

CURRICULUM VITAE

Delphis F. Levia, Jr.

OFFICE ADDRESS

Department of Geography
University of Delaware
Newark, DE 19716-2541
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EDUCATION

Clark University, Worcester, MA
Ph.D. in Geography (2000)
Fields of Expertise: forest hydrology, biometeorology, biosphere-climate interactions, forest biogeochemistry, snow chemistry, field methods and instrumentation
Ph.D. dissertation: *Winter stemflow leaching from deciduous canopy trees in relation to meteorological conditions and canopy structure*
Advisor: Professor Stanley Herwitz

University of Massachusetts, Amherst, MA
M.S. in Geography (1996)
Fields of Expertise: natural hazards, geomorphology
M.S. thesis: *The perception of floods associated with storm surges among the citizens of Scituate, Massachusetts*
Advisor: Professor David Alexander

Clark University, Worcester, MA
B.A. in Geography, *summa cum laude* (1994)
Senior thesis: *Mid-winter stemflow drainage from bigtooth aspen*

ACADEMIC APPOINTMENTS

Associate Professor of Ecohydrology (2009- pr)
Secondary Appointment, Plant & Soil Sciences (2006-pr)
University of Delaware, Newark, DE

Assistant Professor (2003-2009)
University of Delaware, Newark, DE

Assistant Professor (2001-2003)
Southern Illinois University, Carbondale, IL

Visiting Assistant Professor (2000-01)
Clark University, Worcester, MA

**ADMINISTRATIVE
APPOINTMENTS**

Director, Environmental Science & Studies Programs (2010- pr)
University of Delaware, Newark, DE

Associate Chair (2010- pr)
Department of Geography
University of Delaware, Newark, DE

University Faculty Assessment Scholar (2010- pr)
University of Delaware, Newark, DE

**OTHER
APPOINTMENTS**

Reference Librarian (1999-2001)
Quinsigamond Community College, Worcester, MA

Research Assistant (1997)
Harvard University
Harvard Forest, Petersham, MA

Project title: Modeling the carbon budget of an old growth hemlock
(*Tsuga canadensis*) stand

HONORS & AWARDS

Salzburg Global Seminar Fellow (2008)

Award for Excellence in Geography Programmatic Assessment (2008)

Phi Beta Kappa Honor Society (inducted 1994)

Gamma Theta Upsilon-Geographic International Honor Society (inducted 1992)

Strabo Prize for Intellectual Leadership, Exploration, & Creativity in Geography (1992)

PATENTS

2011. United States Patent and Trademark Office. United States Provisional Patent Application No.: 61/441,502. Apparatus for defining a point of interest on the periphery of an object.

2010. United States Patent and Trademark Office. United States Non-Provisional Patent Application No. 12/780,517. Method and apparatus for measuring microrelief of an object. (Patent pending)

2010. Korean Intellectual Property Office- International Searching Authority. International Non-Provisional Patent Application No. PCT/US2010/034942. Method and apparatus for measuring microrelief of an object. (Patent pending)

2009. United States Patent and Trademark Office. United States Provisional Patent Application No.: 61/178,708. Method and apparatus for measuring microrelief of tree bark.

GRANTS AWARDED

2010. National Science Foundation. Critical Zone Observatories (Ref No. EAR-1039401). Ground truth vegetation characteristics for CZO LiDAR study. Role: Co-PI. (Project total: \$30,031)
2010. National Science Foundation. Geography and Spatial Sciences (Ref No. BCS-1003047). Doctoral Dissertation Research: Inter- and intra-storm variability of dissolved organic carbon and nitrogen fluxes from a mid-latitude broadleaved deciduous forest canopy. Role: PI. (Project total: \$12,000)
2009. National Science Foundation. Critical Zone Observatories (Ref No. EAR-0724971). Collaborative Research: Consequences of critical zone disturbance to carbon storage, transport, bioavailability, and sequestration. Role: Co-PI. (Project total: \$4,315,607)
2009. University of Delaware. Office of Educational Assessment. Assessing the efficacy of DLE (discovery learning experience) courses for undergraduate students. Role: PI. (Project total: \$10,000)
2009. Starrett Foundation and University of Delaware, Office of Economic Innovation and Partnership. Gap funding for the LaserBarkTM automated tree measurement system. Role: PI. (Project total: \$51,000; Starrett Foundation: \$25,000; University of Delaware: \$26,000)
2008. National Science Foundation. International Research and Education: Planning Visits and Workshops (Ref No. OISE-0822226). U.S.-Switzerland planning visit: Seeking a better understanding of canopy-snowpack interactions in relation to the avalanche hazard. Role: PI. (Project total: \$15,588)
2008. National Science Foundation. Hydrologic Sciences (Ref No. EAR-0809205). Collaborative Research: Evolution of dissolved organic nitrogen (DON) from the headwaters to the catchment outlet: sources, variation with scale, and differences with DOC. Role: Co-PI. (Project total: \$540,634; Project total to University of Delaware: \$331,920)
2008. Association of American Geographers. AAG Research Grant. Dissolved organic carbon and nitrogen flux through the critical zone: effects of the canopy and litter layer. Role: PI. (Project total: \$1,200)
2007. Starrett Foundation. Microclimatology and biogeochemistry of a mid-Atlantic watershed located in southeastern Pennsylvania. Role: PI. (Project total: \$56,000)
2007. University of Delaware Research Foundation. Dissolved organic carbon and nitrogen flux through the critical zone: effects of the canopy and litter layer. Role: PI. (Project total: \$25,000)

2006. University of Delaware. Center for Teaching Effectiveness, General Education Initiative, Information Technologies- Instructional Grant. Schistosomiasis and gold mining: two PBL activities for *Conservation of Natural Resources* (Geog235). Role: PI. (Project total: \$8,711)
2002. Oklahoma Climatological Survey, University of Oklahoma. Mesonet Data Grant. Assessing climatic suitability of the northward expansion of *Solenopsis invicta* Buren (red imported fire ant) in Oklahoma under three global climate change scenarios. Role: PI. (Project total: \$9,000)
2002. Office of Research and Development Administration, Southern Illinois University, Carbondale. Faculty Research/Creative Grant. The development of a methodology to detect farmland prone to residential development near small towns. Role: PI. (Project total: \$9,641)
2002. Office of Research and Development Administration, Southern Illinois University, Carbondale. Award of an Undergraduate Research Fellow (Ref. No. 3022-165). Litterfall interception of *Liquidambar styraciflua* L. (sweetgum) fruit litter in southern Illinois. Role: PI. (Project total: \$5,400)
1999. National Science Foundation. Doctoral Research Grant. Geography and Regional Science (Ref. No. SBR-9906545). Seasonality of leachate dynamics in broadleaved deciduous forest ecosystems in relation to global change and the increased frequency of mixed precipitation. Role: PI. (Project total: \$9,050)
1999. Massachusetts Water Resource Authority (MWRA), Commonwealth of Massachusetts. Chemical Analysis Grant. Seasonality of leachate dynamics in broadleaved deciduous forests in relation to global change and the increased frequency of mixed precipitation. Role: PI. (Project total: \$28,000)
1999. Pruser/Holzhauser Graduate Enhancement Research Grant. Graduate School of Geography, Clark University. Aboveground winter leachate dynamics from the woody surfaces of deciduous canopy trees in relation to canopy structure and meteorological conditions. Role: PI. (Project total: \$500)
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GRANT PROPOSALS PENDING

2011. National Science Foundation. Geobiology and Low Temperature Geochemistry. A pilot study to investigate the effects of the woolly beech aphid on the hydrology and biogeochemistry of beech forests. Role: PI. (\$70,546)
2011. Deutscher Akademischer Austausch Dienst (DAAD). Faculty Research Visit Grant. A pilot study to investigate the effects of the woolly beech aphid on the hydrology and biogeochemistry of German European beech forests. Role: PI (Project total: €5,970)
2011. Alexander von Humboldt Foundation. Humboldt Research Fellowship. A pilot study to investigate the effects of the woolly beech aphid on the hydrology and biogeochemistry of German European beech forests. Role: PI (Project total: €26,000)

2011. National Science Foundation. Hydrologic Sciences. Collaborative Research: Dissolved organic matter responses to hydrologic and ecological hot moments: hydrologic controls and changes in space and time. Role Co-PI. (\$514,871)
2011. National Science Foundation. Geography and Spatial Sciences. Doctoral Dissertation Research: Hindcasting and forecasting hydrologic and nutrient fluxes in a temperate deciduous forest in response to synoptic scale climate change. Role: PI (To be submitted)
2011. National Science Foundation. Partnerships for International Research and Education (PIRE). Collaborative Research: Canopy-snowpack interactions in open mixed forests of the Swiss Alps in relation to tree-to-tree spacing, climate change, and the avalanche hazard. Role: PI. (To be submitted)
2011. National Science Foundation. Hydrologic Sciences. International workshop for the advancement of forest hydrology and biogeochemistry. Role: PI. (To be submitted)
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PUBLICATIONS (student co-author color code: green = undergraduate; purple = graduate)

Book

Levia, D.F. (Editor), Carlyle-Moses, D.E. (Co-Editor) and Tanaka, T. (Co-Editor). 2011. *Forest Hydrology and Biogeochemistry: Synthesis of Past Research and Future Directions*. Ecological Studies Series, No. 216, Springer-Verlag, Heidelberg, Germany, 740 p.

Journal articles & other peer-reviewed publications

Levia, D.F. and Leathers, D.J. 2011. (invited) Rain-induced snowmelt. In: Singh, V.P., Singh, P. and Haritashya, U.K. (Eds.), *Encyclopedia of Snow, Ice and Glaciers*. Springer-Verlag, Heidelberg, Germany: 915-917.

Levia, D.F., Carlyle-Moses, D.E. and Tanaka, T. 2011. (invited) Reflections on the state of forest hydrology and biogeochemistry. In: Levia, D.F., Carlyle-Moses, D.E. and Tanaka, T. (Eds.), *Forest Hydrology and Biogeochemistry: Synthesis of Past Research and Future Directions*. Ecological Studies Series, No. 216, Springer-Verlag, Heidelberg, Germany: 729-733.

Levia, D.F., Keim, R.F., Carlyle-Moses, D.E. and **Frost, E.E.** 2011. (invited) Throughfall and stemflow in wooded ecosystems. In: Levia, D.F., Carlyle-Moses, D.E. and Tanaka, T. (Eds.), *Forest Hydrology and Biogeochemistry: Synthesis of Past Research and Future Directions*. Ecological Studies Series, No. 216, Springer-Verlag, Heidelberg, Germany: 425-443.

Levia, D.F., **Van Stan, J.T.**, **Siegert, C.M.**, Inamdar, S.P., Mitchell, M.J., **Mage, S.M.** and McHale, P. 2011. Atmospheric deposition and corresponding variability of stemflow chemistry across temporal scales in a mid-Atlantic broadleaved deciduous forest. *Atmospheric Environment* 45(18): 3046-3054.

- Pypker, T.G., **Levia, D.F.**, Staelens, J. and **Van Stan, II, J.T.** 2011. (invited) Canopy structure in relation to hydrological and biogeochemical fluxes. In: **Levia, D.F.**, Carlyle-Moses, D.E. and Tanaka, T. (Eds.), *Forest Hydrology and Biogeochemistry: Synthesis of Past Research and Future Directions*. Ecological Studies Series, No. 216, Springer-Verlag, Heidelberg, Germany: 371-388.
- Siegert, C.M.** and **Levia, D.F.** 2011. Stomatal conductance and transpiration from three co-occurring seedling species in relation to varying shade tolerance. *Trees- Structure and Function*: In press.
- Li, X.Y., Lin, H. and **Levia, D.F.** 2011. (invited) Coupling ecohydrology and hydrology at different spatio-temporal scales in water-limited ecosystems. In: Lin, H. (Ed.), *Hydrology: Synergistic Integration of Pedology and Hydrology*. Elsevier, Amsterdam, Netherlands: In press.
- Legates, D.R., Mahmood, R., **Levia, D.F.**, Deliberty, T.L., Quiring, S.M., Houser, C. and Nelson, F.E. 2011. Soil moisture: a central and unifying theme in physical geography. *Progress in Physical Geography* 35(1): 65-86.
- Van Stan, J.T.**, Jarvis, M.T., **Levia, D.F.** and Friesen, J. 2011. Instrumental method for reducing error in compression-derived measurements of rainfall interception for individual trees. *Hydrological Sciences Journal*: In press.
- Van Stan, J.T.**, **Siegert, C.M.**, **Levia, D.F.** and **Scheick, C.E.** 2011. Effects of wind-driven rainfall on interception and stemflow generation between two codominant tree species with differing crown characteristics. *Agricultural and Forest Meteorology* 151(9): 1277-1286.
- Inamdar, S., Singh, S., Dutta, S., **Levia, D.**, Mitchell, M., Scott, D., Bais, H. and McHale, P. 2011. Fluorescence characteristics and sources of dissolved organic matter for stream water during storm events in a forested mid-Atlantic watershed. *JGR-Biogeosciences*: In press.
- Inamdar, S., **Finger, N.**, Singh, S., Mitchell, M., **Levia, D.**, Bais, H., Scott, D. and McHale, P. 2011. Dissolved organic matter (DOM) concentration and quality in a forested mid-Atlantic watershed, USA. *Biogeochemistry*: In press.
- Levia, D.F.**, **Van Stan, II, J.T.**, **Mage, S.M.** and **Kelley-Hauske, P.W.** 2010. Temporal variability of stemflow volume in a beech-yellow poplar forest in relation to tree species and size. *Journal of Hydrology* 380 (1/2):112-120.
- Van Stan, II, J.T.** and **Levia, D.F.** 2010. Inter- and intraspecific variation of stemflow production from *Fagus grandifolia* Ehrh. (American beech) and *Liriodendron tulipifera* L. (yellow poplar) in relation to bark microrelief in the eastern United States. *Ecohydrology* 3 (1): 11-19.
- Van Stan, II, J.T.**, Jarvis, M.T. and **Levia, D.F.** 2010. An automated instrument for the measurement of bark microrelief. *IEEE Transactions on Instrumentation and Measurement* 59 (2): 491-493.

- Fang, K., Gou, X., **Levia, D.F.**, Li, J., Zhang, F., Liu, X., He, M., Zhang, Y. and Peng, J. 2009. Variation of radial growth patterns in trees along three altitudinal transects in north central China. *IAWA Journal* 30 (4): 443-457.
- Rudrappa, T., Choi Y.S., **Levia, D.F.**, Legates, D.R., Lee, K.H. and Bais, H.P. 2009. *Phragmites australis* root secreted phytotoxin undergoes photo-degradation to execute severe phytotoxicity. *Plant Signaling and Behavior* 4(6): 506-513.
- Levia, D.F.** 2008. A generalized allometric equation to predict foliar dry weight on the basis of trunk diameter for eastern white pine (*Pinus strobus* L.). *Forest Ecology and Management* 255 (5/6): 1789-1792.
- Levia, D.F.** and **Leclair, L.A.** 2008. Winter leaf conductance rates of *Pinus strobus* L. (eastern white pine). *Physical Geography* 29 (5): 474-482.
- Levia, D.F.** and Quiring, S.M. 2008. Assessment of student learning in a hybrid PBL capstone seminar. *Journal of Geography in Higher Education* 32 (2): 217-231.
- Gou, X., Peng, J., Chen, F. Yang, M., **Levia, D.F.** and Li, J. 2008. A dendrochronological analysis of the maximum summer-half-year temperature variations over the past 700 years on the northeastern Tibetan Plateau. *Theoretical and Applied Climatology* 93(3/4): 195-206.
- Klingaman, N.P.**, **Levia, D.F.** and **Frost, E.E.** 2007. A comparison of several canopy interception models for a leafless mixed deciduous forest stand in the eastern United States. *Journal of Hydrometeorology* 8 (4): 825-836.
- Yang, M., Yao, T., Gou, X., Hirose, N., Fuji, H., Hao, L. and **Levia, D.F.** 2007. Diurnal freeze/thaw cycles of the ground surface on the Tibetan Plateau. *Chinese Science Bulletin* 52 (1): 136-139.
- Levia, D.F.** 2006 (invited). Evapotranspirational losses from plants: effects of canopy architecture and climate. In: Trimble, S.W. (Ed.), *Encyclopedia of Water Science*. CRC Press, Boca Raton, Florida, USA, DOI: 10.1081/E-EWS-120010165, 6 p.
- Levia, D.F.** and Bashour, M.J. 2006. Interpreting the place space of an extinct cultural landscape: the Swift River Valley of central Massachusetts. *Historical Journal of Massachusetts* 34 (2): 149-170.
- Levia, D.F.** and **Frost, E.E.** 2006. Variability of throughfall volume and solute inputs in wooded ecosystems. *Progress in Physical Geography* 30 (5): 605-632.
- Levia, D.F.** and **Wubbena, N.** 2006. Vertical variation in the bark water storage capacity of *Pinus strobus* L. in southern Illinois. *Northeastern Naturalist* 13 (1): 131-137.
- Kidane-Mariam, T. and **Levia, D.F.** 2006. The political ecology of land degradation in Ethiopia. In: Konadu-Agyemang, K. and Panford, K. (Eds.), *Africa's Development in the Twenty-first Century: Pertinent Socioeconomic and Development Issues*. Ashgate Publishing Ltd., Aldershot, Hampshire, UK: 139-159.

- Underwood, S.J., **Levia, D.F.** and **Lavin, J.** 2006. A climatology of solar radiation attenuation during fog episodes in the Central Valley of California. *California Geographer* 46 (1): 57-68.
- Levia, D.F.** and Herwitz, S.R. 2005. Interspecific variation of bark water storage capacity of three deciduous tree species in relation to stemflow yield and solute flux to forest soils. *Catena* 64 (1): 117-137.
- Levia, D.F., Bollinger, W.C.** and **Hrabik, R.A.** 2005. Evaporation of intercepted precipitation from fruit litter of *Liquidambar styraciflua* L. (sweetgum) in a clearing as a function of meteorological conditions. *International Journal of Biometeorology* 49 (5): 325-331.
- Levia, D.F.** 2004. Differential winter stemflow generation under contrasting storm conditions in a southern New England broadleaved deciduous forest. *Hydrological Processes* 18 (6): 1105-1112.
- Levia, D.F.** and **Frost, E.E.** 2004. Assessment of climatic suitability for the expansion of *Solenopsis invicta* Buren in Oklahoma using three general circulation models. *Theoretical and Applied Climatology* 79 (1/2): 23-30.
- Levia, D.F.** and Underwood, S.J. 2004a. Hydrological research and the status of physical geography journals: increasing the impact of physical geography in the academy. *The Professional Geographer* 56 (3): 345-349.
- Levia, D.F.** and Underwood, S.J. 2004b. Snowmelt induced stemflow in northern hardwood forests: a theoretical explanation on the causation of a neglected hydrological process. *Advances in Water Resources* 27 (2): 121-128.
- Levia, D.F., Bollinger, W.C., Hrabik, R.A.** and Pogge, J.T. 2004. Water storage capacity of empty fruiting heads of *Liquidambar styraciflua* L. (sweetgum). *Hydrological Sciences Journal* 49 (5): 843-853.
- Herwitz, S.R., **Levia, D.F.** and Ewe, S.M.L. 2004. Transpiration rates of the understory annual *Impatiens capensis* (Balsaminaceae) in response to the autumnal change in canopy leaf area. *Flora* 199 (6): 524-530.
- Yates, E.D., Levia, D.F.** and Williams, C.L. 2004. Recruitment of three non-native invasive plants into a fragmented forest of southern Illinois. *Forest Ecology and Management* 190 (2/3): 119-130.
- Levia, D.F.** 2003a. Winter stemflow leaching of nutrient-ions from deciduous canopy trees in relation to meteorological conditions. *Agricultural and Forest Meteorology* 117 (1/2): 39-51.
- Levia, D.F.** 2003b. Winter stemflow nutrient inputs into a southern New England broadleaved deciduous forest. *Geografiska Annaler* 85A (1): 13-20.

- Levia, D.F.** and **Frost, E.E.** 2003. A review and evaluation of stemflow literature in the hydrologic and biogeochemical cycles of forested and agricultural ecosystems. *Journal of Hydrology* 274 (1/4): 1-29.
- Levia, D.F.** 2002. Nitrate sequestration by corticolous macrolichens during winter precipitation events. *International Journal of Biometeorology* 46 (2): 60-65.
- Levia, D.F.** and Herwitz, S.R. 2002. Winter chemical leaching from deciduous tree branches as a function of branch inclination angle in central Massachusetts. *Hydrological Processes* 16 (14): 2867-2879.
- Levia, D.F.** and Herwitz, S.R. 2000. Physical properties of stemflow water in relation to leachate dynamics: implications for nutrient cycling. *Canadian Journal of Forest Research* 30 (4): 662-666.
- Levia, D.F.** and **Page, D.R.** 2000. The use of cluster analysis in distinguishing farmland prone to residential development: a case study of Sterling, Massachusetts. *Environmental Management* 25 (5): 541-548.
- Levia, D.F.** 1999. Land degradation: why is it continuing? *Ambio* 28 (2): 200-201.
- Levia, D.F.** 1998. Farmland conversion and residential development in north central Massachusetts. *Land Degradation and Development* 9 (2): 123-130.
- Herwitz, S.R. and **Levia, D.F.** 1997. Mid-winter stemflow drainage from bigtooth aspen (*Populus grandidentata* Michx.) in central Massachusetts. *Hydrological Processes* 11 (2): 169-175.

Conference Proceedings & Reports

- Sparks, D.L., **Levia, D.F.** and Pizzuto, J.E. 2011. Ground truth vegetation characteristics for CZO LiDAR study. Final Project Report. *National Science Foundation*, Washington, DC.
- Sparks, D.L., **Levia, D.F.** and Pizzuto, J.E. 2011. Ground truth vegetation characteristics for CZO LiDAR study. Project Outcomes Report. *National Science Foundation*, Washington, DC.
- Levia, D.F.** and Lepori-Bui, M.D. 2011. A watershed scale forest inventory of the Fair Hill Natural Resource Management Area experimental watershed. Final Project Report. *Delaware Water Resources Center*, Newark, DE.
- Levia, D.F.** and Veness, A.R. 2010. Assessing the efficacy of DLE (discovery learning experience) courses for undergraduate students. Final Project Report. *Office of Educational Assessment*, *University of Delaware*, Newark, DE.
- Levia, D.F.** and Bevan, A.N. 2010. Biogeochemistry of base cations in a broadleaved deciduous forest. Final Project Report. *Delaware Water Resources Center*, Newark, DE.

- Levia, D.F.** 2009. U.S.-Switzerland planning visit: Seeking a better understanding of canopy-snowpack interactions in relation to the avalanche hazard. Final Project Report. *National Science Foundation*, Washington, DC.
- Levia, D.F.** 2009. *Cold Trail*. (Ed.) Cryosphere Specialty Group Newsletter, Association of American Geographers: Volume 6, Issue 1.
- Levia, D.F.** 2008. Dissolved organic carbon and nitrogen flux through the critical zone: effects of the canopy and litter layer. Final Project Report. *University of Delaware Research Foundation*, Newark, DE.
- Levia, D.F.** 2008. Dissolved organic carbon and nitrogen flux through the critical zone: effects of the canopy and litter layer. Final Project Report. *Association of American Geographers*, Washington, DC.
- Levia, D.F.** 2008. *Cold Trail*. (Ed.) Cryosphere Specialty Group Newsletter, Association of American Geographers: Volume 5, Issue 1.
- Levia, D.F.** 2007. Schistosomiasis and gold mining: two PBL activities for *Conservation of Natural Resources* (Geog 235). Final Project Report. *Center for Teaching Effectiveness, University of Delaware*, General Education Initiative & Information Technologies, Newark, DE.
- Levia, D.F.** and Leclair, L.A. 2006. Winter needle conductance rates of *Pinus strobus* L. (eastern white pine): meteorological conditions and intraspecific variability. Final Project Report. *Delaware Water Resources Center*, Newark, DE.
- Levia, D.F.** 2003. Differential winter stemflow generation under contrasting storm conditions in a southern New England broadleaved deciduous forest. *Proceedings of the 60th Annual Eastern Snow Conference*, Sherbrooke, Quebec, Canada.
- Levia, D.F.** 2002. The development of a methodology to detect farmland prone to residential development near small towns. Final Project Report. *Office of Research Development and Administration, Southern Illinois University*, Carbondale, IL.
- Levia, D.F.** and Herwitz, S.R. 2002. Seasonality of leachate dynamics in broadleaved deciduous forest ecosystems in relation to global change and the increased frequency of mixed precipitation. Research Nugget Report. *National Science Foundation*, Washington, DC.
- Levia, D.F.** and Herwitz, S.R. 2002. Winter chemical leaching from deciduous tree branches as a function of branch inclination angle in central Massachusetts. *Proceedings of the 59th Annual Eastern Snow Conference*, Stowe, Vermont, USA.
- Herwitz, S.R. and **Levia, D.F.** 2001. Seasonality of leachate dynamics in broadleaved deciduous forest ecosystems in relation to global change and the increased frequency of mixed precipitation. Final Project Report. *National Science Foundation*, Washington, DC.

Levia, D.F. 2000. Winter stemflow leachate dynamics from deciduous canopy trees in relation to precipitation event characteristics. *Proceedings of the 57th Annual Eastern Snow Conference*, Syracuse, New York, USA.

Ault, H.K., Herwitz, S.R. and **Levia, D.F.** 2000. Modeling the geometry of leafless canopy trees for the determination of total woody surface area and its influence on leachate chemistry. *Proceedings of the 9th International Conference on Geometry and Graphics*, Johannesburg, South Africa.

MANUSCRIPTS IN REVIEW

Levia, D.F., Van Stan, J.T., Inamdar, S.P., Jarvis, M.T., Mitchell, M.J., **Mage, S.M., Scheick, C.E.** and McHale, P.J. (submitted to *Canadian Journal of Forest Research*) Temporal variability of stemflow dissolved organic carbon (DOC) concentration, flux and quality from a co-dominant beech-yellow poplar forest in the eastern USA.

Frost, E.E., Levia, D.F. and Willmott, C.J. (submitted to *Applied Geography*) Variability of throughfall inputs in a southern Illinois deciduous forest.

Hellström, R.Å., Mark, B.G. and **Levia, D.F.** (submitted to *Quarterly Journal of the Royal Meteorological Society*) Seasonal and diurnal fluctuations of boundary layer conditions within a tropical alpine valley in the Peruvian Andes.

Yang, Z.P., Li, X.Y., **Levia, D.F.** and Peng, H.Y. (submitted to *Ecohydrology*) Fluctuation of stemflow yields from *Salix psammophila* C. Wang et Chang Y. Yang (sand willow) as a function of alterations in branching geometry.

Gou, X., Zhang, F., Su, J., **Levia, D.F.** and Peng, F. (submitted to *Annals of Forest Science*) Age structure and treeline dynamics of *Juniperus przewalskii* Kom. in response to climate change in the Anyemaqen Mountains, northeastern Tibetan Plateau.

Kumar, A.S., Lakshmannan, V., Caplan, J., **Levia, D.F.,** Powell, D., Czymmek, K.J. and Bais, H.P. (submitted to *The Plant Journal*) Rhizobacteria restricts foliar pathogen entry by closing stomata.

INVITED LECTURES AND PRESENTATIONS

Levia, D.F. 2011. “Does tree species matter in the hydrology and biogeochemistry of a temperate deciduous forested watershed?” College of Earth and Environmental Science, Lanzhou University, Lanzhou, China

Levia, D.F. 2011. “The science of the water cycle and water conservation issues: an introduction.” College of Earth and Environmental Science, Lanzhou University, Lanzhou, China

Levia, D.F. 2011. “What happens in a forest when it rains, and why is it important?” Science Café, Delaware EPSCoR, Newark, DE

- Levia, D.F.** 2010. "Ecohydrological processes in temperate broadleaved deciduous forests." Department of Ecology and Evolutionary Biology, University of Pennsylvania, Philadelphia, Pennsylvania
- Levia, D.F.** 2010. "Ecohydrology of forested catchments: a conspectus of past, present, and future research activities." Department of Geography, University of Alabama, Tuscaloosa, Alabama
- Levia, D.F.** 2009. "Ecohydrology and biogeochemistry: synthesis of past research and future directions." College of Resources Science and Technology, Beijing Normal University, Beijing, China
- Levia, D.F.** 2009. "A synopsis of research activities of UD's Ecohydrology Group: past, present, and future." Department of Geography, University of Delaware, Newark, Delaware
- Levia, D.F.** 2008. "Biometeorology of a beech-yellow poplar forest in northeastern Maryland in relation to stemflow inputs." Northern Delaware/Philadelphia Area Local Chapter, American Meteorological Society
- Levia, D.F.** and Mage, S.M. 2008. "The stemflow hydrology of a beech-yellow poplar forest in northeastern Maryland: implications for hydro pedology." Presented at the First International Hydro pedology Conference, Pennsylvania State University, State College, Pennsylvania
- Klingaman, N.P., **Levia, D.F.** and Frost, E.E. 2006. "A comparison of several canopy interception models for a leafless mixed deciduous forest stand in the eastern United States." Tropical Research Group Colloquia, University of Reading, Reading, United Kingdom
- Levia, D.F.** 2004. "Biosphere-climate interactions in a southern New England broadleaved deciduous forest." Geography Colloquium Series, Ball State University, Muncie, Indiana
- Levia, D.F.** 2003. "Forest biometeorology." Colloquium Series, Department of Geology, University of Delaware, Newark, Delaware
- Levia, D.F.** 2001. "Winter stemflow leachate dynamics from deciduous canopy trees in relation to precipitation event characteristics." Colloquium Series, Southern Illinois University Ecology Consortium, Carbondale, Illinois

SYMPOSIUM PRESENTATIONS

- Inamdar, S.P., Singh, S., **Levia, D.F.**, Scott, D., Mitchell, M.J. and Bais, H. 2011. "Dissolved organic matter responses for extreme storm events: an indicator of things to come? Presented at the 2011 Gordon Research Conference on Catchment Science: Interactions of Hydrology, Biology, and Geochemistry, Lewiston, Maine

- Van Stan, J.T., **Levia, D.F.**, Jarvis, M.T. and Friesen, J. 2011. "Reducing error associated with compression derived measurements of whole-tree rainfall interception within the Christina River Basin Critical Zone Observatory." Presented at the 2011 National CZO All-Hands Meeting, Tucson, Arizona
- Inamdar, S.P., Singh, S., **Levia, D.F.** and Mitchell, M.J. 2011. "Fluorescence characteristics and sources of dissolved organic matter for stream water during storm events and baseflow." Presented at the 2011 National CZO All-Hands Meeting, Tucson, Arizona
- Yoo, K., Aufdenkampe, A., Inamdar, S., **Levia, D.**, Michael, H. and Inhoff, P. 2011. "Short-term and long-term weathering and soil production: responses to land use changes." Presented at the 2011 National CZO All-Hands Meeting, Tucson, Arizona
- Hicks, S., Aufdenkampe, A., Lazareva, O., Montgomery, D., Kaplan, L., Newbold, D., **Levia, D.** and Sparks, D. 2011. "A wireless environmental sensor network based on open-source electronics for the Christina River Basin CZO. Presented at the 2011 National CZO All-Hands Meeting, Tucson, Arizona
- Levia, D.F.**, Van Stan, J.T., Siegert, C.M., Inamdar, S.P., Mitchell, M.J., Mage, S.M. and McHale, P. 2010. "Atmospheric deposition and corresponding variability of throughfall and stemflow chemistry across temporal scales in a mid-Atlantic broadleaved deciduous forest." Presented at the American Geophysical Union Annual Fall Meeting, San Francisco, California
- Siegert, C. M. and **Levia, D.F.** 2010. "Microclimatological and physiological controls of stomatal conductance and transpiration of co-occurring seedlings with varying shade tolerance." Presented at the American Geophysical Union Annual Fall Meeting, San Francisco, California
- Van Stan, J.T., **Levia, D.F.**, Inamdar, S.P., Mitchell, M.J. and Mage, S.M. 2010. "Temporal variability of stemflow dissolved organic carbon (DOC) concentrations and quality from morphologically contrasting deciduous canopies." Presented at the American Geophysical Union Annual Fall Meeting, San Francisco, California
- Inamdar, S.P., Singh, S., Dutta, S., Mitchell, M.J., **Levia, D.F.**, Scott, D. and Bais, H. 2010. Storm-event patterns and sources of dissolved organic matter (DOM) for stream runoff in a forested, mid-Atlantic watershed. Presented at the American Geophysical Union Annual Fall Meeting, San Francisco, California
- Singh, S., Inamdar, S.P., Finger, N., Mitchell, M.J., **Levia, D.F.**, Scott, D. and Bais, H. 2010. "Quality of dissolved organic matter (DOM) in watershed compartments for a forested mid-Atlantic watershed." Presented at the American Geophysical Union Annual Fall Meeting, San Francisco, California
- Levia, D.F.**, Van Stan, J.T., Siegert, C.M., Inamdar, S.P., Mitchell, M.J., Mage, S.M. and McHale, P. 2010. "Stemflow: a hydrological control on the input of canopy derived fluxes to forest soils." Presented at the 2010 Latsis Symposium on Ecohydrology, Lausanne, Switzerland

- Van Stan, J.T., Stotts, S.N., **Levia, D.F.**, Pizzuto, J.E. and Sparks, D.L. 2010. "Christina River Basin Critical Zone Observatory: preliminary results from the vegetation survey for validation of airborne LiDAR imagery." Presented at the 3rd National CZO Meeting, Boulder, Colorado
- Aufdenkampe, A.K., Hicks, S., Montgomery, D.S., Arscott, D.B., Kaplan, L.A., Newbold, J.D., **Levia, D.F.** and Leathers, D.J. 2010. "Advanced sensor network for real-time observations of hydrological and biogeochemical processes in the Christina River Basin CZO." Presented at the 3rd National CZO Meeting, Boulder, Colorado
- Levia, D.F.**, Van Stan, J.T., Mage, S.M. and Hauske, P.W. 2009. "Spatio-temporal variability of stemflow volume in a beech-yellow poplar forest in relation to tree species and size." Presented at the American Geophysical Union Joint Assembly, Meeting of the Americas, Toronto, Ontario, Canada
- Van Stan, J.T., Jarvis, M.T. and **Levia, D.F.** 2009. "An automated instrument for measurement of bark microrelief." Presented at the American Geophysical Union Joint Assembly, Meeting of the Americas, Toronto, Ontario, Canada
- Siegert, C.M. and **Levia, D.F.** 2009. "An investigation into the transpiration and stomatal conductance rates of three co-occurring seedling species of varying shade tolerance." Presented at the 105th Annual Meeting of the Association of American Geographers, Las Vegas, Nevada
- Frost, E.E., **Levia, D.F.** and Willmott, C.J. 2008. "Variability of throughfall inputs in a southern Illinois broadleaved deciduous forest." Presented at the 104th Annual Meeting of the Association of American Geographers, Boston, Massachusetts
- Levia, D.F.** and Quiring, S.M. 2007. "Assessment of student learning in a hybrid PBL capstone seminar." Presented at the 103rd Annual Meeting of the Association of American Geographers, San Francisco, California
- Levia, D.F.** 2006. "Base cation solute enrichment of winter throughfall flux in a deciduous forest in relation to meteorological conditions." Presented at the 63rd Annual Eastern Snow Conference, Newark, Delaware
- Levia, D.F.** 2006. "Intraspecific variation of base cation solute enrichment of winter throughfall flux in a deciduous forest." Presented at the 102nd Annual Meeting of the Association of American Geographers, Chicago, Illinois
- Underwood, S.J. and **Levia, D.F.** 2006. "Solar radiation attenuation during fog episodes in the Central Valley of California." Presented at the 69th Annual Meeting of the Association of Pacific Coast Geographers, Eugene, Oregon
- Levia, D.F.** 2005. "Geography in higher education: trends and issues." Panelist at the 101st Annual Meeting of the Association of American Geographers, Denver, Colorado

- Levia, D.F.** and Underwood, S.J. 2005. "Hydrological research and the status of physical geography journals: increasing the impact of physical geography in the academy." Presented at the 101st Annual Meeting of the Association of American Geographers, Denver, Colorado
- Levia, D.F.** and Frost, E.E. 2004. "Assessment of climatic suitability for the expansion of *Solenopsis invicta* Buren in Oklahoma using three general circulation models." Presented at the 100th Annual Meeting of the Association of American Geographers, Philadelphia, Pennsylvania
- Levia, D.F.** 2003. "Differential winter stemflow generation under contrasting storm conditions in a southern New England broadleaved deciduous forest." Presented at the 60th Annual Eastern Snow Conference, Sherbrooke, Quebec, Canada
- Levia, D.F.** 2003. "Employing field experimentation methods during winter: an example of nitrate sequestration by corticolous macrolichens during winter precipitation events." Presented at the 99th Annual Meeting of the Association of American Geographers, New Orleans, Louisiana
- Kidane-Miriam, T. and **Levia, D.F.** 2003. "Political ecology of land degradation in Ethiopia." Presented at the 99th Annual Meeting of the Association of American Geographers, New Orleans, Louisiana
- Levia, D.F.** and Herwitz, S.R. 2002. "Winter chemical leaching from deciduous tree branches as a function of branch inclination angle in central Massachusetts." Presented at the 59th Annual Eastern Snow Conference, Stowe, Vermont
- Levia, D.F.** 2002. "Detecting farmland prone to residential development in small towns." Presented at the 98th Annual Meeting of the Association of American Geographers, Los Angeles, California
- Levia, D.F.** 2001. "Influence of global change and species composition of a broadleaved deciduous forest on biogeochemical cycling." Presented at the 97th Annual Meeting of the Association of American Geographers, New York, New York
- Levia, D.F.** 2000 "Winter stemflow leachate dynamics from deciduous canopy trees in relation to precipitation event characteristics." Presented at the 57th Annual Eastern Snow Conference, Syracuse, New York
- Ault, H. K., Herwitz, S.R. and **Levia, D.F.** 2000. "Modeling the geometry of leafless canopy trees for the determination of total woody surface area and its influence on leachate chemistry." Presented at the 9th International Conference on Geometry and Graphics, Johannesburg, South Africa
- Levia, D.F.** and Herwitz, S.R. 1999. "Nutrient cycling in deciduous forests during dormancy: implications of global change and increased frequency of mixed precipitation events." Presented at Annual Meeting of the New England-Saint Lawrence Valley Geographical Society, Farmington, Maine

Levia, D.F. 1998. "Farmland conversion and residential development in north central Massachusetts." Presented at the 94th Annual Meeting of the Association of American Geographers, Boston, Massachusetts

UD ECOHYDROLOGY GROUP

Current members:

Delphis F. Levia (PI)
Diana L. Karwan (Postdoctoral researcher, Ph.D. from Yale University)
Carl L. Rosier (Postdoctoral researcher, Ph.D. from University of Montana)
Ethan E. Frost (Ph.D. student, currently Visiting Assistant Professor at Colgate University)
Courtney M. Siegert (Ph.D. student)
John T. Van Stan, II (Ph.D. student)
Willam J. Ryan, III (M.S. student)
Michelle D. Lepori-Bui (B.S. student)
Andrew S. Price (B.S. student)
Carrie E. Scheick (B.S. student)



Former members:

Patrick W. Kelley-Hauske (currently an USAF officer)
Susanna M. Mage (currently M.S. student, biogeochemistry at Brown University)

GRADUATE TEACHING EXPERIENCE

Graduate students:

Chair:

Ethan E. Frost (Ph.D. student)- stemflow chemistry from live, moribund, and standing dead trees

Courtney M. Siegert (Ph.D. student)- canopy leachate chemistry in relation to changing climate and precipitation regimes

John T. Van Stan, II (Ph.D. student)-DOC and DON cycling as a function of spatial and temporal scale

Serve as committee member or external examiner (*):

Kevin Brinson (Ph.D. student, University of Delaware)

Sylvia Cruzatt (M.S. student, University of Delaware)

Aleksandra Muzylo (Ph.D. student, IDAEA-CSIC, Barcelona, Spain)*

Graduate students completed:**Served as committee chair:**

William J. Ryan, III (M.S., 2011)

Employment: Bucktoe Creek Nature Preserve, Botanist

Thesis: *Variation in stemflow volume and chemistry in black birch (Betula lenta L.) in relation to tree size and associated bark textural changes*

John C. Fry (M.S., 2010)

Employment: Marine Information Resources Corporation, Geospatial analyst

Thesis: *Analysis of floristic diversity of Ailanthus altissima Mill. Swingle (tree of heaven) and co-occurring native tree species in northeastern Maryland*

Courtney M. Siegert (M.S., 2009)

Employment: Ph.D. student, University of Delaware, Newark, DE

Thesis: *An investigation of transpiration of three co-occurring seedling species of varying shade tolerances*

John T. Van Stan, II (M.S., 2008)

Employment: Ph.D. student, University of Delaware, Newark, DE

Thesis: *Inter- and intraspecific variation of stemflow production from Fagus grandifolia and Liriodendron tulipifera: effects of bark microrelief and meteorological conditions*

Ethan E. Frost (M.S., 2006)

Employment: Ph.D. student, University of Delaware, Newark, DE

Thesis: *Throughfall variability in a southern Illinois broadleaved deciduous forest*

Emily D. Yates (M.S., 2003)

Employment: Chicago Botanical Garden, Co-Coordinator for Millennium Seed Bank Project, Chicago, IL

Thesis: *Recruitment of three non-native invasive plants into a fragmented forest of southern Illinois*

Served as a committee member or external examiner:

Nina Finger (M.S., 2010, University of Delaware)

Adam J. McKee (M.Sc., 2010, Thompson Rivers University, BC, Canada)

Mark N. Demitroff (M.S., 2007, University of Delaware)

Christopher A. Miehle (M.S., 2003, Southern Illinois University, Carbondale)

Vincent G. McGowan (M.S., 2001, Southern Illinois University, Carbondale)

Melanie A. Schimek (M.S., 2011, University of Delaware)

COURSES TAUGHT (UNDERGRADUATE & GRADUATE)**Prior to University of Delaware:**

Biosphere-Atmosphere Interactions

Earth's Biophysical Environments (traditional & web)

Environmental Impact Analysis

Forest Hydrology Field Methods

At University of Delaware:**Fall 2003:** ENSC 425-*Environmental Field Methods* (Enrollment: 10)**Spring 2004:** GEOG 652-*Seminar: Ecological Climatology* (Enrollment: 4)**Fall 2004:** GEOG 235-*Conservation of Natural Resources* (Enrollment: 67), GEOG 451/651 *Microclimatology* (Enrollment: 8)**Spring 2005:** ENSC 450-*Proseminar in Environmental Science* (Enrollment: 17)**Spring 2006:** ENSC 450-*Proseminar in Environmental Science* (Enrollment: 18)**Fall 2006:** GEOG 235-*Conservation of Natural Resources* (Enrollment: 40), GEOG 451/651 *Microclimatology* (Enrollment: 11)**Spring 2007:** ENSC 450-*Proseminar in Environmental Science* (Enrollment: 14)**Fall 2007:** ENSC 425- *Environmental Field Methods* (Enrollment: 10), GEOG 631- *Watershed Ecology* (Enrollment: 7)**Spring 2008:** ENSC 450-*Proseminar in Environmental Science* (Enrollment: 11)**Fall 2008:** GEOG 235-*Conservation of Natural Resources* (Enrollment: 39), GEOG 451/651 *Microclimatology* (Enrollment: 7)**Spring 2009:** GEOG 342-*Bioclimatology* (Enrollment: 8)**Fall 2009:** ENSC 425-*Environmental Field Methods* (Enrollment: 11), GEOG 431/631- *Watershed Ecology* (Enrollment: 10)**Spring 2010:** GEOG 342-*Bioclimatology* (Enrollment: 4)**Spring 2011:** ENSC 450-*Proseminar in Environmental Science* (Enrollment: 13), GEOG 235- *Conservation of Natural Resources* (Enrollment: 12, Honors section)**Undergraduate and Graduate Student Directed Research Advisees:**

Daniel R. Page (1999-2000)

William C. Bollinger, III (2002-2003)

Michael J. Mihalik (2003-2004)

Noel Wubbena (2003-2004)

Lydia A. Leclair (2005-2006)

E. Rachel Bernstein (2007-2008)

Anna N. Bevan (2009-2010)

Michelle D. Lepori-Bui (2010-2011)

Ethan E. Frost (2000-2002)

Robert A. Hrabik (2002-2003)

Mark P. Neimeister (2003-2004)

Nicholas P. Klingaman (2004-2005)

Gregory Marchesiello (2007-2008)

Susanna M. Mage (2008-2010)

Carrie E. Scheick (2010-2012)

Andrew Price (2011-2012)

**ADVISEE AWARDS
& HONORS**

John T. Van Stan II, Ph.D. advisee

University Dissertation Fellowship (2011-2012)

University Graduate Fellowship (2010-2011)

AGU Outstanding Student Paper Award (Hydrology) (2009)

Michelle D. Lepori-Bui, Undergraduate advisee

Delaware Water Resources Center Research Internship (2010)

Anna N. Bevan, Undergraduate advisee

Delaware Water Resources Center Research Internship (2009)

Ethan E. Frost, Ph.D. advisee

University Fellowship (2007-2008, 2008-2009)

Susanna M. Mage, Undergraduate advisee
UDRF-REU, Undergraduate Research Scholar (2008-2009)

Gregory D. Marchesiello, Undergraduate advisee
NSF EPSCoR Science & Engineering Research Scholar (2007)

Lydia A. Leclair, Undergraduate advisee
Delaware Water Resources Center Research Internship (2005-2006)

Emily D. Yates, Master's advisee
Arey Award for Outstanding Master's Thesis (2004)

William C. Bollinger, III, Undergraduate advisee
Southern Illinois University Undergraduate Research Prize (2003)

SPECIALIZED PBL TRAINING

Introductory Problem Based Learning (PBL) Workshop
Certified PBL Fellow (June 2005)

Institute for Transforming Undergraduate Education (ITUE)
University of Delaware

Advanced PBL Workshop, "Taking PBL to the Next Level"
Winter 2006 Faculty Institute
University of Delaware

Advanced PBL Workshop, "Refining and Publishing PBL Problems"
Winter 2006 Faculty Institute
University of Delaware

Assessment Workshop
Winter 2008 Faculty Institute
University of Delaware

PROFESSIONAL AND UNIVERSITY SERVICE

Professional service:

Editorial duties: Editorial Board, *Publications in Climatology*

Journal manuscript, book publisher, and proposal reviewer:

Journal manuscript reviewer for:

Advances in Water Resources

African Journal of Agricultural Research

Agricultural and Food Science

Agricultural and Forest Meteorology (8)

Agriculture and Human Values

Biogeochemistry (3)

Journal of Arid Environments

Journal of Environmental Informatics

Journal of Geography in Higher Education

Journal of Hydrology (9)

Journal of Vegetation Science

Physical Geography

Climate Research
Ecohydrology (3)
Global and Planetary Change
Forest Ecology and Management (3)
Hydrological Processes (3)
Hydrological Research Letters (Japan)
Hydrological Sciences Journal

Plant and Soil
Professional Geographer (2)
Publications in Climatology
Silva Fennica
Water International
Water Resources Research (2)

Book reviewer for:

Rowman & Littlefield Publishers, Inc.

Proposal reviewer for:

National Science Foundation, Hydrologic Sciences Program (6)
National Science Foundation, Ecosystem Science Cluster
U.S. Civilian Research & Development Foundation

External reviewer for promotion and/or tenure (number of cases): 2

Association of American Geographers:

Member, Publications Committee (2008-2011)
Chair, Cryosphere Specialty Group (2007-2009)
Member, Board of Directors, Cryosphere Specialty Group (2005- 2007)

Eastern Snow Conference:

Member, Research Committee (2007- present)
Local Arrangements Coordinator, 2006 Joint ESC/CrSG Meeting, Newark, DE

Outreach activities:

Consulting expert, *The News Journal* (2003- present)

Duties: supply journalists with topical expertise for newspaper articles

Climatologist, Fair Hill Nature Center, Elkton, MD (2004- present)

Duties: maintain meteorological station on-site, Wild about Weather program

Member, Board of Directors, Fair Hill Nature Center, Elkton, MD (2004- 2007)

Duties: oversee operations, participate in fundraising & educational programs (k-12, adult)

Judge, State (Delaware) Geography Bee (2005-2006, 2010)

Duties: render a decision concerning the validity of a response when queries arose

Presenter, 2005 Water Festival at Bellevue State Park, DE

Duties: present information on field instrumentation to junior high students

Member, Conservation Commission, New Braintree, MA (1993-1996)

Duties: field site evaluation, wetlands delineation, administration of Wetlands Protection Act

University service:**University of Delaware****University posts:**

Assessment Faculty Fellow (2006- present)
Alpha of Delaware Chapter, Phi Beta Kappa, President (2009- 2010)
Alpha of Delaware Chapter, Phi Beta Kappa, Transcript Review Team (2006- present)
Committee on Undergraduate Records and Certification (2009- present)
Director of Environmental Science and Environmental Studies Programs (2010- present)
University Assessment Scholar (2010-2011)
Working Group for Water Science and Policy PhD Program (2010- present)

College posts:

CEO College Cluster Hire Search Committee (2011)
College of Arts & Sciences Faculty Senate (2003-2004, 2007-2009)

Departmental posts:

Associate Chair (2010- present)
Coordinator for Physical Geography (2009- present)
Delaware Valley Geographical Association, Council Member (2003-2007)
DOUG Faculty Co-Advisor (2006-2007)
Environmental Science Advisor (2004- present)
Environmental Studies Advisor (2009- present)
Undergraduate Career Advisor (2005-2008)

Departmental committees:

Academic Council, Interim Chair (Spring 2006)
Academic Council, Member (2009- present)
Graduate Program Committee, Member (2009)
Ph.D. in Geography Committee, Member (2005-2007)
Promotion and Tenure Committee (2009-2010)
Social Events Planning Committee, Member (2003- 2005)

Southern Illinois University, Carbondale**Departmental posts:**

Undergraduate Program Director (2001- 2003)
Undergraduate Advisor for Environmental Planning specialization (2001- 2003)
Preparer of Geography Undergraduate Assessment Report (2001- 2003)

Departmental committees:

Chair, GIScience Faculty Search Committee (Spring 2003)
Natural Resources Faculty Search Committee (Spring 2002)
Merit Pay Committee (Spring 2002)

PROFESSIONAL AFFILIATIONS

American Geophysical Union (AGU)
Association of American Geographers (AAG)
Council of Environmental Deans and Directors (CEDD)

Delaware Geographic Alliance (DGA)

Eastern Snow Conference (ESC)

International Association of Hydrological Sciences (IAHS)

Phi Beta Kappa, Alpha Chapter of Delaware (PBK)

University of Delaware, Institute for Transforming Undergraduate Education (ITUE)