State University of New York
College of Environmental Science and Forestry

Dr. Timothy Hector Morin
Assistant Professor, Department of Environmental Resources Engineering
State University of New York, College of Environmental Science and Forestry
417 Baker Labs, One Forestry Drive
Syracuse, NY 13210-2778
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ACADEMIC EXPERIENCE

Positions

SUNY ESF, Dept. of Environmental Resources Engineering	Syracuse, NY
Assistant Professor	08/2017-present
Lawerence Berkeley National Laboratory, Earth and Environmental Sci.	Berkeley, CA
Visiting Scientist	08/2017-12/2017
Science Graduate Student Researcher	06/2016-08/2017
The Ohio State University, Dept. of Civil Environmental & Geodetic Eng.	Columbus, OH
Graduate Research Assistant	05/2012-05/2017

EDUCATION

The Ohio State University	Columbus, OH
Ph.D. in Environmental Science	05/2017
Advisor: Gil Bohrer, Ph.D.	
Thesis: "The nexus of observing and modeling methane emissions from inland water bodies."	
Georgia Institute of Technology	Atlanta, GA
Master's in Environmental Engineering	05/2012
Bachelor's in Mechanical Engineering (*Cum laude*)	12/2007

GRANTS, AWARD, AND FELLOWSHIPS

- **McIntire-Stennis Capacity Grant –** Determining the influence of plant transport on the greenhouse gas balance of a bioenergy crop, 05/2019-05/2021 (Morin portion: $60,778)
- **U.S. Department of Energy Office of Science Graduate Student Research award –** Multi-scale parameterization on mechanistic wetland biogeochemistry models and manipulation of oxygen controls on methanogenesis, 06/2016-06/2017
- **National Science Foundation Doctoral Dissertation Improvement Grant –** *Typha* specific chambers to measure plant mediated CH_4 fluxes. Utilize those measurements to parameterize wetland methane models, 05/2016-05/2017
- **Environmental Science Graduate Program Travel Grant –** 12/2015
- **International Arctic Research Center Summer School Grant** - Permafrost modeling under shrubification scenarios, Fairbanks Alaska, 05-06/2015
- **Marian P. and David M. Gates Graduate Student Fund Fellowship** - University of Michigan Biological Station, graduate summer research, 05-07/2014
- **Environmental Science Graduate Program Travel Grant –** 12/2013
- **Fay Graduate Student Fellowship** - Environmental Science Graduate Program, Ohio State University, 09/2012- 08/2013
- **Employee of the year** – Terratial Technologies, 2007

PUBLICATIONS

1. Golub G., Desai A.R., Vesala T., Mammarella I, Ojala A, Bohrer G., Weyhenmeyer G.A., Blanken P., Eugster W., Franz D., Koebsch F., … **Morin T.H.**, … Xiao W. (in review); Coherent patterns in direct CO_2 fluxes across Northern Hemisphere lakes and reservoirs. *Nature Geoscience*.
2. Knox, S.H., Jackson, R.B., Poulter, B., McNicol, G., Fluet-Chouinard, E., Zhang, Z., Hugelius, G., Bousquet, P., Canadell, J.G., Saunois, M. …. **Morin T.H.**, … and Papale, D.; (2019); FLUXNET-CH4 Synthesis Activity: Objectives, Observations, and Future Directions. *Bulletin of the American Meteorological Society*.
3. Villa J.A., Ju Y., Vines C., Rey-Sanchez A.C., **Morin T.H.**, Wrighton K.C., Bohrer G.; (2019). Relationships between methane and carbon dioxide fluxes in a temperate cattail-dominated freshwater wetland. *Journal of Geophysical Research: Biogeosciences*. 124(7), pp.2076-2089.
4. **Morin T.H.** (2019); Advances in the eddy covariance approach to CH_4 monitoring over two and a half decades. *Journal of Geophysical Research: Biogeosciences*. 124(3). 453-460.
5. Smith G. J., Angle J. C., Solden L. M., Borton M. A., **Morin T. H.**, Daly R. A., Johnston M.D., Stefanik K.C., Wolfe R.; Bohrer G., Wrighton K. C. (2018); Members of the Genus Methylobacter Are Inferred To Account for the Majority of Aerobic Methane Oxidation in Oxic Soils from a Freshwater Wetland; *mBio*; 9(6), e00815-18.
6. Atkins J., Bohrer G., Fahey R.T., Hardiman B.S., **Morin T.H.**, Stovall A., Zimmerman N., Gough C.M. (2018); Quantifying vegetation and canopy structural complexity from terrestrial LiDAR data using the forestr R package; *Methods in Ecology and Evolution*; 9(10); p 2057-2066.
7. Fotis A, **Morin T.H.**, Fahey R.T., Hardiman B.S., Curtis, P.S. (2018); Forest canopy complexity in space and time: biotic and abiotic determinates and effects on net primary productivity; *Agricultural and Forest Meteorology*; 250; p181-191.
8. Angle J.A. and **Morin T.H.**[*], Solden L., Narrowe A, Smith G, Borton M, Rey-Sanchez A.C., Daly R., Mirfenderesgi G., Hoyt D., Riley W.J., Miller C., Bohrer G., Wrighton K.C. (2017); Methanogenesis in oxygenated soils is a substantial fraction of wetland methane emissions; *Nature Communications*; 8(1); p.1567.
9. Rey Sanchez A.C., Bohrer G., **Morin T.H.**, Shlomo D., Gildor H., Genin A. (2017); Evaporation and CO2 fluxes in a coastal reef: an eddy covariance approach; *Ecosystem Health and Sustainability*; (310); p.1392830.
10. Rey-Sanchez A.C., **Morin T.H.**, Stefanik K.C., Bohrer G.; Determining total emissions and environmental drivers of methane flux in a Lake Erie estuarine marsh: The Old Woman Creek Wetland; *Ecological Engineering*; 114; p. 7-15.
11. **Morin T.H.**, Rey-Sanchez A.C., Vogel C.S., Matheny A.M., Kenny W.T., Bohrer G.; Carbon dioxide emissions from an oligotrophic temperate lake: An eddy covariance approach; *Ecological Engineering*; 114; p. 25-33.
12. Kenny W.T., Bohrer G., **Morin T.H.**, Vogel C.S., Matheny A.M., Desai A.R. (2017); A Numerical Case Study of the Implications of Secondary Circulations to the Interpretation of Eddy-Covariance Measurements Over Small Lakes; *Boundary Layer Meteorology*; 1-22; DOI: 10.1007/s10546-017-0268-8.
13. **Morin T.H.**, Stefanik K.C., Bohrer G., Rey-Sanchez A.C., Mitsch W.J. (2017); Combining eddy-covariance and chamber measurements to determine the methane budget from a

small, heterogeneous urban wetland park; *Agricultural and Forest Meteorology*; 237-238; p160-170; DOI: 10.1016/j.agrformet.2017.01.022.

14. Matheny A.M., Fiorella R.P., Bohrer G., Poulsen C.J., **Morin T.H.**, Wunderlich A., Vogel C.S., Curtis P.S. (2016); Contrasting strategies of hydraulic control in two co-dominant temperate tree species; *Ecohydrology*; DOI: 10.1002/eco.1815.
15. Melaas E.K., Sulla-Menashe D., Gray J.M., Black T.A., **Morin T.H.**, Richardson A.D., Friedl M.A. (2016); Multisite analysis of land surface phenology in North American temperate and boreal deciduous forests from Landsat; *Remote Sensing of Environment*; 186; pp452-464; DOI: 10.1016/j.rse.2016.09.014.
16. Frasson R.P.d.M., Bohrer G., Medvigy D., Matheny A.M., **Morin T.H.**, Vogel C.S., Gough C.M., Maurer K.D., Curtis P.S. (2015); Modeling forest carbon cycle response to tree mortality: effects of plant functional type and disturbance intensity; *Journal of Geophysical Research: Biogeosciences*; 120(11); p2178-2193; DOI:10.1002/2015JG003035.
17. Matheny, A.M., Bohrer G., Garrity S.R., **Morin T.H.**, Howard C.J.V. (2015); Observations of stem water storage in trees of opposing hydraulic strategies; *Ecosphere*; 6(9); pp165; DOI:10.1890/ES15-00170.1.
18. Matheny A.M., Bohrer G., Vogel C.S., **Morin T.M.**, He L., Frasson R.P.d.M.; Mirfenderesgi G., Gough C.M., Ivanov V.Y., Curtis P.S. (2015); Species-specific transpiration responses to intermediate disturbance in a northern hardwood forest; *Journal of Geophysical Research*: Biogeosciences; 119(12); p2292-2311; DOI:10.1002/2014JG002804.
19. Schäfer K.V.R., Tripathee R., Artigas F., **Morin T.H.**, Bohrer G. (2014); Carbon dioxide fluxes of an urban tidal marsh in the Hudson-Raritan estuary, *Journal of Geophysical Research: Biogeosciences*; 119(11); p2065-2081; DOI:10.1002/2014JG002703.
20. **Morin T.H.**, Bohrer G., Frasson R.P.d.M., Naor-Azrieli L., Mesi S., Stefanik K.C., Schäfer K.V.R. (2014); Environmental drivers of methane fluxes from an urban temperate wetland park; *Journal of Geophysical Research: Biogeosciences*; 119(11); p2188-2208; DOI:10.1002/2014JG002750
21. **Morin T.H.**, Bohrer G., Naor-Azrieli L., Mesi S., Kenny W.T., Mitsch W.J., Schäfer K.V.R. (2014); The seasonal and diurnal dynamics of methane flux at a created urban wetland; *Ecological Engineering*; 72; pp 74-83; DOI:10.1016/j.ecoleng.2014.02.002.

[*]Co-first authored publication

PRESENTATIONS

Invited Presentations

1. **Morin T.H.**; Measuring and modeling methane emissions from temperate wetlands; Oral; 05/2019; Marine Biological Laboratory Seminar Series; Woods Hole, MA.
2. **Morin T.H.**, Measuring and modeling methane emissions from temperate wetlands; Oral; 10/2018; Cornel Civil and Environmental Engineering Seminar Series; Ithaca, NY.
3. **Morin T.H.**; Ecosys at Old Woman Creek; Oral; 03/2018; *Old Woman Creek working group meeting*; Columbus, OH.
4. **Morin T.H.**; Land surface and atmospheric interaction of anaerobic environments; Oral 12/2017; *ESGP Seminar Series*, Columbus, OH.

5. **Morin T.H.**; Ecological Engineering: Accounting for greenhouse gases; Oral 08/2017; *Introduction to ERE seminar series*; Syracuse, NY.
6. **Morin T.H.**, Riley W.J., Grant R.F.; *ecosys* and IsoGenie; Oral 06/2017; *IsoGenie Group Meeting;* Columbus, OH.
7. Bohrer G., Matheny A.M., Mirfenderesgi G., **Morin T.H.**, Rey-Sanchez A.C., Gough C.M., Vogel C.S., Nadelhoffer K.J., Curtis P.S.; Forest disturbance spurs growth of modeling and technology; Oral; 12/2016; *American Geophysical Union Fall Meeting 2016*; San Francisco, CA.
8. **Morin T.H.**, Bohrer G., Stefanik K.C., Rey-Sanchez A.C., Schafer, K.V.R., Mitsch W.J., Modeling greenhouse gas chemistry and transport in heterogeneous wetlands; Oral; 6/2016; *5th International Ecosummit*; Montpellier, France.
9. **Morin T.H.**, Bohrer G., Stefanik K.C., Rey-Sanchez A.C., Mitsch W.J.; Combining eddy-covariance and chamber measurements to determine the methane budget from a small, heterogeneous urban wetland park; Oral; 6/2016; *5th International Ecosummit*; Montpellier, France.
10. **Morin T.H.,** Bohrer G.; How do wetlands affect climate change? Oral; 03/2016; *Old Woman Creek Brown Bag*; Huron, OH.
11. Rey-Sanchez A.C., **Morin T.H.**, Bohrer G, Curtis P.S.; University of Michigan Biological Station AmeriFlux Core Site Project (site summary); Oral; 03/2015; *Ameriflux Data Workshop*; Berkley, CA.
12. Bohrer G., **Morin T.H.**, Kenny W.T., Vogel C.S.; Observations and Modeling the Advection of Carbon from an Inland lake Surrounded by a Forest; Oral; 12/2014; *The 2014 American Geophysical Union Fall Meeting*; San Francisco, CA.
13. Bohrer G., **Morin T.H.**, Vogel CS. CO_2; Advection from a small inland lake surrounded by forest in Northern Michigan; Oral; 9/2014; *Advancing the Science of Gas Exchange between Fresh Waters and the Atmosphere*; Hyytiälä, Finland.
14. Bohrer G., Naor-Azrieli L., Mesi S., Schäfer K.V.R., Mouser P., Stefanik K., Mitsch W.J., **Morin T.**; Eddy flux measurements of methane at the Olentangy River Wetland Research Park wetland - Determining the seasonal and diurnal dynamics of methane emissions; Oral; 10/2012; *4th International EcoSummit on Ecological Sustainability*; Columbus, OH.

Professional National/International Conference Presentations

15. Stuart-Haėntjens, E.J., Hardiman, B.S., Fahey, R.T., Bohrer, G., Rey-Sanchez, C., Cheng, S.J., **Morin, T.H.**, Curtis, P., Vogel, C.S. and Gough, C.M., 2019, December. Lessons from a 15-year eddy-covariance dataset: could changing soil water content tip the temperate forest carbon balance?. In AGU Fall Meeting 2019. AGU.
16. **Morin T.H.**, Riley W.J., Rey-Sánchez A.C., Bohrer G., Mekonnen Z.A., Stefanik K.C., Wrighton; Seasonal water level strongly affects CH_4 emissions in a natural estuarine wetland: Current and future predictions using a mechanistic model; Poster; 12/2018; *American Geophysical Union Fall Meeting 2018*; Washington D.C.
17. Rey-Sánchez A.C., **Morin T.H.**, Stefanik K.C., Wrighton K., Bohrer G.; Patterns of methane production in the soil and emission to the atmosphere in different land covers of a Lake Erie estuarine wetland; Poster; 12/2017; *American Geophysical Union Fall Meeting 2017*; New Orleans, LA.
18. Bohrer G., Rey-Sánchez A.C., Kenny W.T., **Morin T.H.**; Eddy-Covariance Observations and Large-Eddy-Simulations of Near-Shore Fluxes from Water Bodies; Poster; 12/2017; *American Geophysical Union Fall Meeting 2017*; New Orleans, LA.

19. **Morin T.H.**, Rey-Sánchez A.C., Bohrer G., Riley W.J., Angle J.A., Mekonnen Z.A., Stefanik K.C., Grant R.F., Wrighton K.C.; Utilizing patch and site level greenhouse-gas concentration measurements in tandem with the prognostic model, ecosys; Poster; 3/2017; *North American Carbon Program and Ameriflux Principal Investigators Meeting*; Bethesda, MD.
20. Angle J.C., **Morin T.H.**, Solden L.M., Smith G.J., Narrowe A.B., Borton M.A., Hoyt D.W., Daly R.A., Wolfe R., Stefanik K.C., Riley W.J., Miller C.S., Bohrer G., Wrighton K.C.; Methanogenesis in Oxygenated Soils is an Unrecognized Driver of Wetland Methane Emissions; Poster; 06/2017; *American Society for Microbiology;* New Orleans, LA.
21. Smith G.J., Angle J.C., Borton M.A., Stefanik K.C., Johnston M.D., **Morin T.H.**, Daly R.A., Wolfe R., Bohrer G., Wrighton K.C.; New Methylococcaceae Genus Possessing Unexpected Denitrification Potential Dominates Freshwater Wetland Soils; Poster; 06/2017; *American Society for Microbiology;* New Orleans, LA.
22. **Morin T.H.**, Rey-Sánchez A.C., Bohrer G., Riley W.J., Angle J., Mekonnen Z.A., Stefanik K.C., Wrighton K.C.; Utilizing patch and site level greenhouse-gas concentration measurements in tandem with the prognostic model, *ecosys*; Poster; 12/2016; *American Geophysical Union Fall Meeting 2016*; San Francisco, CA.
23. Fiorella R., Poulsen C.J., Matheny A.M., Rey-Sanchez A.C., Fotis A.T., **Morin T.H.**, Vogel, C.S., Gough C.M., Aron P., Bohrer G.; Forest Canopy Water Cycling Responses to an Intermediate Disturbance Revealed Through Stable Water Vapor Isotopes; Poster; 12/2016; *American Geophysical Union Fall Meeting 2016*; San Francisco, CA.
24. Rey-Sanchez A.C., **Morin T.H.**, Stefanik K.C., Wrighton K.C., Bohrer G.; Carbon fluxes in a heterogeneous estuarine wetland in Northern Ohio. Comparing eddy covariance and chamber measurements; Poster; 12/2016; *American Geophysical Union Fall Meeting 2016*; San Francisco, CA.
25. Matheny A.M., Bohrer G., Mirfenderesgi G., **Morin T.H.**, Rey-Sanchez A.C., Vogel C.S., Gough A.M., Curtis P.S.; Plant hydrodynamics help govern forest water cycling response to intermediate severity disturbance; Oral; 12/2016; *American Geophysical Union Fall Meeting 2016*; San Francisco, CA.
26. Rey-Sánchez A.C., **Morin, T.H.**, Bohrer G.; Semi-continuous monitoring of methane in wetlands' soils through the use of pore water dialysis 'peepers'; Poster; 10/2016; *Innovative Environmental Monitoring Symposium*; Athens, OH.
27. Rey-Sánchez A.C., **Morin, T.H.**, Bohrer G.; Carbon fluxes from an estuarine wetland in Northern Ohio; Poster; 9/2016; *Ohio River Basin Consortium for Research and Education 32nd annual symposium*; Youngstown, OH.
28. Angle J. C., Smith G. J., Jackson M. A., **Morin T.H.**, Narrowe A.B., Johnston M.D., Stefanik K.C., Hoyt D.W., Daly R.A., Miller C. S., Wrighton K.C.; Challenging a paradigm: Active methanogenesis in oxic surface wetland soils; Poster; 08/2016; *16th International Symposium on Microbial Ecology*; Montreal, CAN.
29. **Morin, T.H.**, Stefanik K.C., Bohrer G., Rey-Sanchez A.C., Mitsch W.J.; Combining eddy-covariance and chamber measurements to determine the methane budget from a small, heterogeneous urban wetland park; Poster; 03/2016; *ESGP 2016 Annual Symposium*, Columbus, OH.
30. **Morin, T.H.**, Bohrer G.; Environmental drivers of methane fluxes from an urban temperate wetland park; Oral; 02/2016; *ESGP spring seminar series*, Columbus, OH.

31. Rey-Sánchez A.C., **Morin T.H.**, Stefanik K.C., Wrighton K., Bohrer G.; The carbon balance in a heterogeneous wetland in Northern Ohio; Poster; *16th American Ecological Engineering Society Meeting*; 06/2016; Knoxville, TN.
32. Bohrer, G., Matheny A.M., Mirfendersgi G., **Morin T.H.**, Fatichi S.; Scaling tree-level hydrodynamics to plot-level hydrology using novel model and measurements; Oral; *European Geosciences Union*; 04/2016; Vienna, Austria.
33. **Morin, T.H.**, Stefanik K.C., Bohrer G., Rey-Sanchez A.C., Mitsch W.J.; Combining eddy-covariance and chamber measurements to determine the methane budget from a small, heterogeneous urban wetland park; Poster; 12/2015; *American Geophysical Union Meeting 2015*, San Francisco, CA.
34. Bohrer, G., Kenny, W.T., **Morin T.H.**; Large-eddy simulations of surface-induced turbulence and its implications to the interpretation of eddy-covariance measurements in heterogeneous landscapes; Poster; 12/2015; *American Geophysical Union Meeting 2015*; San Francisco, CA.
35. Schafer, K.V.R., Jaffe, P., **Morin, T.H.**, Bohrer, G.; Greenhouse gas balance in a restored and natural wetland; Poster; 12/2015; *American Geophysical Union Meeting 2015*; San Francisco, CA.
36. **Morin T.H.**, Stefanik K.C., Bohrer G., Rey-Sanchez A.C., Mitsch W.J.; Combining eddy-covariance and chamber measurements to determine the methane budget from a small, heterogeneous urban wetland park; Poster; 10/2015; *Postdam GHG Flux Workshop - from natural to urban systems*, Potsdam, Germany.
37. **Morin T.H.**, Bohrer G., Fotis A., Curtis P.S.; Live demo of the Portable Canopy LiDAR (PCL); Oral; *2015 Ameriflux PI Meeting*, 01/2015; Washington D.C.
38. Matheny A.M., **Morin T.H.**, Bohrer G., Garrity S., Vogel C.S., Ivanov V., Curtis P.S.; Improved latent heat flux modeling through plant hydrodynamics accounts for the influence of species-specific storage and diurnal hysteresis; Poster; *2015 NACP PI Meeting*; 2015 Jan 26-29. Washington D.C.
39. **Morin T.H.**, Stefanik K.C., Bohrer G.; Footprint-driven gap filling strategies for fluxes from mixed forest-aquatic systems; Poster; *2015 Ameriflux PI Meeting*, 01/2015; Washington D.C.
40. Gough C.M., Cheng S., Hardiman B., Curtis P.S., Bohrer G., Vogel C.S., Nadelhoffer K., **Morin T.H.**; Ecological and environmental controls over fifteen-year forest net ecosystem production at the University of Michigan Biological Station. Poster, 12/2014. *American Geophysical Union Meeting 2014*, San Francisco, CA.
41. Fotis A., **Morin T.H.**, Hardiman B., Curits P.; Spatio-temporal canopy complexity and leaf acclimation to variable canopy microhabitats; *2014 American Geophysical Union Fall Meeting* 12/2014; San Francisco, CA.
42. **Morin T.H.**, Bohrer G., Naor-Azrieli L.; Environmental causes of methane fluxes from an urban wetland; Oral; *43rd Annual Water Management Association of Ohio Meeting*; 11/2014; Columbus, OH.
43. **Morin T.H.**, Bohrer G., Frasson R.P.M., Naor-Azrieli L.; Optimizing a gapfill model for an urban wetland's methane fluxes; Poster; *Graduate Engineering Research Colloquium*; 10/2014; Columbus, OH.
44. Kenny, W., Bohrer G., **Morin T.**, Matheny A.M.; Development of the high resolution VOC atmospheric chemistry in canopies (Hi-VACC) model and application to a lake flux

scenario; Poster; *Advancing the science of gas exchange between fresh waters and the atmosphere*; 09/2014; Hyytiälä forestry field station, Finland.

45. **Morin T.H.**, Bohrer G., Frasson R.P.M., Naor-Azrieli L., Schäfer K.V.R., Mitsch W.J.; Modeling an urban wetland's methane fluxes using the eddy covariance method; Oral; *14th American Ecological Engineering Society Meeting*, 06/2014; Charleston, SC.
46. **Morin T.H.**, Bohrer G., Frasson R.P.M., Naor-Azrieli L.; Optimizing a gapfill model for an urban wetland's methane fluxes; Poster *2014 AmeriFlux Annual PI Meeting*; 05/2014; Potomac, MD.
47. **Morin T.H.**, Bohrer G., Vogel C.S.; Environmental Drivers Influence Carbon Emissions and Storage of a Freshwater Lake; Poster; *2013 American Geophysical Union Fall Meeting*; 12/2013; San Francisco, CA.
48. Naor-Azrieli L, **Morin T.H**., Bohrer G., Schäfer K.V. R., Brooker M., Mitsch W.J.; Effects of Environmental Conditions on an Urban Wetland's Methane Fluxes; Poster; *2013 American Geophysical Union Fall Meeting*; 12/2013; San Francisco, CA.
49. **Morin T.H.**, Bohrer G., Naor-Azrieli L., Mesi S., Schäfer K.V.R., Stefanik K., Mitsch W.J.; Effects of Environmental Conditions on an Urban Wetland's Methane Fluxes; Poster; *42nd Annual Water Management Association of Ohio Conference*; 11/2013; Columbus, OH.
50. **Morin T.H.**, Bohrer G., Naor-Azrieli L., Mesi S., Schäfer K.V.R., Stefanik K., Mitsch W. J.; Effects of Environmental Conditions on an Urban Wetland's Methane Fluxes; Poster; *13th Annual Meeting of the American Ecological Engineering Society*; 06/2013; Lansing, MI.
51. Bohrer G., **Morin T.**, Naor-Azrieli L., Mouser P.J., Mitsch W.J., Schäfer K.V.R.; Determining the meteorological forcing that affect seasonal and diurnal dynamics of respiration and GPP in a constructed urban wetland in Ohio; Oral; *American Geophysical Union Meeting 2012*; 12/2012; San Francisco, CA.
52. **Morin T.H.**, Bohrer G., Naor-Azrieli L., Mesi S., Schäfer K.V. R., Stefanik K., Mitsch W.J.; Effects of Environmental Conditions on an Urban Wetland's Methane Fluxes; Poster; *41st Annual Water Management Association of Ohio Conference*; 11/2012; Columbus, OH.

TEACHING EXPERIENCE

Teaching Experience

SUNY-ESF **Syracuse, NY**

Instructor

- ERE596 – Ecological Modeling 08/2019-present
- ERE275 – Ecological Engineering 01/2018-present
- ERE311 – Ecological Engineering in the Tropics 01/2019-present

The Ohio State University **Columbus, OH**

Co-instructor 2017

- Measuring and modeling of climate change, the atmospheric boundary layer and ecosystem fluxes

Graduate Teaching Assistant 08/2015 – 05/2016

- CEEGS 5130 - Applied hydrology for graduating undergraduate seniors and graduate students
- CEEGS 2060 - Numerical methods for engineering majors

Atlanta Tutors **Atlanta, GA**
Tutor 11/2011 – 05/2012

- Tutored high school and college level math and science

US Peace Corps **Maseru, Lesotho**
Physics and computer teacher 09/2010 – 05/2011

- Two Introduction to Physics courses for 93 students at Lesotho's National Health Training College
- Wrote a computer literacy guide entitled "IT Driving Licence" and led a focus group of 15 teachers in use of the guide.
- Co-established an HIV awareness group at NHTC called "the Student AIDS Committee"

US Peace Corps **Akawini, Guyana**
Primary school teacher 05/2008 – 07/2010

- Constructed a solar powered computer lab to introduce information technology skills to train 30 school age children within the community. Also taught ICT skills at the computer lab
- Implemented radio/multimedia based mathematics lessons.
- Arranged teaching aid initiatives with 3 teachers to train in enhancement of their classroom learning environments
- Led the construction of a benab (traditional style gazebo) to provide teachers with a rewarding activity for students in order to reduce corporeal punishment
- Promoted alternative farming techniques to 40 youths to raise awareness of alternatives to slash and burn farming techniques.

TECHNICAL SKILLS

- **Eddy covariance -** Data management and processing, sensor installation, maintenance, and calibration.
- **Hydrological and atmospheric modeling –** Adaptation and modification of ecosystem scale numerical models.
- **Flux chambers** - Construction, sample collection, sample processing
- **Gas chromatography -** Environmental sample processing
- **Soil pore water sampling -** Methane peeper construction, installation, and sampling
- **GIS -** QGIS, ArcGIS
- **CAD -** Auto CAD, Microstation
- **Computer languages -** Matlab, Fortran, Processing, Visual Basic, Python, R
- **Operating systems -** Linux and Windows environments

SERVICE

SUNY-ESF Ad Hoc Conflicts of Interest Committee Syracuse, NY
Committee member 04/2018-presnet
SUNY-ESF Committee on Research Syracuse, NY
Committee member 08/2018-presnet
Engineers Without Borders Syracuse, NY
Advisor 03/2018-present
SUNY-ESF advisor of the year 04/2019
Engineers for a Sustainable Society Syracuse, NY

Advisor 03/2018-present
Environmental Science Graduate Program Columbus, OH
President (Student association) 07/2014-06/2015

- Organized first OSU Environmental Science Graduate Symposium, 2015

American Society of Environmental Engineers and Scientists Atlanta, GA
Committee member 08/2011 – 05/2012

- Organized and attended sessions at annual symposium
- On social committee for organizing group events

Grant reviewer

- 2018 Editor's Citation for Excellence in Refereeing for JGR-Biogeosciences
- 2018 Department of Energy - Terrestrial Ecosystem Sciences program – Terrestrial Aquatic Interfaces FOA. Reviewer for 12 grants on a $1,000,000 grant program
- 2016, 2018 Department of Energy - Small Business Innovation Research /Small Business Technology Transfer program

Manuscript reviewer

- Ecological Engineering
- AMBIO
- Boreal Environment Research
- Pedosphere
- Agricultural and Forest Meteorology
- Biogeosciences: Discussion
- Carbon Management
- Journal of Geophysical Research: Biogeosciences
- PLoS ONE
- The Scientific Pages of Soil and Water Sciences
- Journal of Environmental Informatics
- Limnology

NON-ACADEMIC POSITIONS

Terratial Technologies **Atlanta, GA**
Technical specialist 10/2006-05/2008

- Head of customer support department. Trained and oversaw technical support as well as lending aid to other departments with ICT related tasks.
- Directly supervised 4 customer support employees.

Rosser International **Atlanta, GA**
HVAC co-op student 2004-2006

- Drafted HVAC systems for large corporate projects.

NON-ACADEMIC HONORS AND AWARDS

Boy Scouts of America 1989-2002

- Eagle Scout Award Spring 2002

PROFESSIONAL AFFILIATIONS

American Geophysical Union 2013-current
American Association of Ecological Engineering 2013-current