

# Kimberly A. Novick

School of Public and Environmental Affairs, Indiana University – Bloomington  
MSB2, Room 316, 702 N. Walnut Grove Avenue, Bloomington, IN 47405  
1-812-855.3010, [knovick@indiana.edu](mailto:knovick@indiana.edu)

## EDUCATION

---

Duke University, Durham, NC, USA Ph.D. in Environmental Science, 2010  
Dissertation: *Reducing Uncertainty in the Biosphere-Atmosphere Exchange of Trace Gases*

Duke University, Durham, NC, USA B.S.E. Civil & Environmental Engineering, 2002  
Honors Thesis: *Carbon dioxide and water vapor exchange in a warm temperate grassland*

## APPOINTMENTS

---

Assistant Professor 2012 - present  
School of Public and Environmental Affairs (SPEA), Indiana University (IU) - Bloomington

Adjunct Faculty 2014 - present  
Department of Geography, IU-Bloomington

Post-Doctoral Research Ecologist 2010 - 2012  
USDA Forest Service, Southern Research Station, Coweeta Hydrologic Laboratory

Graduate Research Assistant 2009 - 2010  
Nicholas School of the Environment, Duke University

National Science Foundation (NSF) Graduate Research Fellow 2006 - 2009  
Nicholas School of the Environment, Duke University

Graduate Teaching Assistant 2007 - 2008  
Nicholas School of the Environment, Duke University

James B. Duke Fellow 2005 - 2006  
Nicholas School of the Environment, Duke University

## HONORS AND AWARDS

---

NSF CAREER Award (2016)  
IU Outstanding Faculty Collaborative Research Award, with Dr. Rich Phillips (2016)  
IU Trustees Teaching Award (2015)  
IU Center of Excellence for Women in Technology Outstanding Faculty Mentor Award (2015)  
The IU – SPEA Student’s Choice Award for Most Creative Teaching Methods (2015)  
IU – SPEA Award for Outstanding Graduate Teaching (2014)

USDA Forest Service Merit Award (2014 & 2015)  
NSF Graduate Research Fellowship (2006 – 2009)  
James B. Duke Fellowship (2005 – 2009)  
Eric I. Pas Award for most outstanding undergraduate research project (2002)  
William Brewster Snow Award for Academic Excellence (2002)  
Phi Beta Kappa (2002)

## GRANTS, SUB-CONTRACTS, AND CO-OPERATIVE AGREEMENTS

---

### *Active projects*

**US Department of Agriculture (NIFA – AFRI)** **\$469,263 to IU**  
Drought impacts on species-specific carbon uptake and growth in Eastern U.S. hardwood forests. **K. Novick (PI)**, J. Maxwell (co-I, IU), L. Wang (co-I, IU-PUI), J. Wood (co-I, U. of Missouri) and Rich Phillips (co-I, IU). 2017 – 2020.

**NASA Roses (Carbon Cycle Science)** **\$909,212 total, \$428,430 to IU**  
Impacts of climate and land-use/land-cover change on gross and net primary productivity in the Southeastern USA. C. Song (PI, University of North Carolina - Chapel Hill), T. Hwang (co-I, Indiana University), **K. Novick (co-I, Indiana University)**. 2017 – 2020.

**US Department of Energy via Lawrence Berkeley National Lab** **\$780,754 to IU**  
Ameriflux Management Project – Morgan Monroe State Forest Core Site Funding. **K. Novick (PI)** and Rich Phillips (co-I, Indiana University). 2016 – 2020.

**NSF Division of Environmental Biology** **\$763,019 to IU**  
CAREER: A network-oriented research and education plan to explore links between forest cover and temperature in the Eastern United States. **K. Novick (PI)**. 2016 – 2021.

**USDA Forest Service – Southern Research Station** **\$69,721 to IU**  
Understanding carbon and water cycling in an intensely managed, restored Loblolly Pine forest in southern Arkansas. **K. Novick (PI)**. 2015 – 2017

### *Completed projects*

**US Department of Energy via Lawrence Berkeley National Lab** **\$757,214 to IU**  
Ameriflux Management Project – Morgan Monroe State Forest Core Site Funding. **K. Novick (PI)** and Rich Phillips (co-I, Indiana University). 2013 – 2016.

**NSF Division of Environmental Biology** **\$2,593,333 total, \$11,876 to IU**  
LTER: The interacting effects of hydroclimate variability and human landscape modification in the southern Appalachian mountains. Ted Gragson (PI, University of Georgia). I am one of >30 funded collaborators. 2014 – 2016.

**USDA Forest Service – Southern Research Station** **\$31,885 to IU**  
Quantifying age-related hydraulic and biochemical constraints on tree photosynthesis in the southern Appalachian mountains. **K. Novick (PI)**. 2014-2016

**Indiana University Faculty Research Support Program** **\$40,581**  
External Resubmission Grant - Exploring the links between surface temperature and forest cover in the Eastern U.S. **K. Novick (PI)**. 2015-2016

**Indiana University Faculty Research Support Program** **\$75,000**  
Collaborative Research Grant - The drought effects on forest carbon uptake and water use-coupling stable isotopes, eddy covariance and process-based modeling. L. Wang (PI, IU-PUI), **K. Novick (co-I)**. 2013-2014.

**US Department of Agriculture (NIFA – AFRI)** **\$463,773**  
Title and Project Dates: Consequences of stand age and structure on water yield. C. Miniati (PI, USDA Forest Service), J. Vose (co-I, USDA Forest Service), **K. Novick (co-I)**, S. Brantley (co-I, University of Minnesota), P. Bolstad (co-I, University of Minnesota). 2012-2016.

## PUBLICATIONS

---

*Manuscripts under review. Lab members are in bold.*

Montane, F., Fox, A.M., Arellano, A.F., MacBean, N., Alexander, M.R., Dye, A., Bishop, D., Trouet, V., Babst, F., Hessel, A.E., Pederson, N., Blanken, P.D., Bohrer, G., Gough, C.M., Litvak, M.E., **Novick, K.A.**, Phillips, R.P., Wood, J.D., Moore, D.J.P. Evaluating the effect of alternative carbon allocation schemes in a land surface model (CLM4.5) on carbon fluxes, pools and turnover in temperate forests. *Under review.*

**Missik, J.E.C.**, Oishi, A.C., **Benson, M.**, Meretsky, V., Phillips, R.P., Novick, K.A. Branch excision lowers gas exchange rates of mature deciduous trees. *Under review.*

Kannenberg, K., **Novick, K.A.**, Phillips, R.P. Coarse roots buffer whole-tree non-structural carbohydrate pools from drought in an isohydric and an anisohydric species. *Under review*

Liu, Y., Wang, Z., Sun, Q., Erb, A.M., Schaaf, C.B., Zhang, X., O’Roman, M., Scott, R.L., **Zhang, Q.**, **Novick, K.A.**, Bret-Harte, S., Petroy, S., SanClements, M., (2017) Evaluation of the VIIRS BRDF, Albedo and NBAR products and an assessment of continuity with the long term MODIS record. *Under review.*

Hwang, T., Gholizadeh, H., **Roman, D.T.**, **Novick, K.A.**, Brzostek, E., Robeson, S., Rahman, F. Capturing species-level drought responses in a temperate deciduous forest using ratios of photochemical reflectance indices between sunlit and shaded canopies. *In revision.*

Burakowski, E., Twafik, A., Ouimette, A., Lepine, L., Zarzycki, C., **Novick, K.A.**, Ollinger, S., Bonan, G. Simulating surface energy fluxes using uncoupled and coupled Earth System Models and eddy covariance tower clusters. *In revision.*

**Denham, S.O.**, Coyle, D.R., Oishi, A.C., Bullock, B.P., Heliövaara, A.K., **Novick, K.A.** Effects of Synthetic, Micro-infestations of Bark Beetles on Tree Resin Dynamics. *In revision.*

*Peer-reviewed journal articles, published or in press. Lab members are in bold.*

33. **Yi, K.**, Dragoni, D., Phillips, R., **Roman, D.T.**, **Novick, K.A.** Dynamics of stem water uptake among isohydric and anisohydric species experiencing a severe drought. *Tree Physiology*, *in press*.
32. Ficklin, D, and **Novick, K.A.** Historic and projected changes in evaporative demand suggest a continental-scale drying of the U.S. atmosphere. *Journal of Geophysical Research – Atmospheres*, *In press*. 10.1002/2016JD025855
31. Runkle, R.K., Rigby, J.R., Reba, M.L, Anapalli, S.S., Bhattacharjee, J., Krauss, K.W., Liang, L., Locke, M., **Novick, K.A.**, Sui, R., Suvocarev, K., White, P.M. Jr. (2017) Delta-Flux: An eddy covariance network for a climate-smart lower Mississippi Basin. *Agricultural & Environmental Letters* 2, 170003.
30. **Sulman, B.N.**, **Roman, D.T.**, **Yi, K.**, Wang, L., Phillips, R., **Novick, K.A.** (2016) Atmospheric demand for water can limit forest carbon uptake and transpiration as severely as soil drying. *Geophysical Research Letters* 43, 9686-9695.
29. Zscheidschler, J., Fatichi, S., Wolf, S., Blanken, P., Bohrer, G., Clark, K., Desai, A., Hollinger, D., Keenan, T., **Novick, K.A.**, Seneviratne, S.I. (2016) Short-term favorable weather conditions are an important control of interannual variability in carbon and water fluxes in temperate forests. *Journal of Geophysical Research – Biogeosciences* 21, 2186-2198.
28. Tian, C., Wang, L., **Novick, K.A.** (2016) On the concentration and delta dependence of water vapor  $\delta D$ ,  $\delta^{18}O$  and  $\delta^{17}O$  measurements using an off-axis integrated cavity output spectrometer. *Rapid Communications in Mass Spectrometry* 30, 2077-2086.
27. **Novick, K.A.**, Ficklin, D., Stoy, P.C., Williams, C.A., Bohrer, G., Oishi, A.C., Papuga, S.A., Blanken, P., Noormets, A., **Sulman, B.**, Scott, R.L., Wang, L., Phillips, R. (2016) The increasing importance of atmospheric demand for ecosystem water and carbon fluxes. *Nature Climate Change* 6, 1023-1027.
26. **Sulman, B.N.**, **Roman, D.T.** Scanlon, T.M., Wang, L., **Novick, K.A.** (2016) Comparing methods for partitioning a decade of carbon dioxide and water vapor fluxes in a temperate forest. *Agricultural and Forest Meteorology* 226, 229-245.
25. Wagle, P., Xiao, X., Kolb, T., Law, B., Wharton, S., Monson, R., Chen, J., Blanken, P., **Novick, K.A.**, Dore, S., and Noormets, A. (2016) Biophysical controls on carbon and water vapor fluxes of evergreen needleleaf forests in the United States. *Ecological Processes* 5, 8. DOI: 10.1186/s13717-016-0053-5
24. **Novick, K.A.**, Oishi, A.C., Miniati, C.F. (2016) Cold air drainage flows subsidize montane valley ecosystem productivity. *Global Change Biology* 22, 4014–4027.
23. Manoli, G., Domec, J.-C., **Novick, K.A.**, Oishi, A.C., Marani, M., Katul, G. (2016). Soil-plant-atmosphere conditions regulating convective cloud formation above southeastern US pine plantations. *Global Change Biology* 22, 2238–2254.
22. **Novick, K.A.**, Miniati, CF, Vose, JM. (2016). Drought limitations to leaf-level gas exchange: results from a model linking stomatal optimization and cohesion tension theory. *Plant Cell & Environment* 39, 583-596.
21. **Roman, D.T.**, **Novick, K.A.**, Brzostek, E., Dragoni, D., Rahman, F., and Phillips, R. (2015). The role of isohydric and anisohydric species in determining ecosystem-scale response to severe drought. *Oecologia* 179, 641-654.

20. **Novick, K.A.**, Oishi, A.C., Ward, E., Siqueira, M.B.S., Juang, J.-Y., and Stoy, P.C. (2015). On the difference in the net ecosystem exchange of CO<sub>2</sub> between deciduous and evergreen forests in the southeastern United States. *Global Change Biology* 21, 827-842.
19. Matheny, A.M., Bohrer, G., Stoy, P., Baker, I., Black, A., Desai, A., Deitze, M., Gough, C., Ivanov, V., Jassal, P., **Novick, K.**, Schäfer, K., and Verbeek, H. (2014). Characterizing the diurnal patterns of errors in the prediction of evapotranspiration by several land-surface models: an NACP analysis. *Journal of Geophysical Research – Biogeosciences* 119, 1458 – 1473.
18. Pryor, S.C., Horsby, K. and **Novick, K.A.** (2014). Multi-year measurements of nucleation mode particles through a deciduous forest canopy. *Atmospheric Chemistry & Physics* 14, 18181-18206.
17. Stoy, P.C., Lin, H., **Novick, K.A.**, Siqueira, M.B.S., and Juang, J.-Y. (2014). The role of vegetation on the ecosystem radiative entropy budget and trends along ecological succession. *Entropy* 16, 3710-3731.
16. Luyssaert, S., Jammert, M., Stoy, P.C., Estel, S., Pongratz, J., Ceschia, E., Churkina, G., Don, A., Erb, K., Ferlicoq, M., Gielen, B., Brunwald, T., Houghton, R.A., Klumpp, K., Knohl, A., Kolb, T., Kuemmerle, T., Laurila, T., Lohila, A., Loustau, D., McGrath, M.J., Meyfroidt, P., Moors, E., Naudts, K., **Novick, K.**, Otto, J., Pilegaard, K., Pio, C., Rambal, S., Rebmann, C., Ryder, J., Suyker, A.E., Varlagin, A., Wattenbach, M., Dolman, A.J. (2014). Land management and land-cover change have impacts of similar magnitude on surface temperature. *Nature Climate Change* 4, 389-393.
15. Kim, D., Oren, R., Oishi, A.C., Hsieh, C.-I., Phillips, N., **Novick, K.A.**, and Stoy, P.C. (2014). The effect of wind velocity on transpiration in a mixed broadleaved deciduous forest. *Agricultural and Forest Meteorology* 187, 62-71.
14. **Novick, K.A.**, Miniati, C.F., Brantley, S.B., Walker, J.T., and J.M. Vose. (2014). Inferring the contribution of advection to total ecosystem scalar fluxes over a tall forest in complex terrain. *Agricultural and Forest Meteorology* 185, 1-13.
13. **Novick, K.A.**, Walker, J.T., Chan, W.S., Sobek, C.M., and J.M. Vose. (2013). Eddy covariance measurements with a new fast-response, enclosed-path analyzer: spectral characteristics and cross-system comparison. *Agricultural and Forest Meteorology* 181, 17-32.
12. Campbell, P.P.K., Middleton, E., Thome, K.J., Kokaly, K.F., Huemmrich, K.F., Lagomasino, D., **Novick, K.A.**, Brunsell, N.A. (2012). EO-1 Hyperion reflectance time series at calibration and validation sites: stability and sensitivity to seasonal dynamics. *IEEE Journal of Select Topics in Applied Earth Observations and Remote Sensing* 6, 276-290.
11. **Novick, K.A.**, G.G. Katul, H.R. McCarthy, and R. Oren. (2012). Increased resin flow in mature pine trees growing under elevated CO<sub>2</sub> and moderate soil fertility. *Tree Physiology* 32, 752-763.
10. Oishi, A.C., Oren, R., **Novick, K.A.**, Palmroth, S., Katul, G. (2010). Inter-annual invariability of forest evapotranspiration and its consequences to water flow downstream. *Ecosystems* 13, 421 – 436.
9. Avissar, R., Holder, H.S., Abehserra, N., Bolch, M.A., **Novick, K.A.**, Canning, P., Prince, K., Magalhaes, N., Katul, G., Walko, R.L., Johnson, K.M. (2009). The Duke University Helicopter Observation Platform. *Bulletin of the American Meteorological Society* 90, 939 – 954.

8. **Novick, K.A.**, Oren, R., Stoy, P.C., Siqueira, M.B.S., Katul, G.G. (2009). Nocturnal evapotranspiration in eddy-covariance records from three co-located ecosystems in the southeastern U.S.: Implications for annual fluxes. *Agricultural and Forest Meteorology* 149, 1491-1504.
7. **Novick, K.A.**, Oren, R., Stoy, P.C., Siqueira, M.B.S., Katul, G.G. (2009). The relationship between reference canopy conductance and simplified hydraulic architecture. *Advances in Water Resources* 32, 808-819.
6. Stoy PC, Katul, G.G., Siqueira, M.B.S., Juang, J.-Y., **Novick, K.A.**, McCarthy, H.R., Oishi, A.C., Oren, R. (2008). Role of vegetation in determining carbon sequestration along ecological succession in the southeastern United States. *Global Change Biology* 14, 1409-1427.
5. Juang J.-y., Katul, G.G., Siqueira, M.B.S., Stoy, P.C. **Novick, K.A.** (2007). Separating the effects of albedo from eco-physiological changes on surface temperature along a successional chronosequence in the southeastern United States. *Geophysical Research Letters* 34, doi:10.1029/2007GL031296.
4. Stoy, P.C., Palmroth, S., Oishi, A.C., Ward, E., Siqueira, M.B.S., Juang, J.-Y., **Novick, K.A.**, Johnsen, K., Katul, G.G., Oren, R. (2007). Are ecosystem carbon inputs and outputs coupled at short time scales? A case study from adjacent pine and hardwood forests using impulse-response analysis. *Plant, Cell and Environment* 6, 700-710.
3. Stoy, P., Katul, G.G., Siqueira, M.B.S., Juang, J.-Y., **Novick, K.A.**, McCarthy, H.R., Oishi, A.C., Uebelherr, J.M., Kim, H.-S., Oren, R. (2006). Separating the effects of climate and vegetation on evapotranspiration along a successional chronosequence in the southeastern U.S. *Global Change Biology* 12, 1-21.
2. Stoy, P., Katul, G.G., Siqueira, M.B.S., Juang, J.-Y., **Novick, K.A.**, Uebelherr, J.M., Oren, R. (2006). An evaluation of models for partitioning eddy covariance-measured net ecosystem exchange into photosynthesis and respiration. *Agricultural and Forest Meteorology* 141, 2-18.
1. **Novick, K.A.**, Stoy, P.C., Katul, G.G., Ellsworth, D.S., Siqueira, M.B.S., Juang, J.-Y., Oren, R. (2004). Carbon dioxide and water vapor exchange in a warm temperate grassland. *Oecologia* 138, 259-274.

### Book Chapters

1. Katul, G. and **Novick, K.A.** 2009. Evapotranspiration. In: Gene E. Likens, (Editor) *Encyclopedia of Inland Waters*. Volume 1, pp. 661-667 Oxford: Elsevier.

### PRESENTATIONS

---

#### Invited lectures, panel discussions, and departmental seminars

Stanford University, Department of Earth Sciences. May 2017. Stanford, CA. Title: Tree response to drought in the wetter half of the United States

University of Arizona, School of Natural Resources and the Environment. February 2017. Tucson, AZ. Title: Tree response to drought in the wetter half of the United States.

Science on Tap, Panel Discussion on Climate Change. Bloomington, IN 2017.

Indiana University, Lecture for Outstanding Faculty Collaboration Award. December 2016. Bloomington, IN. Title: The Breath of Trees – Interactions between Eastern US Forests and the Climate System. With Rich Philips (IU-Biology).

Flux course, University of Colorado Mountain Research Station. July 2016. Nederland, CO. Title: Energy balance and evapotranspiration.

University of Arkansas – Monticello, School of Forestry and Natural Resources. April 2016. Monticello, AR. Title: The Crossett Experimental Forest Flux Tower.

Indiana Department of Natural Resources, Division of Forestry. February 2016. Madison, IN. Title: Carbon sequestration and atmosphere-biosphere interaction of a Midwest Hardwood Forest.

Purdue University, Department of Earth, Atmospheric and Planetary Sciences. November 2015. West Lafayette, IN. Title: The mechanisms limiting ecosystem carbon uptake and evapotranspiration during drought.

University of Wisconsin – Madison, Department of Atmospheric and Ocean Sciences. October 2015. Madison, Wisconsin. Title: The mechanisms limiting ecosystem carbon uptake and evapotranspiration during drought.

USDA Natural Resources Conservation Service, Central States Soils Workshop. September 2015. Martinsville, Indiana. Title: The Morgan-Monroe State Forest Flux Tower.

Flux course, University of Colorado Mountain Research Station. July 2015. Nederland, CO. Title: Energy balance and evapotranspiration.

Indiana University – Purdue University – Indianapolis (IU-PUI), Department of Earth Sciences. March 2015. Indianapolis, Indiana. Title: The mechanisms limiting carbon uptake and evapotranspiration during drought.

University of Illinois – Urbana-Champaign, Department of Natural Resources and Environmental Science. February 2015. Urbana, IL. Title: The mechanisms limiting carbon uptake and evapotranspiration during drought.

Flux course, University of Colorado Mountain Research Station. July 2014. Nederland, CO. Title: Energy balance and evapotranspiration.

Indiana Department of Natural Resources, Forest Stewardship Committee Meeting. April 2014. Martinsville, Indiana. Title: The Morgan-Monroe State Forest Flux Tower – Overview and Recent Results.

The Ohio State University, Department of Civil and Environmental Engineering. February 2013. Columbus, Ohio. Title: Measuring ecosystem-scale fluxes of CO<sub>2</sub> and H<sub>2</sub>O from a tall forest in mountainous terrain.”

North Carolina Museum of Natural Science. April 2012. Raleigh, NC. Title: Panel discussion to celebrate the opening of the Museum’s Nature Center.

Duke University, Program in Ecology. April 2011. Durham, North Carolina. Title: Reducing Uncertainty in the Biosphere-Atmosphere Exchange of Trace Gases

USDA Forest Service, Coweeta Hydrologic Laboratory. March 2011. Otto, North Carolina. Title: Reducing Uncertainty in the Biosphere-Atmosphere Exchange of Trace Gases

Conference presentations (\* indicates poster):

- Novick, K.A., Ficklin, D., Stoy, P.C., Williams, C.A., Bohrer, G., Oishi, A.C., Papuga, S.A., Blanken, P., Noormets, A., Sulman, B., Scott, R.L., Wang, L., Yi, K., Roman, D.T., Phillips, R. (2016) Harnessing Long-Term Flux Records to Better Understand Ecosystem Response to Drought (Invited). American Geophysical Union Fall Meeting. San Francisco, CA.
- Novick, K.A., Oishi, A.C., Roman, D.T., Benson, M., Miniati, C.F. (2016) Hydrodynamics of isohydric and anisohydric trees: insights from models and measurements (Invited). American Geophysical Union Fall Meeting. San Francisco, CA.
- Novick, K.A., Oishi, A.C., Miniati, C.F. (2016) Cold air drainage flows subsidize montane valley ecosystem productivity. Coweeta LTER Annual Summer Meeting, Otto, NC.
- Novick, K.A., Williams, C., Oishi, A.C., Phillips, R., Sulman, B., Bohrer, G., Ficklin, D. (2015) Vapor pressure deficit is as important as soil moisture in determining limitations to evapotranspiration during drought. AGU Fall Meeting, San Francisco, CA.
- \*Novick, K.A., Oishi, A.C., Miniati, C.F. (2015) Interactions between climate and topography enhance Appalachian valley carbon uptake. LTER All-Scientists Meeting, Estes Park, CO.
- Novick, K.A., Oishi, A.C., Brantley, S.T., Miniati, C.F., Walker, J.T., Vose, J.M. (2014). Biosphere-atmosphere fluxes in complex terrain: Challenges and opportunities (invited). AGU Fall meeting, San Francisco, CA.
- \*Novick, K.A., Roman, D.T., Brzostek, E.R., Dragoni, D., Phillips, R. (2014) A novel approach for diagnosing isohydric and anisohydric behavior during drought. AGU Fall Meeting, San Francisco, CA.
- \*Novick, K.A., Roman, D.T., Brzostek, E.R., Dragoni, D., Rahman, A.F., Phillips, R. (2014) The role of isohydric and anisohydric species in determining ecosystem-scale response to severe drought. Annual Ameriflux PI meeting. Potomac, MD.
- \*Novick, K.A., Miniati, C.F., Denham, S.O., Ritger, H.M., Williams, C., Guldin, J.M., Bragg, D., Coyle, D. (2013) The biophysical controls on tree defense against attacking bark beetles in managed pine forests of the Southeastern United States. AGU Fall meeting, San Francisco, CA.
- Novick, K.A., Bragg, D., Guldin, J., Vose, J., Miniati, C.F. (2013) Carbon and water vapor exchange in a 65-year-old pine forest: results from a new flux tower in the Crossett Experimental Forest. North American Forest Ecology Workshop, Bloomington, IN.
- \*Novick, K.A., Miniati, C.F., Brantley, S.B., Walker, J.T., Vose, J.M. (2013) Estimates of ecosystem exchange in a new site challenged by topography, landscape heterogeneity, and environmental conditions. North American Carbon Program meeting, Albuquerque, NM.
- Novick, K.A., Ward, E., Oishi, A.C., Stoy, P.C.S. (2012) Inter-annual variability in the biosphere-atmosphere exchange of carbon dioxide and water vapor in adjacent pine and hardwood forests: links to drought, disturbance, and seasonality. AGU Fall Meeting, San Francisco, CA.
- \*Novick, K.A., G.G. Katul, J.T. Walker, J.M. Vose. (2011) A new Ameriflux tower in mountainous terrain at the Coweeta Hydrologic Laboratory. *Ameriflux Science Meeting & 3<sup>rd</sup> NACP Investigators Meeting*. New Orleans, LA.
- \*Novick, K.A., G.G. Katul, M.L. Ardon, J.L. Morse, E.S. Bernhardt. (2008) The impact of drainage and re-flooding of a restored wetland on ecosystem-scale greenhouse gas fluxes. *AGU Fall Meeting*. San Francisco, California, CA.

- \*Novick, K.A., G.G. Katul, H.P Schmid, P.C. Stoy, C. Wayson. (2007) Effective physiological parameters for use in carbon and water cycling models. *Marie Curie iLEAPs workshop*. Helsinborg, Sweden.
- Novick, K.A., P.C. Stoy, J.J. Juang, M.B.S. Siqueira, G.G. Katul. (2007) What do the towers see at night? An exploration of nocturnal evapotranspiration fluxes from three adjacent ecosystems in the Southeastern U.S. *AGU Fall Meeting*. San Francisco, CA.
- Novick, K.A., G.G. Katul, H.P Schmid, P.C. Stoy, C. Wayson. (2006) Ecosystem functional convergence models of carbon and water cycling for use in bottom-up scaling strategies. *AGU Fall Meeting*. San Francisco, CA.
- Novick, K.A., R. Oren, P.C. Stoy, J.J. Juang, M.B. Siqueira, G. Katul. (2006) Inter-specific variation in mean canopy stomatal conductance with canopy architecture. *ESA Annual Meeting*. Memphis, TN.
- \*Novick, K.A., G.G. Katul, J.J. Juang, M.B. Siqueira, P.C. Stoy. (2005) Towards a bottom-up scaling strategy for regional carbon and water cycling – field testing simple models for ecosystem assimilation and transpiration. *AGU Fall Meeting*, San Francisco, CA.

## SELECTED MEDIA AND BLOG COVERAGE

---

- ["With plants, it's not the humidity, it's the heat,"](#) Voice of America, 2016.
- ["During drought, dry air can stress plants more than dry soil,"](#) Science Daily, 2016.
- ["Young Scientist Profile,"](#) FLUXNET blog, 2016.
- ["Research study of forest restoration will use NEON's Project BudBurst,"](#) NSF National Ecological Observatory Network blog, 2016.
- ["IU Professors Awarded Grant From National Science Foundation"](#) - Indiana Public Media, April 5, 2016.
- ["IU Forest Tower Receives Department of Energy Funding"](#) - Indiana Public Media, September 24, 2013.

## TEACHING ASSIGNMENTS

---

### Indiana University

- E426/E526 Applied Math for Environmental Science (3 credits, Spring 2013, 2014, 2015, 2016, 2017, typically ~60 students per course)
- E162 – Environment and People (Fall 2015, typically ~65 students per course)
- E555 – Topics in Environmental Science – Watershed Hydrology (3 credits, Fall 2013, 2014, typically <10 students per course)
- SPEA Advanced Math Camp (1 credit, August 2013, 2014, 2015, 2016, 2017, typically ~40 students per course)

### Duke University

- ENV734L – Watershed Hydrology (Teaching Assistant, Fall 2007, 2008)

## ACADEMIC AND PUBLIC SERVICE

---

### Committee Service for SPEA and the University

Indiana University Committee on General Education (2016 – present)  
SPEA MSES Admissions Committee (2016 - present)  
SPEA Undergraduate Curriculum Committee (2015-present)  
SPEA Undergraduate Programs Advisory Committee (2015-present)  
Indiana University Research and Teaching Preserve Executive Board (2013 – present)  
SPEA Ad-hoc committee to develop a new environmental sustainability masters degree (2014 –2015)  
SPEA Ad-hoc committee on new course evaluations (2014-2015)  
SPEA PhD Admissions Committee (2013-2015)  
SPEA Search Committee – Hydrologist (2013-2014)  
SPEA Search Committee – Eco-hydrologist (2012-2013)

### Indiana University Student Service

PhD Thesis Committee Chair: Koong Yi (2013 – present), Sander Denham (2016 – present)  
PhD Thesis Committee Member: Steve Kannenberg (2014 – present), Kara Prior (2016 – present), Mollie Cain (2016 – present), Aslan Aslan (2014– 2016), Nichole Sharko (2013 –2016)  
Masters Thesis Committee Chair: Justine Missik (2014-2015)  
Masters Student Independent Research Project Supervisor: Donovan Moxley (MPA-MSES, 2017 – present), Glenia Pena (MPA-MSES, 2017 – present), Yuqian Zhang (MSES, 2017 – present), Tessa Mandra (MPA/MSES, 2016 – present), Martin Medicus (MPA/MSES, 2016 – present), Rio Schondelmeyer (MPA/MSES, summer 2016), Yingchu Wei (MSES, Summer 2015), Haley Ritger (MPA-MSES, 2014-2015), Julie Savia (MPA-MSES, 2014-2015)  
Undergraduate Student Independent Research Project Supervisor: Lily Young (BSES, 2015-present), BJ Toole (BSPA, IU Civic Leaders Program, 2013-2014), Morgan Mosley (BSES, IU Cox Research Scholar, 2013-2014)  
Mentored two incoming freshman for a six-week research experience through the IU Groups STEM program for first-generation, underrepresented students (Summer 2016)  
Mentored two high school students for an intensive, one-week field research experience through the IU Jim Holland Summer Science Research Program for high achieving, under-represented students in STEM (Summer 2015, Summer 2017)  
Undergraduate Research Experience Supervisor: Addison Haas (2015-2016), Alexandra Lewis (2015 – 2016)  
Post-doctoral scholar supervisor: Quan Zhang (2015 – present), Benjamin Sulman (2014-2015)  
Research assistant supervisor and mentor: Michael Benson (2015 – present), Matt Wenzel (2016 – present), Tyler Roman (2013 – 2015)  
Gatekeeper for the Calculus requirement of the Masters of Science in Environmental Science (MSES) program (2013–present)  
Advisor for the SPEA Masters of Public Affairs and Masters of Science in Environmental Science (MPA/MSES) Water Resources concentration (2013–present)

### Other service to the University and SPEA

Panel Discussant for a peer review workshops for the preparation of NSF CAREER awards, sponsored by the IU Proposal Development Services (2017)

Judge for the Inaugural "IPEIES" for undergraduate and graduate research on environmental science and policy, sponsored by the IU Integrated Program for the Environment (2017)

Guest Lecturer for SPEA Preview Days (2017)

Session Chair, SPEA Association of PhD Students Annual Conference (2016, 2017)

Panel Chair, SPEA Wider World Conference (2016, 2017)

IU Representative and judge for the Network of Schools of Public Policy, Affairs, and Administration (NASPAA) student simulation competition (2016)

Led efforts to solicit public, private, and non-profit partners for the Water Sustainability IU Grand Challenge proposal (PI Royer, 2015 – 2016)

IU representative to the Consortium of Universities for the Advancement of Hydrologic Science (CUASHI, 2015 – present)

Panel discussant: SPEA Distinguished Alumni Council (2014, 2015)

Panel discussant: SPEA Teaching & Learning committee meeting on best teaching practices (2015)

Panel discussant: SPEA Research Retreat panel on synergies in environmental science and policy (2014)

SPEA Environmental Science and Policy Seminar Series – Hosted approximately one speaker per semester (2013 – present)

Led outreach activities for IU Research and Teaching Preserve, including *Sciencefest* (2014) and organized hikes on IU RTP properties (2015, 2017)

### Public service

Provided the US Department of Energy with long-term data from multiple AmeriFlux flux tower monitoring sites (site codes US-MMS, US-BRG, US-DK1, US-DK2, US-DK3), which have been collectively downloaded >1,000 times by researchers all over the world

Maintained operations of a USDA-Forest Service surface-atmosphere flux monitoring tower in the Crossett Experimental Forest in Arkansas (2012 – present)

Provided technical expertise and student research assistant support to collaborators at the USDA Forest Service, Southern Research Station, Coweeta Hydrologic Laboratory in support of a number of projects (2013 – present)

Provided technical expertise and student research assistant support to the Indiana Department of Natural Resources – Division of Forestry for an ongoing analysis of their Continuous Forest Inventory (CFI) database (2016 – present)

Launched a citizen science phenology monitoring project in Bloomington in coordination with the Sycamore Land Trust and the Indiana University Research and Teaching Preserve (2017 – present)

Led more than a dozen field tours of the long running Morgan-Monroe State Forest AmeriFlux tower site in collaboration with a number of public and non-profit organizations and groups, including the

Indiana Department of Natural Resources, IU-PUI the Sycamore Land Trust, and Bloomington High School South (2013 – present)

Regularly provided meteorological data to the Rabun Gap Nachoochee School (near Coweeta Hydrologic Lab) Environmental Science instructor for use in educational contexts (2016 – present)

Guest Speaker for the 2016 Indiana DNR Division of Forestry Annual Personnel Meeting

Guest Speaker for the Central States Soils Workshop organized by the Indiana Department of Natural Resources and the USDA Natural Resources Conservation Service, Fall 2015.

Guest Speaker – Indiana Department of Natural Resources Forest Stewardship Committee Meeting (2013)

## PROFESSIONAL SERVICE AND ACTIVITIES

---

Co-Organizer, Flux Course – a two week workshop for early career scientists studying land-atmosphere interactions. Held annually in July in Nederland, Colorado. (2016 – present)

Steering Committee Member: Ameriflux Science Committee (2017 – present)

Guest-Editor, Special Issue of *Agricultural and Forest Meteorology* to celebrate the 20<sup>th</sup> anniversary of Ameriflux (2016-present)

Steering Committee Member, Working Group on Synergies Between LTER and NEON (2015 – present)

Reviewer Board member, *Tree Physiology* (2016 – present)

Co-chair, Ameriflux Principal Investigator's meeting planning committee (2014 – 2015)

Guest instructor for Flux Course (2014 – present)

Review Committee member, Ameriflux Scholarship for Flux Course (2015 – present)

Proposal Panel Reviewer for NSF (2015, 2016) and EPA (2015)

Ad – hoc Proposal Reviewer for NSF (2015, 2016)

Lead Organizer, Workshop for Midwestern Ameriflux Core Site scientists. Held in Bloomington, IN, (June 2013)

Peer Reviewer for: *Advances in Water Resources, Agricultural and Forest Meteorology, Bulletin of the American Meteorological Society, Biogeosciences Discussions, Biogeochemistry, Global Change Biology, Environmental Research Letters, Hydrological Processes, Journal of Forest Research, Journal of Geophysical Research –Atmospheres, Journal of Geophysical Research –Biogeosciences, Journal of Hydrology, Journal of Plant Ecology, Nature, Nature Climate Change, New Phytologist, Oecologia, Plant Cell and Environment, Plant Ecology and Diversity, Tree Physiology, Water Resources Research*

Workshop, Working Group, and PI Meeting Participation:

*Workshop on synergies between LTER and NEON, Santa Barbara, CA, March 2017*

*Coweeta LTER PI Meeting, Otto, North Carolina, August 2016*

*DROUGHT-NET RCN Workshop. Sevilleta National Wildlife Refuge, New Mexico, May 2016.*

*Coweeta LTER PI Meeting, Otto, North Carolina, January 2016.*

*Forest DROUGHT-NET workshop. Woodstock, New Hampshire, October 2014.*

*LTER All-Investigators Meeting. Estes Park, Colorado. September 2015.*

*Coweeta LTER PI Meeting, Otto, North Carolina, June 2015.*

*5<sup>th</sup> Annual NACP and Ameriflux Joint PI meeting. Washington, D.C. January 2015.*

*Coweeta LTER PI Meeting, Otto, North Carolina, January 2015.*  
*Coweeta LTER PI Meeting, Otto, North Carolina, Summer 2014.*  
*DOE and Ameriflux PI Meeting, Washington, D.C, May 2014.*  
*Coweeta LTER PI Meeting, Otto, North Carolina, Winter 2014*  
*Midwest Ameriflux Core Site PI workshop, Bloomington, Indiana, June 2013.*  
*North American Forest Ecology Workshop, Bloomington, Indiana, June 2013.*  
*Coweeta LTER PI Meeting, Otto, North Carolina, Summer 2013.*  
*4<sup>th</sup> Annual NACP and Ameriflux Joint PI meeting. Albuquerque, New Mexico, February 2013.*  
*Coweeta LTER PI Meeting, Otto, North Carolina, Winter 2013.*  
*3<sup>rd</sup> Annual NACP and Ameriflux Joint PI meeting. New Orleans, Louisiana, February 2011.*