Impact*. The Ninth International *In Situ* and On-Site Bioremediation Symposium, Baltimore, MD, May 7-10, 2007.
- Aelion, C.M. (Chair and Organizer) and B. Sherwood Lollar (Co-chair), *Tools/Techniques for Chlorinated Solvent Sites*. The Eighth International *In Situ* and On-Site Bioremediation Symposium, Baltimore, MD, June 6-9, 2005.
- Aelion, C.M. (Chair and Organizer), *Isotopic Techniques in Support of Bioremediation*. *In Situ* and On-Site Bioremediation, The Seventh International Symposium, Orlando, FL, June 2-5, 2003.
- Aelion, C.M. (Chair and Organizer), *Isotopic Approaches in Bioremediation*. *In Situ* and On-Site Bioremediation, The Sixth International Symposium, San Diego, CA, June 4-7, 2001.
- Aelion, C.M. (Chair) and S.R. Hutchins (Co-chair), *Laboratory and Field Investigations on the use of Alternative Electron Acceptors*. *In Situ* and On-Site Bioremediation, The Fifth International Symposium, San Diego, CA, April 19-22, 1999.
- Aelion, C.M. (Chair) and S.R. Hutchins (Co-chair), *Alternate Electron Acceptors*. *In situ* and On-Site Bioreclamation, The Fourth International Symposium, New Orleans, LA, April 28-May 1, 1997.
- Aelion, C.M. (Chair) and S. Pavlostathis (Co-chair), *Biodegradation of Contaminants in Soil and Sediment Systems*, Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management VIII, American Chemical Society, Birmingham, AL, Sept. 9-12, 1996.
- Aelion, C.M. (Chair), *Remediation of Soils*, NAFTA Workshop on Environmental Quality, Innovative Technology & Sustainable Development. Sponsored by the National Science Foundation and the U.S. State Department, Mexico City, Mexico, February 1996.
- Aelion, C.M. (Chair) and S.R. Hutchins (Co-chair), *Alternate Electron Acceptors*. *In situ* and On-Site Bioreclamation, The Third International Symposium, San Diego, CA, April 24-27, 1995.

- Aelion, C.M. (Chair), *Microbially-Mediated Processes for Contaminant Removal*. Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management VI, American Chemical Society, Atlanta, GA, Sept. 19-21, 1994.
- Aelion, C.M., Moderator for Session *Ground Water Management I*, American Water Resources Association, 2nd International Conference on Ground Water Ecology. Atlanta, GA, March 27-30, 1994.
- Aelion, C.M., Invited Participant and Moderator at the National Science Foundation's Invitational Conference on Reform in Mathematics and Science Education, Building the System: Making Science Education Work. Washington, D.C., February 24-26, 1994.
- Dobbins, D.C. and C.M. Aelion (Symposium Co-chairs), *Special Applications of Microbiology in the Remediation of Contaminated Sites*. Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management V, American Chemical Society, Atlanta, GA, Sept. 27-29, 1993.
- Dobbins, D.C. and C.M. Aelion (Symposium Co-chairs), *Recent Advances in In Situ Bioremediation*, 92nd Annual Meeting of the American Society for Microbiology, New Orleans, LA, May 26-30, 1992.

INVITED PARTICIPANT

- Aelion, C.M., Harvard University, The Second Century Symposium: Transforming Public Health Education, Boston, MA, November 1, 2013.
- Aelion, C.M. Columbia University, Innovations in Public Health Education, New York, NY, June 3-4, 2013.
- Aelion, C.M. National Academies, National Research Council, Vietnam Education Foundation, Fellows Review, Hanoi and Ho Chi Minh City, Vietnam, September 8-19, 2006.
- Aelion, C.M. Federal Agency Workshop on, Conceptual Model Development for Subsurface Reactive Transport Modeling of Inorganic Contaminants, Radionuclides, and Nutrients, USGS, USEPA, DOE, Albuquerque, NM, April 20-22, 2004.
- Aelion, C.M. National Science Foundation sponsored Forum for PYIs, NYIs, and PFFs in Environmental Engineering, Duke University, May 28-30, 1997.
- Aelion, C.M. Land Use-Coastal Ecosystems Study Planning Workshop, National Oceanic and Atmospheric Administration, S.C. Sea Grant Consortium, Savannah, GA, June 23-25, 1996.
- Aelion, C.M. NAFTA Workshop on Environmental Quality, Innovative Technology & Sustainable Development. Sponsored by the National Science Foundation and the U.S. State Department, Mexico City, Mexico, February 1996.
- Aelion, C.M. National Science Foundation, Invitational Conference on Women & Science. Washington, DC, December 13-15, 1995.

INVITED SEMINARS

- Aelion, C.M. Associating soil metal concentrations with clusters of intellectual disabilities in children, using Bayesian kriging, Department of Civil and Environmental Engineering, Virginia Technical and State University, Blacksburg, VA, April 20, 2012.
- Aelion, C.M. Can residential soil metals affect children's health?, Department of Civil and Environmental Engineering, University of Massachusetts, Amherst, MA, April 13, 2012.
- Aelion, C.M., J. Hiland, and J. Sherris. Careers in Global Health. Schools of Public Health Application Services, (SOPHAS) Association of Schools of Public Health Webinar, October 12, 2011.
- Aelion, C.M. Potential associations between residential soil metals and intellectual disabilities in children. Università de Brescia, Facoltà di Medicina, Section of Occupational Health and Industrial Hygiene, Brescia, Italy, June 4, 2010.
- Aelion, C.M. Activities of the Association of Schools of Public Health. Association of Schools of Public Health in the European Region, Deans and Directors Retreat, Rennes, France, May 27, 2010.
- Aelion, C.M. Can we associate childhood outcomes with soil metal concentrations? Université de Provence, Equipe Chimie de l'Environnement Continental, Marseille, France, Delivered in French, December 11, 2008.

- Aelion, C.M and S. McDermott. Using Epidemiology, Environmental Science, and Spatial Statistics in Maternal and Child Health, Department of Epidemiology and Biostatistics, University of South Carolina, Columbia, SC, Sept. 17, 2008.
- Aelion, C.M. Residential Soils, Metals and Mental Retardation: What do We Know about Where We Live? Science and Engineering Lecture Series, Jacksonville University, Jacksonville, FL, Feb. 28, 2008.
- Aelion, C.M. Marco, Micro and Nano-Technology for the Remediation of Chlorinated Hydrocarbons, Department of Civil and Environmental Engineering, Storrs, CT, February 9, 2007.
- Aelion, C.M. Interdisciplinary Research and Teaching, Department of Civil and Environmental Engineering, Storrs, CT, February 8, 2007.
- Aelion, C.M. *Assessing Biodegradation of Organic Contaminants in the Environment*, Department of Environmental Engineering, National University of Technology (VNU HCMC), Ho Chi Minh City, Vietnam, Sept. 15, 2006.
- Aelion, C.M. *Assessing Biodegradation of Organic Contaminants in the Environment*, Faculty of Environmental Engineering, National University of Civil Engineering, Hanoi, Vietnam, Sept. 11, 2006.
- Aelion, C.M. *Environmental Problems of the Southeastern United States*, Faculty of Environmental Engineering, National University of Civil Engineering, Hanoi, Vietnam, Sept. 11, 2006.
- Aelion, C.M. *Assessing Biodegradation of Organic Contaminants in the Environment*, Water Resources University, Hanoi, Vietnam, Sept. 11, 2006.
- Aelion, C.M. *Environmental Problems of the Southeastern United States*, Water Resources University, Hanoi, Vietnam, Sept. 11, 2006.
- Aelion, C.M. *Computer-Aided Management of Emergency Operations (CAMEO)*, USC Center for Public Health Preparedness, University of South Carolina, Columbia, SC, April 28, 2006.
- Aelion, C.M. *Biochemical Remediation*, EPSCoR IdeA Speaker, Columbia College, Science Department, Columbia, SC, Feb. 28, 2005.
- Aelion, C.M. *Assessing In Situ Microbial Degradation of Pollutants in Contaminated sediments using Stable Isotopes (^{13}C) and Naturally-Occurring Radiocarbon (^{14}C)*, University of South Carolina, Marine Science Program, Columbia, SC, Oct. 1, 2004.
- Aelion, C.M. *Use of isotopes for Biodegradation Assessment in Contaminated Ground Water and Sediment*. University of South Carolina Undergraduate Student Chemistry Club, Columbia, SC, September 25, 2003.
- Aelion, C.M. *Quantifying PCE biodegradation using naturally-occurring radiocarbon*. EAWAG, Swiss Federal Institute for Environmental Science and Technology, Dübendorf, Switzerland, December 16, 2002.
- Aelion, C.M. *Monitored natural attenuation of chlorinated hydrocarbons*. Department of Environmental Science, University of Wageningen, Wageningen, The Netherlands, November 28, 2002.
- Aelion, C.M. *Biodegradation of atrazine and phenanthrene in coastal sediments*. School of Architecture, Civil and Environmental Engineering (ENAC), Institute of Environmental Science and Technology (ISTE), École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, July 22, 2002.
- Aelion, C.M. *Use of microcapsules in in situ pH control of groundwater*. Savannah River Technology Center, Environmental Restoration Group, Savannah River Site, New Ellenton, SC, June 12, 2002.
- Aelion, C.M. *Innovative techniques for assessing microbial degradation of organic contaminants in sediments*. Department of Exercise Science, USC, Columbia, SC, April 11, 2002.
- Aelion, C.M. *Radiolabel and Radiocarbon: Assessment of Biodegradation*. Savannah River Ecology Laboratory, University of Georgia, Aiken, SC, February 21, 2002.
- Aelion, C.M. *Microbial degradation of organic contaminants in coastal sediments*. Department of Biology and Geology, USC Aiken, SC, February 15, 2002.
- Aelion, C.M. *Biodegradation of PAHs in South Carolina coastal sediments*. Science Department, Columbia College, Columbia, SC, February 4, 2002.

- Aelion, C.M. *Measuring the Role of Bacteria in Natural Attenuation of Contaminated Groundwater*, University of South Carolina, Department of Civil and Environmental Engineering, Columbia, SC, November 23, 1998.
- Aelion, C.M. *Multiple Methods to Assess Physical and Biological Removal of Groundwater and Sediment Contamination*, Duke University, Department of Civil and Environmental Engineering, Durham, NC, January 28, 1998.
- Aelion, C.M. *Research Opportunities at the USC School of Public Health*, Columbia College, Chi Beta Phi Honor Society, Department of Biological and Physical Sciences, Columbia, SC, February 17, 1997.
- Aelion, C.M. *Alternative Methods for Assessing Bioremediation in Petroleum Contaminated Groundwater and Subsurface Sediment*, Virginia Polytechnic Institute and State University, Environmental Engineering and Chemical Engineering Departments, Blacksburg, VA, October 30, 1996.
- Aelion, C.M. *Field Applications of Bioremediation*, S.C. Association for American Women in Science, Section Annual Meeting, Columbia, SC, November, 1994.
- Aelion, C.M. *Bioremediation and Contaminated Sites*, American Society for Industrial Hygiene, S.C./N.C. Annual Meeting, Myrtle Beach, SC, Oct. 13, 1994.
- Aelion, C.M., *Field Applications of Remediation*, University of South Carolina, Masters of Earth Resources Sciences Seminar Columbia, SC, April 7, 1994.
- Aelion, C.M. *Liabilities and Past Impacts* in University of South Carolina short course entitled *Hazardous Materials - Cradle to Grave*, Columbia, SC, July 21, 1992.

INVITED PRESENTATIONS

- Ma, H. and C.M. Aelion. Potential rates of denitrification (DNF) and dissimilatory nitrate reduction to ammonium (DNRA) in surface and subsurface sediments of SC coast, USA. Podium presentation, 2004 Annual Summer meeting, American Society for Limnology and Oceanography, Savannah, GA, June 13-18, 2004.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Quantifying PCE biodegradation using *in situ* respiration and isotopic analysis. Podium presentation, *In Situ* and On-Site Bioremediation, The Seventh International Symposium, Orlando, FL, June 2-5, 2003.
- Lopez-de-Victoria, G., K. Tuerk, B. Hoover and C.M. Aelion. Microbial denitrification rates in a suburban estuary along the South Carolina coast. Podium presentation, American Society for Limnology and Oceanography, Aquatic Sciences Meeting, Salt Lake City, UT, February 8-14th, 2003.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Assessment of natural attenuation of groundwater contamination using innovative field monitoring techniques. Poster presentation, 11th South Carolina Environmental Symposium, Myrtle Beach, SC, November 6-8, 2002.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Radiocarbon and stable isotope assessment of *in situ* PCE bioremediation. Podium presentation, *In Situ* and On-Site Bioremediation, Sixth International Symposium, San Diego, CA, June 4-7, 2001.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Innovative Methods for Measuring Bacterial Removal of Soil and Groundwater Contamination. Poster presentation, 8th South Carolina Environmental Symposium, Pawleys Island, SC, Oct. 13-15, 1999.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Soil gas and isotopic assessment of CO₂ and CH₄ for *in situ* anaerobic petroleum biodegradation. Poster presentation, 7th South Carolina Environmental Symposium, Pawleys Island, SC, Nov. 11-13, 1998.
- Aelion, C.M. Impact of land use on nitrate removal by sediment bacteria from the Coastal Plain of South Carolina. Poster presentation, 7th South Carolina Environmental Symposium, Pawleys Island, SC, Nov. 11-13, 1998.
- Tufford, D.L., H.N. McKellar, C.M. Aelion, M.H. Wahl, C.W. Corbett and D.E. Porter. Mechanisms of surface and shallow ground water hydrology and nutrient fluxes into two high salinity estuaries.

- Podium presentation, Conference on Southeast Coastal Ocean Research (SECOR), Savannah, GA, April 7-10, 1998.
- Aelion, C.M., B.C. Kirtland and P.A. Stone. Radiocarbon assessment of aerobic petroleum bioremediation in the vadose zone and groundwater at an AS/SVE site. Poster presentation, 6th South Carolina Environmental Symposium, Myrtle Beach, SC, October 26-28, 1997.
- Aelion, C.M. and B.C. Kirtland. Petroleum contamination removal using air sparging/soil vapor extraction and bioremediation. Poster presentation, 5th South Carolina Environmental Symposium, Myrtle Beach, SC, October 2-4, 1996.
- Aelion, C.M., B.C. Kirtland and P. Wei. Comparison of Laboratory and In Situ Indicators of Biodegradation of Petroleum Hydrocarbons in low permeability Soil. Podium presentation, Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management VIII, American Chemical Society, Birmingham, AL, September 9-12, 1996.
- Aelion, C.M. and B.C. Kirtland. Petroleum mass removal rates in the Appalachian Piedmont using air sparging/soil vapor extraction and bioremediation. Poster presentation, South Carolina Environmental Law and Technology Conference, Greenville, SC, May 23-24, 1996.
- Aelion, C.M., J.N. Shaw and P. Raj. Bacterial removal of nitrate in a shallow coastal aquifer. Poster presentation, South Carolina Environmental Law and Technology Conference, Greenville, SC, May 23-24, 1996.
- Aelion, C.M. and B.C. Kirtland. Vadose zone O₂ and CO₂ as indicators of *in situ* bioremediation in the Appalachian Piedmont. Podium presentation, Division of Environmental Chemistry 211th American Chemical Society National Meeting, New Orleans, LA, March 24-29, 1996.
- Raj, P. and C.M. Aelion. Denitrification in coastal freshwater stream sediments. Poster presentation, Estuarine Research Federation, Corpus Christi, TX, November 12-15, 1995.
- Wahl, M., H. McKellar, T. Williams and M. Aelion. Patterns of nutrient loading in forested and urbanized coastal streams. Podium presentation, Estuarine Research Federation, Corpus Christi, TX, November 12-15, 1995.
- Kawaguchi, T., A.J. Lewitus, M. Wahl, C.M. Aelion and H. McKellar. Can urbanization limit iron availability to estuarine algae? Podium presentation, Estuarine Research Federation, Corpus Christi, TX, November 12-15, 1995.
- Wahl, M., H. McKellar, T. Williams and M. Aelion. Water table dynamics and nutrient chemistry in forested and urbanized coastal streams. Poster presentation, Estuarine Research Federation, Corpus Christi, TX, November 12-15, 1995.
- Aelion, C.M., R.P. Ray, M.A. Widdowson, H.W. Reeves and J.N. Shaw. Soil vapor and off-gas sampling of a petroleum-contaminated aquifer during soil venting and bioremediation. Podium presentation, Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management VI, American Chemical Society, Atlanta, GA, Sept. 19-21, 1994.
- Aelion, C.M. Hydraulic containment and *in situ* bioremediation for petroleum hydrocarbon contamination. Poster presentation, 1993 Joint Conference on Hazardous Waste Reduction, Hazardous Waste Management Research Fund, Greenville, SC, Oct. 12, 1993.
- Ray, R.P., H.W. Reeves, C.M. Aelion and M.A. Widdowson. *In Situ* stripping and bioremediation of petroleum-derived contamination. Poster presentation, 1993 Joint Conference on Hazardous Waste Reduction, Hazardous Waste Management Research Fund, Greenville, SC, Oct. 12, 1993.
- Aelion, C.M., M.A. Widdowson, R.P. Ray and H.W. Reeves. *In situ* air sparging and bioremediation in a saprolitic aquifer contaminated with gasoline. Podium presentation, Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management V, American Chemical Society, Atlanta, GA, Sept. 27-29, 1993.
- Aelion, C.M. Cleaning up the past: Issues in site remediation. Podium presentation, 1992 Joint Conference on Hazardous Waste Reduction, Hazardous Waste Management Research Fund, Columbia, SC, Oct. 20, 1992.
- Widdowson, M.A., R.P. Ray, H.W. Reeves and C.M. Aelion. *In Situ* stripping and bioremediation of petroleum-derived contamination in soil and groundwater. Podium presentation, 1992 Joint

- Conference on Hazardous Waste Reduction, Hazardous Waste Management Research Fund, Columbia, SC, Oct. 20, 1992.
- Aelion, C.M. and D.C. Dobbins. *In situ* bioremediation: Problems and progress. Podium presentation, 92nd Annual Meeting of the American Society for Microbiology, New Orleans, LA, May 26-30, 1992.
- Aelion, C.M. Field demonstration of *in situ* bioremediation of subsurface jet fuel contamination: Microbial processes and contaminant fate, Hanahan, South Carolina. Podium presentation, 1991 Joint Conference on Hazardous Waste Reduction, Hazardous Waste Management Research Fund, Columbia, SC, Sept. 19, 1991.
- Aelion, C.M., P.M. Bradley and P.B. McMahon. Potential for *in situ* bioremediation of a jet fuel spill near Charleston, South Carolina. Podium presentation, 1990 Annual Meeting of the American Association for the Advancement of Science, New Orleans, LA, Feb. 15-20, 1990.
- Aelion, C.M. Ability of microbial communities from an uncontaminated aquifer to degrade organic pollutants. Podium presentation, University of South Carolina, Department of Environmental Health Sciences, Spring Seminar Series, Mar. 20, 1989.

CONTRIBUTED PRESENTATIONS

- Miller, M., D. Harris, T. Huf and C.M. Aelion. Transformation within a Master Plan: Public health education research & facilities planning. Society for College and University Planning, 2105 North Atlantic Regional Conference, Providence, RI, April 14, 2105.
- C.M. Aelion, H.T. Davis and S. McDermott. Surface soil concentrations of arsenic, barium and lead and associations with land cover and population race/ethnicity and socioeconomic status. American Public Health Association 142nd Annual Meeting and Exposition, New Orleans, LA, November 15-19, 2014.
- Davis, H.T., J. Liu, C.M. Aelion, B. Cai, J.B. Burch and S. McDermott. Association between exposure to lead in soils and preterm birth in Medicaid Women in South Carolina. Society for Epidemiologic Research 46th Annual Meeting, Boston, MA, June 18-21, 2013.
- Davis, H.T., C.M. Aelion, J. Liu and S. McDermott. Association between exposure to lead in soils and preterm birth in Medicaid Women in South Carolina. Poster presentation, 26th Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research (SPER), Boston, MA, June 17-18, 2013.
- Davis, H.T., C.M. Aelion and S. McDermott. Racial disparities in the potential for exposure to arsenic and lead in soils for a Medicaid population of mothers in South Carolina, USA. International Society for Environmental Epidemiology 25th Conference, Basel, Switzerland, August 19-23, 2013.
- Aelion, C.M. and H.T. Davis. An aggregate analysis of kriged residential soil arsenic and lead concentrations and mother-child measures in low-income populations. Poster presentation, 140th Annual Meeting, American Public Health Association, San Francisco, CA, October 27-31, 2012.
- Aelion, C.M. and H.T. Davis. Associations of mother-child measures and neighborhood characteristics in a low-income population with spatially interpolated arsenic, lead, and mercury soil concentrations. Poster presentation, 24th Annual Conference, International Society for Environmental Epidemiology, Columbia, SC, August 26-30, 2012.
- Aelion, C.M. and H.T. Davis. Associations of mother-child health measures with spatially-interpolated soil lead concentrations in residential soils. Poster presentation, 32nd Annual Meeting, Society of Environmental Toxicology and Chemistry, Boston, MA, November 13-17, 2011.
- Onicescu, G., A.B. Lawson, S. McDermott, C.M. Aelion, B. Cai. Cumulative spatial and temporal exposure modeling of soil metals and developmental disabilities in children. Poster presentation, GEOMED 2011, Victoria, British Columbia, Canada, October 20-22, 2011.
- Aelion, C.M. and H.T. Davis. Geostatistical and factor analysis of metal concentrations in urban and rural residential soils with potential for human health impacts. Poster presentation, 30th Annual Meeting, of the Society of Environmental Toxicology and Chemistry, New Orleans, LA, November 19-23, 2009.

- Aelion, C.M., H.T. Davis, S. McDermott and A.B. Lawson. Metal concentrations in rural soils; Is there a potential for human health impact? Podium presentation, 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Tampa, FL, November 16-20, 2008.
- Aelion, C.M., H.T. Davis, H. Zhen, S.W. McDermott and A.B. Lawson. Metal concentrations in residential soils. Poster presentation, 28th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Milwaukee, WI, November 11-15, 2007.
- Aelion, C.M. and U. Warttinger. Nitrate removal in coastal retention ponds sediments of high sulfate and sulfide concentration. Poster presentation, 28th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Milwaukee, WI, November 11-15, 2007.
- Aelion, C.M., H.T. Davis and J.V.R. Flora. Macrocapsules: A novel remediation technology for the treatment of acidic ground water. Poster presentation, National Ground Water Association, 2007 Ground Water Summit. Albuquerque, NM, April 29-May 3, 2007.
- Aelion, C.M., H.T. Davis and J.R.V. Flora. Field application of macroencapsulation for groundwater remediation. Poster presentation, Joint Carolina and Southeast SETAC Meeting, Athens, GA, April 11-13, 2007.
- Engle, M. and C.M. Aelion. Can the natural abundance of ^{15}N be used to identify nitrogen sources in golf course retention ponds? Poster presentation, Carolina and Southeast SETAC Meeting, Athens, GA, April 11-13, 2007.
- Warttinger, U. and C.M. Aelion. Role of sulfur species in denitrification in coastal retention ponds. Poster presentation, Joint Carolina and Southeast SETAC Meeting, Athens, GA, April 11-13, 2007.
- Siewicki, T.C., S. McDaniel, T.C. Pullaro, E. Boyce, J.W. Daugomah and M. Aelion. Water quality and predicted loading of contaminants in South Carolina coastal ponds. Podium presentation, North American Lake Management Society, 15th Annual Southeastern Lake and Watershed Management Conference, Columbus, GA, March 8-11, 2006.
- Aelion, C.M. and H. Ma. Sources of ammonium and nitrate in soil and surface water from an undeveloped marsh, and a golf course retention pond and its adjacent marsh. Poster presentation, ASLO, AGU and TOS Ocean Sciences 2006, Honolulu, HI, February 20-24, 2006.
- Aelion, C.M. and H.T. Davis. Use of Microtox 7 to predict heavy metal concentrations in urban residential soils. Poster presentation, 26th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD, November 13-17, 2005.
- Kirtland, B.K., M. Aelion, J. Flora and M. Engle. Laboratory testing of macro-encapsulated buffers for pH control of groundwater from the Savannah River National Laboratory. Poster presentation, 105th General Meeting of the American Society for Microbiology, Atlanta, GA, June 5-9, 2005.
- Engle, M., M. Aelion and B.K. Kirtland. Groundwater pH remediation using macroencapsulated buffer. Poster presentation, Discovery Day 2005, Columbia, SC, April 22, 2005.
- Thornton, P.H. and C.M. Aelion. Use of a General Toxicity Test to Predict Heavy Metal Concentrations in Soils: Implications for Explaining High Incidences of Developmental Delays/Mental Retardation in Children. Podium Presentation, Graduate Student Day, Columbia, SC, April 6, 2005.
- Flora, J.R.V., C.M. Aelion, B. Baker, L. Liu and D. Wybenga. Manufacture and testing of macroencapsulated buffers for pH control. Podium presentation, 1st International Conference on Environmental Science and Technology, New Orleans, LA, January 23-26, 2005.
- Kloot, R.W., B. Radakovich and C.M. Aelion. Getting a handle on water quality: Alternatives for limited-resource watershed managers. Podium presentation, 2004 annual conference of the Soil and Water Conservation Society, St. Paul, MN, July 24-28, 2004.
- Smalling, K. and C.M. Aelion. Microbial degradation of atrazine in coastal sediments: distribution of metabolites into aqueous and basic fractions. Poster presentation, 19th Annual International Conference on Soils, Sediments and Water, Amherst, MA, October 20-23, 2003.
- Wybenga, D.Q., J.R.V. Flora and C.M. Aelion. Macroencapsulated buffers for pH control. Podium presentation, ERTEC 03, Environmental Restoration Technology End-User Conference, Columbia, SC, June 3-5, 2003.

- Smalling, K. and C.M. Aelion. Sorption and biodegradation account for the majority of atrazine added to coastal sediment microcosms. Podium presentation, 2003 Carolinas SETAC (Society of Environmental Toxicology and Chemistry) Annual Meeting, Charleston, SC, April 2-4, 2003.
- Tuerk, K., C.M. Aelion and G. Lopez de Victoria. Nitrogen cycling in aquatic coastal sediments: Bacterial removal of nitrate and generation of ammonium. Podium presentation, 2003 Carolinas SETAC, Society of Environmental Toxicology and Chemistry Annual Meeting, Charleston, SC, April 2-4, 2003.
- Pullaro, T.C., T.C. Siewicki, W. Pan, S.A. McDaniel, J.W. Daugomah, and C.M. Aelion. Preliminary modeling of nutrient and fecal coliform loading into small, urbanized estuarine systems. Poster presentation, Southeast Coastal Ocean Science Conference, Charleston, SC, January 27-29, 2003.
- Smalling, K.L. and C.M. Aelion. Mineralization of ^{14}C -atrazine in coastal sediments: impacts of sorption to humic substances. Poster presentation, 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry, Salt Lake City, UT, November 16-20, 2002.
- Liu, L.B., J.R.V. Flora and C.M. Aelion. Sensitivity analysis of encapsulated buffer performance in soil columns. Podium presentation, A Special Joint Conference of Universities Council on Water Resources (UCOWR), Environmental & Water Resources Institute of ASCE (EWRI), U.S. Army Corps of Engineers Institute for Water Resources (CEIWR), and National Ground Water Association (NGWA), Traverse City, MI, July 23-26, 2002.
- Conte, B.C., C.M. Aelion and T.J. Miller. Identifying factors to assess susceptibility to ground-water contamination in residential wells located near TRI facilities. Podium presentation, 53rd Annual Meeting of the National Ground Water Association, Nashville, TN, December 7-9, 2001.
- C.M. Rust, C.M. Aelion and J.R.V. Flora. Evaluation of pH as a limiting factor for TCE dechlorination in Savannah River Site sediment. Poster presentation, 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD, November 11-15, 2001.
- Rust, C.M., C.M. Aelion and J.R.V. Flora. Subsurface bacteria metabolize TCE in groundwater; impact of pH. Podium presentation, Annual Meeting of the S.C. Academy of Sciences, Greenwood, SC, April 6, 2001.
- Tidwell, A.D. and C.M. Aelion. Microbial mineralization and transformation of phenanthrene in coastal sediment microcosms. Podium presentation, Annual Meeting of the Society for Environmental Toxicology and Chemistry, Nashville, TN, Nov. 12-16, 2000.
- Rust, C.M., C.M. Aelion and J.R.V. Flora. Encapsulation technology control pH in flow-through columns during denitrification. Podium presentation, Annual Meeting of the American Chemical Society, Washington, DC, August 20-24, 2000.
- Aelion, C.M. and B.C. Conte. Assessing susceptibility of groundwater to land applied contaminants. Poster presentation, Annual Meeting of the American Geophysical Union, Washington, DC, May 30-June 3, 2000.
- Tidwell, A.D. and C.M. Aelion. Microbial removal of phenanthrene from coastal sediments. Podium presentation, USC Graduate Student Day, Columbia, SC, April 5, 2000.
- Rust, C.M. and C.M. Aelion. Controlling pH in denitrifying flow-through columns using encapsulated phosphate buffer. Podium presentation, USC Graduate Student Day, Columbia, SC, April 5, 2000.
- Tidwell, A.D. and C.M. Aelion. Microbial removal of phenanthrene from coastal sediments. Podium presentation, Annual Meeting of the S.C. Academy of Sciences, Greenwood, SC, April 30, 1999.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Soil gas and isotopic assessment of anaerobic petroleum biodegradation. Poster presentation, 5th International Symposium, In Situ and On-Site Bioremediation, San Diego, CA, April 19-22, 1999.
- Patel, P. and C.M. Aelion. Deisopropylatrazine and Deethylatrazine production by subsurface microbes exposed to Atrazine. Podium presentation, 8th Annual Meeting of the Carolinas Regional Society of Environmental Toxicology and Chemistry, Columbia, SC, April 9-10, 1999.
- Rust, C.M. and C.M. Aelion. Control of pH with encapsulated buffer during denitrification in subsurface soils. Podium presentation, 8th Annual Meeting of the Carolinas Regional Society of Environmental Toxicology and Chemistry, Columbia, SC, April 9-10, 1999.

- Tidwell, A. and C.M. Aelion. Microbial mineralization of Phenanthrene in coastal sediments. Presentation, 8th Annual Meeting of the Carolinas Regional Society of Environmental Toxicology and Chemistry, Columbia, SC, April 9-10, 1999.
- Patel, P. and C.M. Aelion. Microbial transformation products of Atrazine in estuarine sediments. Poster presentation, 19th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Charlotte, NC, Nov. 15-19, 1998.
- Rust, C.M. and C.M. Aelion. Control of pH with encapsulated buffer during denitrification in subsurface soils. Poster presentation, 19th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Charlotte, NC, Nov. 15-19, 1998.
- Flora, J.R.V., B. Vanukuru, C.M. Aelion and M.F. Petrou. pH control during denitrification. Podium presentation, First Consumer and Diversified Products Conference, Controlled Release Society, Inc., Las Vegas, NV, June 21-24, 1998: 287-288.
- Kirtland, B.C. and C.M. Aelion. Monitoring and modeling vadose zone oxygen and carbon dioxide to estimate biodegradation during air sparging/soil vapor extraction. Poster presentation, 98th Annual Meeting of the American Society for Microbiology, Atlanta, GA, May 17-21, 1998.
- Rust, C.M. and C.M. Aelion. Denitrification in soil from an aquifer beneath the Savannah River Site. Podium presentation, USC Graduate Student Day, Columbia, SC, April 3, 1998.
- Aelion, C.M. and D.C. Cresci. Microbial mineralization of ¹⁴C atrazine in estuarine sediments. Poster presentation, 97th Annual Meeting of the American Society for Microbiology, Miami Beach, FL, May 4-8, 1997.
- Aelion, C.M., B.C. Kirtland and P.A. Stone. Monitoring *in situ* biodegradation of hydrocarbons using radiocarbon. Podium presentation, Fourth International In Situ and On-Site Bioreclamation Symposium, New Orleans, LA, April 28-May 1, 1997.
- Aelion, C.M., B.C. Kirtland and P.A. Stone. Isotopic assessment of petroleum bioremediation in soil and groundwater using radiocarbon. Poster presentation, Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management VIII, American Chemical Society, Birmingham, AL, Sept. 9-12, 1996.
- Porter, D.E., F.J. Vernberg, W. Vernberg, T. Chandler, H. McKellar, M. Aelion, T. Kawaguchi, G. Scott, M. Fulton, T. Siewicki and B. Jones. Multidisciplinary ecosystem assessment of anthropogenic influences on localized coastal estuaries: A research and management approach. Poster presentation, 5th South Carolina Environmental Symposium, Myrtle Beach, SC, October 2-4, 1996.
- Porter, D.E., F.J. Vernberg, W. Vernberg, T. Chandler, H. McKellar, M. Aelion, T. Kawaguchi, G. Scott, M. Fulton, T. Siewicki, B. Jones and D. Edwards. Integrated ecosystem assessment of anthropogenic influences on localized salt-marsh estuaries: A research and management approach. Podium presentation, 3rd Marine and Estuarine Shallow Water Conference, Atlantic City, NJ, December 1996.
- Aelion, C.M., R.P. Ray, M.A. Widdowson, J.N. Shaw and Y. Wei. Microbial activity during soil vapor extraction and air sparging in the S.C. Piedmont. Poster presentation, 95th Annual Meeting of the American Society for Microbiology, Washington, D.C., May 21-25, 1995.
- Aelion, C.M., R.P. Ray, M.A. Widdowson, H.W. Reeves and J.N. Shaw. Gas monitoring for subsurface microbial activity and hydrocarbon contamination during soil venting and bioremediation. Poster presentation, Third International In Situ and On-Site Bioreclamation Symposium, San Diego, CA, April 24-27, 1995.
- Widdowson, M.A., C.M. Aelion, R.P. Ray and H.W. Reeves. A pilot study of soil vapor extraction at a Piedmont UST site. Podium presentation, Third International In Situ and On-Site Bioreclamation Symposium, San Diego, CA, April 24-27, 1995.
- Sullins, N.R. and C.M. Aelion. CO₂ recovery and toluene utilization in contaminated aquifer sediments. Poster presentation, 94th Annual Meeting of the American Society for Microbiology, Las Vegas, NV, May 23-27, 1994.
- Wahl, M., C.M. Aelion, H. McKellar, T. Kawaguchi and T. Williams. Nutrient loading, and ground water and surface water interactions in coastal South Carolina blackwater streams. Podium presentation,

- 2nd International Conference on Ground Water Ecology, American Water Resources Association, Atlanta, GA, March 27-30, 1994.
- Kawaguchi, T., C.M. Aelion, M.H. Wahl and H.N. McKellar. Reduction of organically-bound ferrous iron (Org.-Fe(II)) - A potential effect of coastal urbanization? Poster presentation, Southeastern Estuarine Research Society Spring meeting, Jekyll Island, GA, March 10-12, 1994.
- N.R. Sullins and C.M. Aelion. Microbial profile within a petroleum contaminated aquifer. Podium presentation, NC & SC Branches of American Society for Microbiology, Charlotte, NC, November 5-6, 1993.
- Widdowson, M.A., R.P. Ray, H.W. Reeves, C.M. Aelion and K.D. Holbrooks. Investigation of soil venting-based remediation at a UST site in the Appalachian Piedmont. Podium presentation, ASTM Symposium of Bioremediation, Fort Worth, TX, Oct. 14-15, 1993.
- R.P. Ray, M.A. Widdowson, H.W. Reeves and C.M. Aelion. Soil sampling and laboratory testing for SVE/Sparging in Piedmont soils: Measurements of spatial variation and field confirmation. Podium presentation, 1993 American Geophysical Union, MSA, GS Joint Spring Meeting, Baltimore, MD, May 24-28, 1993.
- Long, S.C., C.M. Aelion and F.K. Pfaender. A comparison of decane and toluene metabolism in uncontaminated and jet-fuel contaminated aquifer sediment microcosms. Poster presentation, 93rd Annual Meeting of the American Society for Microbiology, Atlanta, GA, May 16-20, 1993.
- Aelion, C.M. Investigation of the relation between contaminant distribution, sediment type, and microbial activity in jet-fuel contaminated subsurface sediments. Poster presentation, Second International Symposium on *In Situ* and On-Site Bioreclamation, San Diego, CA, April 5-8, 1993.
- Long, S.C., C.M. Aelion and F.K. Pfaender. An investigation of the microbially mediated fate of the petroleum constituents decane and toluene in jet fuel contaminated aquifer sediments. Podium presentation, 13th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Cincinnati, OH, Nov. 8-12, 1992.
- Long, S.C., C.M. Aelion and F.K. Pfaender. An investigation of the potential for *in situ* bioremediation of a jet-fuel contaminated aquifer. Poster presentation, Hazardous Waste Conference, University of Notre Dame Center for Bioengineering and Pollution Control, Notre Dame, IN, Aug. 31- Sept. 4, 1992.
- Vroblecky, D.A., J.F. Robertson, M. Fernandez and C.M. Aelion. The permeable-membrane method of passive soil-gas collection. Podium presentation, Sixth National Outdoor Action Conference on Aquifer Restoration, Ground Water Monitoring, and Geophysical Methods, National Ground Water Association, Las Vegas, NV, May 9-13, 1992.
- Long, S.C. and C.M. Aelion. Metabolism of hydrocarbon contaminants by subsurface microbial communities from a jet-fuel contaminated aquifer. Podium presentation, First International Conference on Ground-Water Ecology, American Water Resources Association, Tampa, FL, April 26-29, 1992.
- Widdowson, M.A. and C.M. Aelion. Application of a numerical model to the performance and analysis of an *in situ* bioremediation project. Poster presentation, International Symposium on *In Situ* and On-Site Bioreclamation, San Diego, CA, March 19-21, 1991.
- Aelion, C.M. and M.A. Widdowson. Numerical modeling and field application to the *in situ* bioremediation of subsurface contamination at a JP-4 jet fuel spill. Podium presentation, 91st Annual Meeting of the American Society for Microbiology, Dallas, TX, May 5-9, 1991.
- Aelion, C.M. Biodegradation potential of subsurface microorganisms adapted to jet fuel contamination. Podium presentation, 90th Annual Meeting of the American Society for Microbiology, Anaheim, CA, May 13-17, 1990.
- Aelion, C.M. and F.K. Pfaender. Ability of microbial communities from a pristine aquifer to degrade xenobiotic compounds. Podium presentation, National Symposium on Water Quality, Orlando, FL, Nov. 12-17, 1989.
- Aelion, C.M., D.C. Dobbins and F.K. Pfaender. Adaptation of aquifer microbial communities to the biodegradation of xenobiotic compounds: Influence of concentration and preexposure. Poster

- presentation, 88th Annual Meeting of the American Society for Microbiology, Miami Beach, FL., May 8-13, 1988.
- Aelion, C.M., C.M. Swindoll and F.K. Pfaender. Effect of substrate and chemical concentration on biodegradation and adaptation by groundwater microbes. Poster presentation, 87th Annual Meeting of the American Society for Microbiology, Atlanta, GA, March 1-6, 1987.
- Swindoll, C.M., C.M. Aelion and F.K. Pfaender. Inorganic and organic amendment effects on the biodegradation of organic pollutants by groundwater microbes. Poster presentation, 87th Annual Meeting of the American Society for Microbiology, Atlanta, GA, March 1-6, 1987.
- Aelion, C.M., C.M. Swindoll, O. Jiang and F.K. Pfaender. Adaptation of groundwater microbes to organic pollutants during long term incubations. Podium presentation, 7th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Washington, D.C., Nov. 2-5, 1986.
- Dobbins, D.C., S.C. Long, C.M. Aelion, C.M. Swindoll and F.K. Pfaender. Kinetics of utilization of radiolabeled substrates by subsurface microbial communities. Podium presentation, 7th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Washington, D.C., Nov. 2-5, 1986.
- Dobbins, D.C., C.M. Aelion, S.C. Long and F.K. Pfaender. Methodology for assessing the metabolism of subsurface microbial communities. Poster presentation, 86th Annual Meeting of the American Society for Microbiology, Washington, D.C., March 1986.
- Long, S.C., D.C. Dobbins, C.M. Aelion, and F.K. Pfaender. Metabolism of naturally occurring and xenobiotic compounds by subsurface microbial communities. Poster presentation, 86th Annual Meeting of the American Society for Microbiology, Washington, D.C., March 1986.

SELECTED SERVICE TO PROFESSIONAL SOCIETIES

Managing Editor

Biodegradation, 2008-2012

Editorial Boards

Bioremediation Journal, 1996-present

Biodegradation, 2002-2008; 2012-present

International Journal of Oceans & Oceanography, 2004-present

International Symposium Technical Review Panel

Technical Review Committee for the 1997 Fourth International Symposium on In Situ and On-Site Bioremediation, New Orleans, LA.

Selected Manuscript Reviews

ACS Symposium Series, American Chemical Society,

Applied and Environmental Microbiology

Biodegradation

Bioremediation Journal

Chemosphere

Ecohealth

Environmental Science & Technology

Geoderma

Water Environment Research

Water Research, *International Association on Water Quality*, *Journal of the International Association on Water Pollution Research and Control*

Selected Research Review Panels

National Institutes of Health, National Institute of Environmental Health Science, Special Emphasis Panel: Conference Review Meeting, R13/U13 awards, March 21, 2013.

Chair, Reigelman Award for Excellence in Undergraduate Public Health Education, Associations of Schools and Programs of Public Health, October 3, 2013.

Vietnam Education Foundation, U.S Faculty Scholars' Program, March 5, 2012.

University of Massachusetts Medical School, Life Science Moment Fund, Worcester, MA, October 5, 2010, May 9, 2012.

National Institutes of Health, National Institute of Environmental Health Science, Superfund Basic Research Program Center Awards, Durham, NC, October 11-12, 2011.

National Academy of Sciences and National Academy of Engineering, Jefferson Science Fellows (JSF) program, 2010, 2011, and 2012.

National Academy of Sciences and National Academy of Engineering, National Research Council, Ford Foundation Predoctoral Fellowship Panel, Engineering, Washington, D.C., Member, Engineering, Dissertation and Postdoctoral Fellowship Program, March 13-15, 2008.

Environmental Protection Agency, SBIR: Phase I: Innovations in Manufacturing, Washington, D.C. Sept. 11-12, 2007.

National Academy of Sciences and National Academy of Engineering, National Research Council, Ford Foundation Predoctoral Fellowship Panel, Engineering, Washington, D.C., Chair, Engineering, March 3-5, 2005, Chair, Engineering, March 2-4, 2006, and Chair, Engineering, March 1-3, 2007.

National Science Foundation Member of Review Panel for Graduate Research Fellowship Program (GRFP), Washington, D.C., February 17-19, 2000, Arlington, VA, February 6-8, 2006, Arlington, VA, and February 5-7, 2007.

National Science Foundation Review Panel for Environmental Engineering/Environmental Technology Program, Division of Chemical, Bioengineering, Environmental, and Transport Systems, Washington, D.C., December 13-14, 2006.

National Science Foundation Review Panel for Small Business Innovation Research (SBIR), Washington, D.C., September 20, 2005.

National Science Foundation Review Panel for the Integrated Graduate Education and Research Training Program (IGERT), Washington, D.C., April 18-19, 2005.

Fulbright Senior Specialists Program Discipline Peer Review Committee, Council for International Exchange of Scholars Panel, for Environmental Science 2 Panel, 2003, 2004, and 2005.

National Academy of Sciences and National Academy of Engineering, National Research Council, Ford Foundation Predoctoral Fellowship Panel, Engineering, Washington, D.C., Co-Chair, Engineering, March 5-6, 2004.

National Science Foundation Review Panel for NATO Postdoctoral Fellowship Program, Washington, D.C., March 4, 2004.

National Research Council, The National Academies, Policy and Global Affairs Division, FY 2003 Vietnam Education Foundation Fellowship Program, Panel review, Washington, D.C., May 12, 2003, Washington, DC, 2004.

The Cooperative Institute for Coastal and Estuarine Environmental Toxicology (CICEET) Grant Program Review Panel, National Oceanic and Atmospheric Administration, University of New Hampshire, Durham, NH, May 28-30, 2003.

National Science Foundation Review Panel for NATO Postdoctoral Fellowship Program, Washington, D.C., February 15-16, 2001.

National Academy of Sciences and National Academy of Engineering, National Research Council, Ford Foundation Predoctoral Fellowship Panel, Engineering, Washington, D.C., Member, Engineering, Washington, D.C., Member, Engineering, March 5-6, 1999, and March 10-11, 2000.

National Science Foundation Review Panel for Collaborative Research at Undergraduate Institutions (CRUI), Washington, D.C., March 13-14, 1997, Washington, D.C., March 8-9, 1999.

Associations of Schools of Public Health, Reviewer for Association of Schools of Public Health/Center for Disease Control Internship Program, 1995, 1996, 1997, 1998 and 1999, 2000.

National Science Foundation Member of Review Panel for Graduate Research Fellowship Program (GRFP), Washington, D.C., January 19, 1996. Washington, D.C., February 4-6, 1999

American Society for Microbiology, Selection Committee, Undergraduate Research Fellowship Program, 1998.
Environmental Protection Agency, Office of Research and Development, 1997 Grants for Research. Washington, D.C., June 17-18, 1996, Washington, D.C., May 13-14, 1997.
American Society for Microbiology, Selection Committee, Undergraduate Research Fellowship Program, 1994, 1995, 1996, and 1997.

Selected Research Proposal Reviews

National Science Foundation; U.S. Environmental Protection Agency;
Virginia Graduate Marine Science Consortium; Idaho Board of Education, Specific Research Grant Program; Idaho DOE EPSCoR; Waste Management Education and Research Consortium, New Mexico; New Mexico Water Resources Research Institute

SELECTED ACADEMIC SERVICE

Selected Service to the University of Massachusetts Amherst and the University of Massachusetts System:

Member UMass Life Sciences Task force, UMass System
Co-Chair UMass Life Sciences Task force, Subcommittee on Translation Sciences, UMass System
Member UMass Amherst Academic Vision Committee
Member UMass Amherst Comprehensive Science Planning Committee
Member UMass Amherst Research Council (Provost's representative)
Member UMass Amherst Dean's Council
Member UMass Amherst New Laboratory Science Building Committee
Member UMass Amherst Review Committee for Faculty Research Grants
Member Steering Committee, UMass Medical School, Center for Community and Translational Science, Worcester MA
Member UMass Medical School, Board of Global Health Committee, Worcester MA

Selected Service to the University of South Carolina:

Member USC Salary Equity Committee
Member USC Provost's Committee for Women's Issues
Member USC University Committee for Tenure and Promotion (USC faculty elected), a 24-person committee that evaluates every university tenure and promotion file
Member USC Search Committee for the Dean of the Arnold School of Public Health
Member USC Search Committee for the Dean of the College of Engineering and Information Technology
Member USC Search Committee for the Director of the Nanotechnology Center
Member USC Search Committee for the Director of Sponsored Programs and Research
Member USC Search Committee for the Director of the Center for Water Research and Policy
Member USC Research Advisory Committee (RAC)
Chair Subcommittee of Research Advisory Committee, Research and Productive Scholarship Awards
Member USC School of the Environment Advisory Committee
Member USC Environmental Advisory Committee
Member USC Radiation Safety Committee
Member USC Health and Safety Committee
Member USC Faculty Senator from the School of Public Health
Chair and Member USC Udall Scholarship Committee
Member USC Sponsored Programs and Research Proposal Review Committee
Chair USC Educational Foundation Research Award Committee
Chair Arnold School of Public Health Research Advisory Committee

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Association for the Advancement of Science

American Chemical Society
American Public Health Association
Association of Environmental Engineering and Science Professors
American Geophysical Union, Lifetime Member
Fulbright Association Lifetime Member
Society of Women Engineers, Lifetime Member
Society of Environmental Toxicology and Chemistry

INCLUSION IN WHO'S WHO SOCIETIES

Who's Who in America, 1994-present
American Men and Women of Science, 1994-present
Who's Who of American Women, 1995-present
Who's Who of the South and Southwest, 1995-present
Who's Who, 2000 Notable American Women, 1996-present
The World's Who's Who of Women, 1997-present

LANGUAGES

Fluent French, Intermediate Spanish.