

Nathaniel A. Brunsell

CONTACT INFORMATION	Department of Geography University of Kansas 417 Lindley Hall 1475 Jayhawk Blvd. Lawrence, KS 66045-7613 USA Voice: (785) 864-2021 E-mail: brunsell@ku.edu
RESEARCH INTERESTS	Biometeorology, scaling processes from leaf to pixel, remote sensing of the surface energy balance, turbulence measurements using large aperture scintillometry and eddy covariance, ecological consequences of regional climate change, implications of climate change on extreme weather events, application of non-linear time series analysis to meteorological datasets, renewable energy and climate change
EDUCATION	Ph.D. , Biometeorology, 2003 Utah State University, Logan UT Dissertation: An examination of scale issues involved with remotely sensed data B.S. , Earth and Planetary Sciences, 1997 University of New Mexico, Albuquerque, NM Undergraduate Honors Thesis: The effect of topography on precipitation
PROFESSIONAL EXPERIENCE	Chair , 2015 - Present Professor , 2015 - Present Associate Professor , 2010 - 2015 Assistant Professor , 2004 - 2010 Department of Geography - Atmospheric Sciences Program, University of Kansas, Lawrence, KS Visiting Scientist , 2010 - 2011 Biospheric Theory and Modelling Group (Sabbatical from KU) Max Planck Institute for Biogeochemistry, Jena, Germany Postdoctoral Research Associate , 2002 - 2004 Department of Civil and Environmental Engineering, Duke University, Durham, NC
AWARDS	McNair Scholars Research Mentor Award . University of Kansas, McNair Scholar Program. 2014. Humboldt Fellowship for Experienced Researchers . Alexander von Humboldt Foundation. 2010-2011. Lecia Geosystems Award for best scientific paper in remote sensing:

Second Place. American Society for Photogrammetry and Remote Sensing. 2003.

PUBLICATIONS

† indicates a graduate student, ‡ indicates an undergraduate student co-author

Submitted

- Wagle, P, X. Xiao, P. Gowda, J. Basara, **N. Brunsell**, J. Steiner, and A. KC: 2015, Analysis and estimation of tallgrass prairie evapotranspiration in the central United States. *Agricultural and Forest Meteorology*, in review.
- Petrie, M. D., **N. A. Brunsell**, R. Vargas, S. L. Collins, L. B. Flanagan, N. P. Hanan, M. E. Litvak, and A. E. Suyker: 2015, The sensitivity of carbon exchanges in Great Plains grasslands to precipitation variability. *Journal of Geophysical Research - Biogeosciences*, in review.
- Cochran†, F. V., and **N. A. Brunsell**: 2015, Biophysical metrics for detecting more sustainable urban forms at the global scale. *Landscape and Urban Planning*, in review.
- Wolf, S., T. F. Keenan, J. B. Fisher, D. D. Baldocchi, A. R. Desai, A. D. Richardson, R. L. Scott, B. E. Law, M. E. Litvak and **N. A. Brunsell**: 2015, Warm spring mitigates carbon cycle impact of summer drought but increases summer heating. *Nature Communications*, in review.
- Ratajczak, Z., S. Ravi, P. D'Odorico, **N. A. Brunsell**, S. Collins, and J. B. Nippert: 2015, Transient dynamics of grassland beyond a critical threshold: can we recognize when ecosystems begin a slow regime shift? *Ecology*, in review.
- **Brunsell, N. A.**, J. B. Nippert and T. Ocheltree: 2015, Climate change alters sensitivity to timing of weather events in grasslands. *Environmental Research Letters*, in review.
- Eck, D., D. Hirmas, D. Gimenez, M. Qin and **N. A. Brunsell**: 2015, Relating quantitative soil structure metrics to saturated hydraulic conductivity. *Vadose Zone Journal*, in review.
- Cochran†, F. V., **N. A. Brunsell**, and A. Sukyer: 2015, Thermodynamic entropy production as a measure of agroecosystem sustainability. *Ecological Indicators*, in review.
- **Brunsell, N. A.**, J. C. Brown, C. R. Bishop and A. C. Coutinho: 2015, Spatial and temporal scales of agriculturally driven land cover change in Mato Grosso, Brazil. *International Journal of Applied Earth Observation and Geoinformation*, in review.
- Figueiredo, G. K. D. A., **N. A. Brunsell**, J. V. Rocha, and R. A. C. Lamparelli: 2015, Using temporal stability to estimate soybean yield. A case study in Parana state, Brazil. *International Journal of Remote Sensing*, in review.
- Figueiredo, G. K. D. A., B. H. Higa, **N. A. Brunsell**, J. V. Rocha, and R. A. C. Lamparelli: 2015, Using correlation maps to assess soybean yield from EVI data in Parana state, Brazil. *Scientia Agricola*, in review.
- Zheng, Y., **N. A. Brunsell**, J. Alfieri and D. Nyogi: 2013, Impacts of heterogeneous land surface and land surface parameterizations on turbulent flow and mesal predictions in the WRF model. *Earth Interactions*, in review.

- [55] Hu, L., A. J. Monaghan and **N. A. Brunsell**: 2015, Investigation of urban air temperature and humidity patterns during extreme heat conditions using satellite-derived data. *Journal of Applied Meteorology and Climatology*, in press.
- [54] Wagle, P., X. Xiao, R. Scott, T. Kolb, D. Cook, **N. A. Brunsell**, D. Baldocchi, J. Basara, R. Matamala, Y. Zhou, and R. Bajgain: 2015, Biophysical controls on carbon and water budgets across a grassland climatic gradient in the United States. *Agricultural and Forest Meteorology*, in press.
- [53] Miller, L. M., **N. A. Brunsell**, D. B. Mechem, F. Gans, A. J. Monaghan, R. Vautard, D. W. Keith and A. Kleidon: 2015, Turbine-atmosphere interactions limits large scale wind power. *Proceedings of the National Academy of Science*, doi:10.1073/pnas.1408251112.
- [52] Logan[†], K. E., and **N. A. Brunsell**: 2015, Influence of drought on growing season carbon and water cycling with changing land cover. *Agricultural and Forest Meteorology*, 213, 217-225.
- [51] Cochran[†], F. V., **N. A. Brunsell**, A. Cabalzar, P-J van der Veld, E. Azevedo, R. A. Azevedo, R. A. Pedrosa, and L. Winegar: 2015, Indigenous ecological calendars define scales for climate change and sustainability assessments. *Sustainability Science*, doi: 10.1007/s11625-015-0303-y.
- [50] El Kenawy, A., J. I. Lopez-Moreno, M. F. McCabe, **N. A. Brunsell**, and S. M. Vicente-Serrano: 2015, Daily Temperature Changes and Variability in ENSEMBLES Regional Models Predictions: Evaluation and Intercomparison for the Ebro Valley (NE Iberia). *Atmospheric Research*, 155, 141-157
- [49] Hu[†], L. and **N. A. Brunsell**: 2015, A new perspective to assess the urban heat island through remotely sensed atmospheric profiles. *Remote Sensing of Environment*, 158, 393-406.
- [48] Brown, J. C., E. Hanley, J. Bergtold, M. Caldas, V. Barve, D. Peterson, R. Callihan, J. Gibson, B. Gray, N. Hendricks, **N. Brunsell**, K. Dobbs, D. Earnhart: 2014: Ethanol plant location and intensification vs. extensification of corn cropping in Kansas. *Applied Geography*, 53, 141-148.
- [47] Monaghan, A. J., L. Hu[†], **N. A. Brunsell**, M. Barlage, and O. V. Wilhelm: 2014, Evaluating the impact of urban morphology configurations on the accuracy of urban canopy model temperature simulations with MODIS. *Journal of Geophysical Research - Atmospheres*, 119, 6376-6392.
- [46] Huber[†], D. B., D. B. Mechem and **N. A. Brunsell**: 2014, Effects of Great Plains irrigation on regional climate. *Climate*, doi: 10.3390/cli2020103, 2, 103-128.
- [45] Hu[†], L. **N. A. Brunsell**, A. J. Monaghan, M. Barlage and O. V. Wilhelm: 2014, How can we use MODIS land surface temperature to validate long-term urban model simulations? *Journal of Geophysical Research - Atmospheres*, 119, 3185-3201.
- [44] Barve, N., C. Martin, **N. A. Brunsell**, and A. T. Peterson: 2014, Role of physiological optima in shaping the geographic distribution of Spanish moss. *Global Ecology and Biogeography*, doi:10.1111/geb.12150, 23, 633-645.

- [43] Shi, Z., M. L. Thomey, W. Mowll, M. Litvak, **N. A. Brunsell**, S. L. Collins, W. T. Pockman, M. D. Smith, A. K. Knapp, and Y. Luo: 2014, Differential effects of extreme drought on production and respiration: Synthesis and modeling analysis. *Biogeosciences*, 11, 621-633.
- [42] **Brunsell, N. A.**, J. B. Nippert, and T. L. Buck[†]: 2014, The impact of seasonality and surface heterogeneity on water use efficiency in mesic grasslands. *Ecohydrology*, doi:10.1002/eco.1455, 7, 1223-1233.
- [41] Oleson, K. W., A. Monaghan, M. Barlage, **N. Brunsell**, J. Fedema, L. Hu[†], O. Wilhelmi, and D. F. Steinhoff: 2014, Interactions between urbanization, heat stress, and climate change. *Climatic Change*, doi:10.1007/s10584-013-0936-8, in press.
- [40] Lin[†], P. and **N. A. Brunsell**: 2013, Assessing regional climate and local landcover impacts on vegetation with remote sensing. *Remote Sensing*, doi:10.3390/rs5094347, 5, 4347-4369.
- [39] **Brunsell, N. A.** and C. J. Wilson[‡]: 2013, Multiscale interactions between water and carbon fluxes and environmental variables in a central US grassland. *Entropy*, doi:10.3390/e15041324, 15, 1324-1341.
- [38] Hu[†], L., and **N. A. Brunsell**: 2013, The impact of temporal aggregation of land surface temperature data for surface urban heat island (SUHI) monitoring. *Remote Sensing of Environment*, 134, 162-174.
- [37] Cochran[†], F. V., **N. A. Brunsell** and D. B. Mechem: 2013, Comparing surface and mid-troposphere CO₂ concentrations from central U.S. grasslands. *Entropy*, 15, 606-623.
- [36] Ruddell, B. L., **N. A. Brunsell** and P. Stoy: 2013, Applying information theory to quantify process uncertainty, feedback, and scale in the Earth system. *EOs*, doi: 10.1002/2013EO050007, 94, 56.
- [35] **Brunsell, N. A.** and L. Hu[†]: 2013, The role of scale in determining surface energy fluxes from remote sensing. in *Remote Sensing of Land Surface Turbulent Fluxes and Soil Surface Moisture Content: State of the Art*, ed: G. Petropoulos, CRC Press, 283-300.
- [34] Campbell, P. P. K., E. Middleton, K. J. Thome, R. F. Kokaly, K. F. Huemmrich, D. Lagomasino, K. Novik and **N. A. Brunsell**: 2013, EO-1 Hyperion reflectance time series at calibration and validation sites: Stability and sensitivity to seasonal dynamics. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, doi:10.1109/JSTARS.2013.2246139, 6, 276-290.
- [33] El Kenawy, A., J. I. Lopez-Moreno, **N. A. Brunsell** and S. M. Vicente-Serrano: 2013, Anomalously severe cold nights and warm days in northeast Spain: their spatial variability, driving forces and future projections. *Global and Planetary Change*, 101, 12-32.
- [32] Cochran[†], F. V. and **N. A. Brunsell**: 2012, Temporal scales of tropospheric CO₂, precipitation, and ecosystem responses in central Great Plains. *Remote Sensing of Environment*, 127, 316-328.
- [31] Wohl, E., A. Barros, **N. Brunsell**, N. Chappell, M. Coe, T. Giambelluca, S. Goldsmith, R. Harmon, J. Hendrickx, J. Juvik, J. McDonnell, and F. Ogden: 2012, The hydrology of the humid tropics. *Nature Climate Change*, doi:10.1038/NCLIMATE1556, 2, 655-662.

- [30] Petrie[†], M. D. and **N. A. Brunsell**: 2012, The role of precipitation variability on the ecohydrology of grasslands. *Ecohydrology*, doi:10.1002/eco.224, 5, 337-345.
- [29] Barve, N., A. J. Bonilla, J. Brandes, J. C. Brown, **N. Brunsell**, F. V. Cochran[†], R. Crosthwait, J. Gentry, L. M. Gerhart, T. Jackson, A. J. Kern, H. Owens, A. T. Peterson, A. S. Reed, J. Soberón, A. D. Sundberg, and L. M. Williams: 2012, Climate-change causation of mass mortality events in overwintering monarch butterflies. *Revista Mexicana de la Biodiversidad*, 83, 817-824.
- [28] Craine, J. M., J. B. Nippert, A. J. Elmore, A. M. Skibbe, S. L. Hutchinson and **N. A. Brunsell**: 2012, The timing of climate variability and grassland productivity. *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.1118438109, 109, 3401-3405.
- [27] Petrie[†], M. D., **N. A. Brunsell** and J. B. Nippert: 2012, Climate change alters growing season flux dynamics in mesic grasslands. *Theoretical and Applied Climatology*, 107, 427-440.
- [26] **Brunsell, N. A.** and M. C. Anderson: 2011, Characterizing the multi-scale spatial structure of remotely sensed evapotranspiration with information theory. *Biogeosciences*, doi:10.5194/bg-8-2269-2011, 8, 2269-2280.
- [25] **Brunsell, N. A.**, J. M. Ham and K. A. Arnold: 2011, Validating remotely sensed land surface fluxes in heterogeneous terrain with large aperture scintillometry. *International Journal of Remote Sensing*, 32, 6295-6314.
- [24] **Brunsell, N. A.**, S. Schymanski and A. Kleidon: 2011, Quantifying the thermodynamic entropy budget of the land surface: is this useful? *Earth System Dynamics*, doi:10.5194/esd-2-87-2011, 2, 87-103.
- [23] **Brunsell, N. A.**, D. B. Mechem and M. C. Anderson: 2011, Surface heterogeneity impacts on boundary layer dynamics via energy balance partitioning. *Atmospheric Chemistry and Physics*, doi:10.5194/acp-11-1-2011, 11, 3403-3416.
- [22] Nippert, J. B., T. Ocheltree, A. Skibbe, L. Kangas, J. M. Ham, K. Arnold, and **N. A. Brunsell**: 2011, Scaling above-ground growth by landscape position in mesic grassland. *Oecologia*, doi:10.1007/s00442-011-1948-6, 1-12.
- [21] **Brunsell, N. A.**: 2010, A multiscale information theory approach to assess spatial-temporal variability of daily precipitation. *Journal of Hydrology*, doi:j.jhydrol.2010.02.016, 385, 165-172.
- [20] **Brunsell, N. A.**, A. R. Jones[†], T. L. Jackson and J. J. Feddema: 2010, Seasonal trends in air temperature and precipitation in IPCC AR4 GCM output for Kansas, USA: evaluation and implications. *International Journal of Climatology*, doi:10.1002/joc.1958, 30, 1178-1193.
- [19] Logan[‡], K., **N. A. Brunsell**, A. R. Jones[†] and J. J. Feddema: 2010, Assessing spatiotemporal variability of drought in the U. S. Central Plains. *Journal of Arid Environments*, 74, 247-255, doi:10.1016/j.jaridenv.2009.08.008.
- [18] **Brunsell, N. A.**, P. P. B. Pontes, and R. A. C. Lamparelli: 2009, Remotely sensed phenology of coffee and its relationship to yield. *GIScience & Remote Sensing*, 46, doi:10.2747/1548-1603.46.3.1, 289-304.

- [17] Jones[†], A. R. and **N. A. Brunsell**: 2009, A scaling analysis of soil moisture-precipitation interactions in a regional climate model. *Theoretical and Applied Climatology*, 98, doi:10.1007/s00704-009-0109-x, 221-235.
- [16] Jones[†], A. R. and **N. A. Brunsell**: 2009, Energy balance partitioning and net radiation as controls on soil moisture-precipitation feedbacks. *Earth Interactions*, 13, doi: 10.1175/2009EI270.1, 1-25.
- [15] Baum, K. A., J. M. Ham, **N. A. Brunsell**, and P. I. Coyne: 2008, Surface boundary layer of cattle feedlots: implications for emission measurement. *Agricultural and Forest Meteorology*, 148, 1882-1893.
- [14] Lash, R. R., **N. A. Brunsell** and A. T. Peterson: 2008, Spatiotemporal environmental triggers to Ebola and Marburg virus transmission. *GeoCarto International*, 23, 451-466.
- [13] **Brunsell, N. A.**, J. M. Ham and C. E. Owensby: 2008, Assessing the multi-resolution information content of remotely sensed variables and elevation for evapotranspiration in a tall-grass prairie environment. *Remote Sensing of Environment*, 112, 2977-2987.
- [12] Lyon, S., F. Dominguez, D. Gochis, **N. Brunsell**, C. Castro, F. Chow, D. Fuka, Y. Hong, P. Kucera, S. Nesbitt, Y. Fan, N. Salzmann, J. Schmidli, P. Snyder, A. Teuling, T. Twine, G. Lee, S. Levis, J. Lundquist, G. Salvucci, A. Sealy, T. Walter: 2008, Coupling terrestrial and atmospheric water dynamics to improve prediction in a changing environment. *Bulletin of the American Meteorological Society*, 89, 1275-1279.
- [11] Young, C. B. and **N. A. Brunsell**: 2008, Evaluating NEXRAD precipitation estimates for the Missouri River Basin: an analysis using daily raingage data. *Journal of Hydrologic Engineering*, 13, 549-553.
- [10] **Brunsell, N. A.** and C. B. Young: 2008, Land surface response to precipitation events using MODIS and NEXRAD data, *International Journal of Remote Sensing*, 29, 1965-1982.
- [9] **Brunsell, N. A.**: 2006, Characterization of land-surface precipitation feedback regimes with remote sensing. *Remote Sensing of Environment*, 100, 200-211.
- [-] French, A. N., F. Jacob, M. C. Anderson, W. P. Kustas, W. Timmermans, A. Gieske, B. Su, H. Su, M. F. McCabe, F. Li, J. Prueger, and **N. Brunsell**: 2005, Erratum: surface energy fluxes with the Advanced Thermal Emission and Reflection Radiometer (ASTER) at the Iowa SMACEX site (USA). *Remote Sensing of Environment*, 99, 471.
- [8] French, A. N., F. Jacob, M. C. Anderson, W. P. Kustas, W. Timmermans, A. Gieske, B. Su, H. Su, M. F. McCabe, F. Li, J. Prueger, and **N. Brunsell**: 2005, Surface energy fluxes with the Advanced Thermal Emission and Reflection Radiometer (ASTER) at the Iowa SMACEX site (USA). *Remote Sensing of Environment*, 99, 55-65.
- [7] White, M.A., **N. Brunsell**, and M.D. Schwartz: 2004, Vegetation phenology in global change studies. In *Phenology: An Integrative Environmental Science*. M.D. Schwartz, editor. Kluwer Academic Publishers, New York, NY. 453-466.
- [6] **Brunsell, N. A.** and R. R. Gillies: 2003, Length scale analysis of surface energy fluxes derived from remote sensing. *Journal of Hydrometeorology*, 4, 1212-1219.

- [5] **Brunsell, N. A.** and R. R. Gillies: 2003, Determination of scaling characteristics of AVHRR data with wavelets: Application to SGP97, *International Journal of Remote Sensing*, 24, 14, 2945-2957.
- [4] **Brunsell, N. A.** and R. R. Gillies: 2003, Scale issues in land-atmosphere interactions: implications for the remote sensing of the surface energy balance, *Agricultural and Forest Meteorology*, 117, 3-4, 203-221.
- [3] **Brunsell, N. A.** and R. R. Gillies: 2002, Incorporation of surface emissivity into a thermal atmospheric correction, *Photogrammetric Engineering and Remote Sensing*, 68, 12, 1263-1269.
- [2] **Brunsell, N.** and Gillies, R.: 2001, The effect of emissivity on evaporation, in *Remote Sensing and Hydrology 2000: Proceedings of a Symposium Held at Santa Fe, New Mexico, April 2000*. eds: M. Owe, K. Brubaker, J. Ritchie and A. Rango, 267, 276-280.
- [1] Menking, K. M., R. Y. Anderson, **N. A. Brunsell**, B. D. Allen, A. L. Ellwein, T. A. Loveland and S. W. Hostetler: 2000, Evaporation from groundwater discharge playas, Estancia Basin, central New Mexico. *Global and Planetary Change*, 25, 133-147.

Non-peer reviewed publications

- [4] Feddema, J. J., **N. A. Brunsell**, T. L. Jackson and A. R. Jones: 2008, Climate change in Kansas. Technical report for the Climate and Energy Project of the Land Institute. 10 pages.
- [3] Young, C. B., T. M. Brown[†], and **N. A. Brunsell**: 2008, Evaluation of NEXRAD operational precipitation estimates in Kansas. Technical report for the Kansas Department of Transportation. 108 pages.
- [2] **Brunsell, N. A.:** 2007, Book Review - Global Warming: Understanding the Forecast by David Archer, Palios, doi:10.2110/palo.2007.BR011.
- [1] Brown, J. C., M. Purcell, and N. Brunsell: 2007, Scale, Problems of. Encyclopedia of Environment and Society. ed. by Paul Robbins. SAGE Publications.

PRESENTATIONS [†] indicates a graduate student, [‡] indicates an undergraduate student co-author

Invited Presentations

- [14] **Brunsell, N. A.:** 2015, Disentangling climate and land-use impacts on grassland carbon and water fluxes. Midwest Mathematics and Climate Conference, 30 Apr - 2 May. Lawrence, KS.
- [13] **Brunsell, N. A.** and J. Nippert: 2014, Disentangling climate and land-use impacts on grassland carbon and water fluxes. AGU Fall Meeting, 15-19 December. San Francisco, CA.
- [12] **Brunsell, N. A.:** 2013, Soil-plant-atmosphere relations in the water and energy cycle. Universidad de la Republica, 14 November, Montevideo, Uruguay.
- [11] **Brunsell, N. A.:** 2013, A multi-scale perspective for sustainability: the challenge of synthesizing processes. NCAR. 31 May. Boulder, CO.
- [10] **Brunsell, N. A.**, J. Nippert and T. Ocheltree: 2012, Implications of changing extreme weather distributions on grassland ecohydrology. ESA Annual Meeting. 5-10 Aug. Portland, OR.

- [9] **Brunsell, N. A.:** 2012, Biosphere-atmosphere processes across scale. FEAGRI, UNICAMP, Campinas, BR.
- [8] **Brunsell, N. A.:** 2011, Synthesizing biosphere-atmosphere processes across scales. University of Nebraska. Lincoln, NE.
- [7] **Brunsell, N. A.:** 2011, A multi-scale perspective for sustainability: the challenge of synthesizing processes. University of Wyoming. Laramie, WY.
- [6] **Brunsell, N. A.:** 2010, Information theory approaches to scaling of land-atmosphere interactions. AGU Fall Meeting, 13-17 December. San Francisco, CA.
- [5] **Brunsell, N. A.:** 2010, Scaling land-atmosphere interactions using observational and modeling frameworks. Max Planck Institute for Biogeochemistry. Jena, Germany.
- [4] **Brunsell, N. A.:** 2009, A multi-scale approach to assessing the role of surface heterogeneity on land-atmosphere interactions. National Center for Atmospheric Research. Boulder, CO.
- [3] **Brunsell, N. A.:** 2008, Assessing the predictability of the water cycle: a multiscale framework. Seminars in Ecology and Evolutionary Biology, Kansas State University. Manhattan, KS.
- [2] **Brunsell, N. A.:** 2008, Trading carbon for water: assessing climate change in Kansas. KU Commons: University Lecture Series. University of Kansas. Lawrence, KS.
- [1] **Brunsell, N. A.:** 2007, Understanding water cycle dynamics for increased predictability: where are we? WyGIS Geospatial Forum. University of Wyoming. Laramie, WY.

Conference Proceedings and Presentations

- [73] Logan[†], K. E. and **N. A. Brunsell:** 2014, Land-atmosphere coupling investigated across scales. AGU Fall Meeting, 15-19 December. San Francisco, CA.
- [72] Koerner[†], S., **N. A. Brunsell**, L. Miller, and D. B. Mechem: 2014, Understanding the Role of Interannual Variability and Momentum Transfer on Wind Energy. AGU Fall Meeting, 15-19 December. San Francisco, CA.
- [71] Hu, L. A. J. Monaghan and **N. A. Brunsell:** 2014, Investigation of urban heat stress from satellite atmospheric profiles. AGU Fall Meeting, 15-19 December. San Francisco, CA.
- [70] **Brunsell, N. A.**, M. J. Barlage, A. J. Monaghan: 2014, Diagnosing flux tower-model agreement under woody encroachment and drought. GEWEX annual meeting: Trending now water. 14-18 July, The Hague, Netherlands.
- [69] **Brunsell, N. A.**, M. J. Barlage, A. J. Monaghan: 2014, Diagnosing time scales of flux tower-model agreement in relation to environmental condition. Agricultural and Forest Meteorology. 12-15 May, Portland, OR.
- [68] **Brunsell, N. A.**, K. Logan[†], J. Delaroy[‡] and J. Nippert: 2014, Land cover and drought impacts on the ecohydrology of Kansas natural areas. Kansas Academy of Sciences, 4-5 April, Emporia, KS.
- [67] **Brunsell, N. A.**, M. J. Barlage, A. J. Monaghan: 2013, Diagnosing time scales of flux tower-model agreement as a function of environmental regime. AGU Fall Meeting. 9-13 December, San Francisco, CA.

- [66] Cochran[†], F. V. and **N. A. Brunsell**: 2013, Remote Detection of Urban Intensity for Climate Change Impact Assessments. AGU Fall Meeting. 9-13 December, San Francisco, CA.
- [65] Hu, L., A. J. Monaghan; **N. A. Brunsell**, M. J. Barlage, J. J. Feddema, and O. Wilhelmi: 2013, Can we use remotely sensed land surface temperatures to evaluate and improve model simulations of the urban heat island? AGU Fall Meeting. 9-13 December, San Francisco, CA.
- [64] Petrie, M. D., **N. A. Brunsell**, R. Vargas, and S. L. Collins: 2013, A collaborative characterization of North American grasslands and rangelands: climate, ecohydrology and carbon sink-source dynamics. AGU Fall Meeting. 9-13 December, San Francisco, CA.
- [63] Logan, K. E. and **N. A. Brunsell**: 2013, Impact of prairie management on turbulent transport of carbon and water fluxes during drought. AGU Fall Meeting. 9-13 December, San Francisco, CA.
- [62] **Brunsell, N. A.**, J. Nippert and T. Ocheltree: 2013, Assessing the role of extreme event timing on water and carbon cycling as a function of land use and disturbance history. North American Carbon Program. 4-7 February, Albuquerque, NM.
- [61] **Brunsell, N.**, J. Nippert and T. Ocheltree: 2012, Assessing the impacts of changing precipitation and temperature extremes on the current and future ecohydrology of grassland ecosystems. AGU Fall Meeting. 3-9 December, San Francisco, CA.
- [60] Figueiredo, G., J. Rocha, R. Lamparelli and **N. Brunsell**: 2012, Comparison between historical yield and soybean crop EVI values using correlation map. AGU Fall Meeting. 3-9 December, San Francisco, CA.
- [59] Cochran[†], F. V. and **N. A. Brunsell**: 2012, Evaluating a Thermodynamically Based Metric of Sustainability. AGU Fall Meeting. 3-9 December, San Francisco, CA.
- [58] Wilson[†], C., **N. A. Brunsell**, C. B. Young and L. Miller: 2012, Variation in 20th Century Weather Extremes as a function of Biome. AGU Fall Meeting. 3-9 December, San Francisco, CA.
- [57] Hu[†], L. and **N. A. Brunsell**: 2012, The impact of temporal aggregation of land surface temperature data for urban heat island monitoring. AGU Fall Meeting. 3-9 December, San Francisco, CA.
- [56] Johnson, A., P. Stoy, **N. Brunsell** and B. Ewing: 2012, Tracking Spatial and Temporal Changes in the Discontinuous Permafrost Zone using Multi-Resolution Analysis. AGU Fall Meeting. 3-9 December, San Francisco, CA.
- [55] Lin[†], P. and **N. A. Brunsell**: 2012, Impacts of altered agricultural land cover patterns on carbon and water cycling in the central plains of the U.S. AGU Fall Meeting. 3-9 December, San Francisco, CA.
- [54] **Brunsell, N. A.** and C. J. Wilson[†]: 2012, Trends and implications of changes in extreme weather events. Governor's Conference on the future of water in Kansas, 31 Oct., Manhattan, KS.
- [53] **Brunsell, N. A.** and J. Nippert: 2012, Modeling ecohydrological responses to extreme precipitation events in grasslands. CUAHSI Biennial Meeting, 16-18 July, Boulder, CO.

- [52] Zheng, Y., D. Niyogi, and **N. A. Brunsell**: 2012, Exploring the Impacts of Soil Moisture/Temperature Variation on Atmospheric Boundary Layer from a Turbulent Mechanism Perspective. 20th Symposium on Boundary Layers and Turbulence, 8 - 13 July 2012, Boston, MA.
- [51] **Brunsell, N. A.**, T. Ocheltree, and J. B. Nippert: 2012, Timing of extreme weather events impacts annual carbon and water dynamics in a grassland ecosystem. 30th Conference on Agricultural and Forest Meteorology, 28 May - 1 June, Boston, MA.
- [50] Wendt[‡], N. and **N. A. Brunsell**: 2012, Comparing flux measurements across scale in a central plains grassland. 30th Conference on Agricultural and Forest Meteorology, 28 May - 1 June, Boston, MA.
- [49] **Brunsell, N. A.** and J. B. Nippert: 2011, Assessing the implications of changing extreme value distributions of weather on carbon and water cycling in grasslands. AGU Fall Meeting, 5-9 Dec, San Francisco, CA.
- [48] Cochran[†], F. V. and **N. A. Brunsell**: 2011, Temporal Scales of Mid-Troposphere CO_2 , Precipitation, and Vegetation Phenology in the US Great Plains. AGU Fall Meeting, 5-9 Dec, San Francisco, CA.
- [47] Lin[†], P. and **N. A. Brunsell**: 2011, The spatial and temporal shifts of biofuel production in the ecosystem-level carbon and water dynamics in the central plains of US. AGU Fall Meeting, 5-9 Dec, San Francisco, CA.
- [46] Wilson[†], C. J. and **N. A. Brunsell**: 2011, Assessing the geographical and climate space distributions of extreme weather events. AGU Fall Meeting, 5-9 Dec, San Francisco, CA.
- [45] **Brunsell, N. A.**, C. J. Wilson[†] and D. B. Mechem: 2011, Assessing regional scale variability in North American extreme weather events. DOE CESM Meeting, 19-22 Sept, Washington, D.C.
- [44] **Brunsell, N. A.**, L. Miller and A. Kleidon: 2011, The role of dissipation on spatial and temporal structure of turbulent fields. EGU General Assembly, 4-8 Apr, Vienna, Austria.
- [43] Hirmas, D. R. and **N. A. Brunsell**: 2011, Application of wavelet and fractal techniques to the analysis to soil structure and color. EGU General Assembly, 4-8 Apr, Vienna, Austria.
- [42] **Brunsell, N. A.**, S. Schymanski and A. Kleidon: 2010, The role of vegetation fraction on the thermodynamics of the land surface. AGU Fall Meeting, 13-17 Dec, San Francisco, CA.
- [41] Cochran[†], F. V., **N. A. Brunsell**, and A. T. Quick[‡]: 2010, Comparing surface and mid-troposphere CO_2 concentration and fluxes from central U.S. grasslands. AGU Fall Meeting, 13-17 Dec, San Francisco, CA.
- [40] **Brunsell, N. A.** and M. C. Anderson: 2010, Characterization of the multi-scale spatial structure of land atmosphere interactions. ESA-iLEAPS-EGU Joint Conference on Earth Observation for Land-Atmosphere Interaction Science, 3-5 Nov, Frascati (Rome), Italy.
- [39] Hirmas, D. R. and **N.A. Brunsell**, and B.L. Allen: 2010, Soil morphological applications of wavelet and fractal analyses. ASA, CSSA, and SSSA International Annual Meetings, 31 Oct - 4 Nov, Long Beach, CA.

- [38] Cochran[†], F. V., **N. A. Brunsell**, and A. T. Quick[‡]: 2010, Assessing surface and mid-troposphere CO₂ concentration and fluxes from grasslands in northeastern Kansas. General Land Project Open Meeting, 15-17 Oct, Phoenix, AZ.
- [37] **Brunsell, N. A.** and D. B. Mechem: 2010, Assessing the role of surface heterogeneity on energy balance partitioning and land-atmosphere feedbacks. 29th Conference on Agricultural and Forest Meteorology, 2-6 Aug, Keystone, CO.
- [36] Lin[†], P. L., and **N. A. Brunsell**: 2010, Implications of altering land use for biofuel production on carbon and water cycling in the central US. 29th Conference on Agricultural and Forest Meteorology, 2-6 Aug, Keystone, CO.
- [35] Huber, D., D. B. Mechem, and **N. A. Brunsell**: 2010, Influence of Irrigation on Mid-Summer Convective Rainfall in the Great Plains. 29th Conference on Agricultural and Forest Meteorology, 2-6 Aug, Keystone, CO.
- [34] Quick[‡], A., **N. A. Brunsell** and T. L. Buck[†]: 2010, Variations in land cover conditions on scalar similarity and correlation of scalar transport by turbulent eddies. 29th Conference on Agricultural and Forest Meteorology, 2-6 Aug, Keystone, CO.
- [33] Wilson[‡], C. and **N. A. Brunsell**: 2010, Seasonal dynamics of the thermodynamic entropy budget for a heterogeneous grassland. 29th Conference on Agricultural and Forest Meteorology, 2-6 Aug, Keystone, CO.
- [32] Buck[†], T. L. and **N. A. Brunsell**: 2010, The role of land cover and precipitation variability on carbon and water fluxes in central US grasslands. 29th Conference on Agricultural and Forest Meteorology, 2-6 Aug, Keystone, CO.
- [31] **Brunsell, N. A.**: 2009, A multi-scale information theory approach to assess spatial-temporal variability in daily precipitation and temperature. AGU Fall Meeting, 14-18 December, San Francisco, CA.
- [30] Petrie[†], M. D. and **N. A. Brunsell**: 2009, Nonlinear Ecosystem Responses to Variable Precipitation Timing and Magnitude Using a Low-dimensional Modeling Framework. AGU Fall Meeting, 14-18 December, San Francisco, CA.
- [29] **Brunsell, N. A.**: 2009, Multi-scale analysis of surface-precipitation feedbacks in the central United States. AGU Joint Assembly, 23-27 May, Toronto, CA.
- [28] Maksimowicz[‡], M., **N. A. Brunsell**, and J. M. Ham: 2009, Spatial and temporal alterations on carbon and water cycles due to grazing. AGU Joint Assembly, 23-27 May, Toronto, CA.
- [27] Ham, J., J. Nippert, J. Blair, K. Arnold, and **N. A. Brunsell**: 2008, Sensor networks for measuring spatial variability in the landscape energy balance. 2008 GSA-SSSA-ASA-CSSA-GCAGS-HGS Joint Annual Meeting, 5-9 October, Houston, TX.
- [26] **Brunsell, N. A.**, J. M. Ham and C. B. Young: 2008, A wavelet based information theory approach to assess scaling of evapotranspiration. CUAHSI Biennial Colloquium on Hydrologic Science and Engineering, 14-16 July, Boulder, CO.

- [25] **Brunsell, N. A.**, A. P. Barros and T. A. Rahn: 2008, Determination of the areal averaged fluxes in CLASIC: a synthesis of methodologies. 28th Conference on Agricultural and Forest Meteorology, 28 Apr-2 May, Orlando, FL.
- [24] Buck†, T. A. and **N. A. Brunsell**: 2008, Soil moisture controls on carbon and water cycling. 28th Conference on Agricultural and Forest Meteorology, 28 Apr-2 May, Orlando, FL.
- [23] Ham, J. M., **N. A. Brunsell** and K. B. Arnold†: 2008, Effect of landscape position on carbon and water fluxes from tallgrass prairie. 28th Conference on Agricultural and Forest Meteorology, 28 Apr-2 May, Orlando, FL.
- [22] **Brunsell, N. A.**, T. L. Buck†, K. Arnold† and J. M. Ham: 2007, Variation in scintillometer and eddy tower footprints and implications for the validation of satellite derived energy fluxes in heterogeneous terrain. AGU Fall Meeting, 10-14 Dec, San Francisco, CA.
- [21] Jones†, A. R. and **N. A. Brunsell**: 2007, Investigation of the impacts of spatial variability of soil moisture on convective precipitation in the central plains. AGU Fall Meeting, 10-14 Dec, San Francisco, CA.
- [20] Arnold†, K., J. Ham and **N. Brunsell**: 2007, Energy balance closure when using eddy covariance: How good is good enough? American Society of Agronomy, 4-8 Nov, New Orleans, LA.
- [19] Ham, J., **N. Brunsell**, K. Arnold, and K. Baum: 2007, Effect of sampling frequency and integration interval on eddy covariance measurements of heat, water vapor, and CO₂ fluxes. American Society of Agronomy, 4-8 Nov, New Orleans, LA.
- [18] **Brunsell, N. A.** and J. M. Ham: 2007, Scaling evapotranspiration in prairie ecosystems: remote sensing, modeling and field measurements. American Ecological Engineering Society, 21-25 May, Manhattan, KS.
- [17] **Brunsell, N. A.** and A. R. Jones†: 2007, Determining the spatial variability of water and carbon cycling, First Annual Kansas EPSCoR Ecoforecasting Meeting, 21 Apr, Manhattan, KS.
- [16] **Brunsell, N. A.** and J. M. Ham: 2006, Spatial scaling of water and energy fluxes in a tall-grass prairie. AGU Fall Meeting, 5-9 Dec, San Francisco, CA.
- [15] Young, C. B. and **N. A. Brunsell**: 2006, Which is better: NEXRAD or Gage? AGU Fall Meeting, 5-9 Dec, San Francisco, CA.
- [14] **Brunsell, N. A.** and J. M. Ham: 2006, Scaling surface energy fluxes in a tall-grass prairie using large aperture scintillometer and MODIS data. 27th Conference on Agricultural and Forest Meteorology, 22-26 May, San Diego, CA.
- [13] Young, C. B., T. M. Brown and **N. A. Brunsell**: 2006, Evaluation of NEXRAD operational estimates of intense rainfall using a dense network of ALERT raingages. AGU Joint Assembly, 23-26 May, Baltimore, MD.
- [12] Young, C. B. and **N. A. Brunsell**: 2005, Evaluation of NEXRAD precipitation estimates for the Missouri River Basin using daily raingage data. AGU Fall Meeting, 5-9 Dec, San Francisco, CA.
- [11] **Brunsell, N. A.** and J. M. Ham: 2005, Water and heat fluxes from a large aperture scintillometer in an ungrazed prairie. Ameriflux Annual Science Meeting, 18-20 October, Boulder, CO.

- [10] **Brunsell, N. A.** and C. B. Young: 2005, Assessing spatial-temporal variability of vegetation-precipitation interactions with combined NEXRAD and MODIS data. AGU Joint Assembly, 23-27 May, New Orleans, LA.
- [9] **Brunsell, N. A.:** 2005, Quantifying the dominant time scales of land-surface precipitation feedbacks. AAG Annual Meeting, 5-9 April, Denver, CO.
- [8] Lash, R. R., **N. A. Brunsell**, A. T. Peterson and B. Coles: 2005, Spatiotemporal context of Ebola and Marburg hemorrhagic fever outbreaks in Africa. AAG Annual Meeting, 5-9 April, Denver, CO.
- [7] Prueger, J.H., W. P. Kustas, L. E. Hipps, J. L. Hatfield, A. Cahill, C. Williams, J. Albertson, W. E. Eichinger, D. I. Cooper, and **N. Brunsell:** 2004, Spatial variability of turbulent fluxes across a corn/soybean production region in central Iowa. 26th Conference on Agriculture and Forest Meteorology, 23-27, August, Vancouver, BC, Canada.
- [6] **Brunsell, N. A.** and J. D. Albertson: 2003, Separating soil-atmosphere and canopy-atmosphere contribution to CO2 exchange. SERC-NIGEC Annual Meeting, 21-22 October, Indianapolis, IN.
- [5] **Brunsell, N. A.** and J. D. Albertson: 2003, Assessing the spatial scales of surface atmosphere interactions. AGU Fall Meeting, 8-12 December, San Francisco, CA.
- [4] **Brunsell, N. A.** and J. D. Albertson: 2003, Effects of surface heterogeneity on scalar and flux profiles in the atmospheric boundary layer. EGS-AGU-EUG Joint Assembly, 6-11 April, Nice, France.
- [3] **Brunsell, N. A.**, R. R. Gillies, B. Lapenta, and S. Dembeck: 2003, Aggregation of remotely sensed vegetation and derived latent heat flux. 83rd AMS Annual Meeting, 9-13 February, Long Beach, CA.
- [2] **Brunsell, N. A.**, and R. R. Gillies: 2002, Length scales of remotely sensed vegetation, surface radiometric temperature, and derived surface energy fluxes. 25th Conference on Agricultural and Forest Meteorology, 20-24 May, Norfolk, VA.
- [1] **Brunsell, N. A.**, K. M. Menking, R. Y. Anderson, and B. D. Allen: 1998, Atmospheric and hydrologic estimates of evaporation for the Estancia basin playa complex. New Mexico Geological Society Spring Meeting, 9 April, Socorro, NM.

FUNDING

	Currently Funded Projects
2015	Spatio-temporal climate impacts on the ecosystems. KU Research Investment Council Level II \$15,330, (Co-PI, PI: D. Reuman).
2010-Present	Subcontract to Konza Prairie Long Term Ecological Station. NSF. \$25,000/year (annually renewed). (PI).
2014-Present	Konza Cluster for the Ameriflux Network. DOE. \$140,000/year (annually renewed). (PI).
2014-2017	Reducing uncertainty in carbon cycle science of North America: a synthesis program across United States and Mexico. USDA/NASA \$537,741. (Co-PI, PI: R. Vargus, U. Delaware).

2013-2016	Enhancements to Internet and communication systems at the KU Field Station. \$349,714. (Senior personnel, PI: B. Foster).
2013-2018	Collaborative Research EaSM2: Linking Human and Earth System Models to Assess Regional Impacts and Adaption in Urban Systems and their Hinterlands. \$4.17 Million; KU portion: \$712,000 (Co-PI on KU portion of project, PI: B. O'Neill, NCAR).
2012-2013	Lower Republican River HydroGeoSphere modeling. Kansas Water Office. \$44,999. (Co-PI, PI: A. Brookfield, KGS).
2011-2014	Facilities to Enhance Research and Teaching at the University of Kansas Field Station. \$329,890. NSF (Senior Personnel, PI: S. Billings).
2011-2013	Assessing regional scale variability in extreme value statistics under altered climate scenarios. DOE. \$510,554. (PI).
2010-2014	System for Integrated Modeling of Metropolitan Extreme Heat Risk (SIMMER). NASA. KU Funding: \$367,116. (CO-I, PI: O. Wilhelmi, NCAR).
2009-2014	Understanding Climate Change in the Great Plains: Source, Impact, and Mitigation. NSF EPSCoR. KU Climate Group Funding: \$1,086,575. (Co-I, KU PI: J. Feddema).

Previously Funded Projects

2011-2012	Scaling ecosystem function: Novel approaches from MaxEnt and Multiresolution. NSF. Total: \$135,803. (Co-PI, PI: P. Stoy, MSU).
2009-2012	RET: Shaping Inquiry from Feedstock to Tailpipe (SHIFT). NSF. \$499,477 (Co-I, PI: S. Williams).
2008-2011	KU biofuels 'feedstock to tailpipe' initiative. Transportation Research Institute. \$516,814. (Co-I, PI: S. Williams).
2006-2009	Understanding and forecasting ecological change: causes, trajectories and consequences of environmental change in the Central Plains. NSF EPSCoR. KU funding: \$3,599,997. (Collaborator, KU PI: L. Krishtalka).
2008	Assessing climate change in Kansas. The Land Institute. \$36,012. (PI).
2006-2007	Water and heat fluxes in a prairie ecosystem assessed using scintillometry and physically based modeling. KUCR General Research Fund. \$7,015.00.
2005-2006	Assessing multi-scale spatial-temporal variability of surface energy fluxes using scintillometry and remote sensing. KUCR New Faculty General Research Fund. \$7,914.56.

SERVICE

		Editorial Duties
Associate editor	Agricultural and Forest Meteorology	2014-Present

Guest editor	Entropy - Special issue on Entropy and Hydrology	2013-2014
Guest editor	Climate - Special issue on Land Cover and Climate	2013-2014
Editorial board	Climate	2012-Present
Editorial board	Agricultural and Forest Meteorology	2008-2014

Scientific Committees

Chair	AGU Hydrology Section Technical Committee on Large Scale Field Experimentation	2015-Present
Member	World Climate Research Program, WCRP Global Land/Atmosphere System Study (GLASS) Committee of the Global Energy and Water Cycle Experiment (GEWEX)	2012-Present
Member	AGU Hydrology Section Technical Committee on Large Scale Field Experimentation	2013-2014
Member	<i>Agricultural and Forest Meteorology Scientific and Technological Activities Commission (STAC)</i> for the American Meteorological Society	2007-2013
Member	National Ecological Observatory Network (NEON) Domain Science and Education Coordination Committee (DSECC) for Domain 6.	2009-2011
Member	Kansas Mesonet Steering Committee	2008-Present
Member	Science Steering Committee for EPSCoR Track II Project, joint between Kansas and Oklahoma	2009-Present
Member	DOE Scientific Discovery through Advanced Computing (SCIDAC) proposal review panel	2011
Member	NSF IGERT Pre-proposal review panel	2010

Conference Chair and Session Chair

Chair	29th conference on Agricultural and Forest Meteorology, 1-6 August 2010, Keystone, CO.	2009-2010
Session chair	“Large-Scale Field Experiments and Long-Term Observing Networks” AGU Fall Meeting, 15-19 December, San Francisco, CA	2014
Session chair	“Biosphere-atmosphere greenhouse gas fluxes in terrestrial ecosystems I, II, III” AGU Fall Meeting, 9-13 December, San Francisco, CA	2013
Session chair	“Ecosystem response to stress and disturbance” at the 30th Conference on Agricultural and Forest Meteorology, 29 May-1 June, Boston, MA	2012
Session chair	“Scaling in biogeosciences and Earth system science” at the EGU Joint Assembly, 4-8 Apr, Vienna, Austria.	2011

Session chair	“Scaling issues in land-atmosphere interactions” at the 29th Conference on Agricultural and Forest Meteorology, 1-6 August, Keystone, CO	2010
Session chair	“Biosphere-atmosphere interactions: empirical, modeling, and simulation studies” at the AGU Joint Assembly, 23-27 May 2009, Toronto, CA.	2009
Session chair	“Areal flux averaging measurements and methods” at the 28th Conference on Agricultural and Forest Meteorology, 28 Apr-2 May 2008, Orlando, FL.	2008

Teacher Mentoring

Mentor	Research Experience for Teachers (Hosted 1 high school and 1 junior college teacher for the Summer)	2010
Mentor	Middle School Science Educators Research Experience (Hosted 2 middle school teachers for the Summer)	2008

Large Field Campaigns

Participant	Cloud and Land Surface Interaction Campaign (CLASIC) in Oklahoma	2007
Participant	Soil Moisture Experiments 2002 (SMEX'02) in Iowa	2002

University

Member	Faculty Advisory Board for Center for Undergraduate Research	2014-2016
Member	University Senate Judicial Board	2013-Present
Member	Graduate Studies Fellowship Committee	2012-2013
Member	Undergraduate Research Awards	2010-Present
Member	Research Committee of the University Honors Program	2006-Present
Member	Search committee (Kansas Geological Survey, Hydrologist)	2008-2009

College

Member	College Committee on Promotion and Tenure	2014-Present
Member	College Space Committee	2012-Present
Member	College Academic Misconduct Committee	2006-2009
Member	Faculty search committee (Ecology and Evolutionary Biology, Ecological modeler)	2006-2008

		Department
Chair	Department of Geography	2015-Present
Associate Chair	Dept. of Geography	2014-2015
Chair	Faculty affairs committee	2014-Present
Chair	Graduate affairs committee	2012-2014
Chair	Faculty search committee (Geography, Ecohydrology)	2013-2014
Chair	Space allocation committee	2012-2013
Member	Graduate affairs committee	2011-2012
Chair	Faculty search committee (Geography, Atmospheric scientist)	2011-2012
Member	Chair search committee (Geography)	2011-2012
Member	Faculty affairs committee	2008-2010
Member	Graduate student affairs committee	2005-2008
Member	Faculty search committee (Geography, Soils/Geomorphologist)	2007-2008
Member	Faculty search committee (Geography, Atmospheric scientist)	2006-2007
Member	Faculty search committee (Geography, Glaciologist)	2005-2006
Member	Undergraduate studies committee	2004-2005

TEACHING
EXPERIENCE

Course	Title	Time
ATMO/GEOG 521	Microclimatology	Sp 2006, 2008-Present
ATMO 642	Remote Sensing of the Atmosphere	Sp (2005-Present)
ATMO 680	Physical Meteorology	F (2004-2006, 2009, 2012)
ATMO/GEOG 731	Land-Atmosphere Interactions	F 2011
ATMO 731	Atmospheric Turbulence	Sp 2009, 2010
EVRN 720	IGERT, Climate and Borders	F (2009)
GEOG 531/731	Land-Atmosphere Interactions	Sp 2005, F 2007
GEOG 104	Introduction to Physical Geography	Sp 2007, F 2007
HNRS 190	State of Fear: Assessing Climate Change	F 2006
DUKE TIP	State of Fear: Assessing Climate Change (Weekend course for junior high school students at the University of Kansas)	2007

Visiting Scientists and Post-docs		
Scientist	Location	Date
Gabriel de Oliveira	PhD student, INPE, Brazil	4/2015-4/2016
Diego Rocha	PhD student, Unicamp, Campinas Brazil	7/2014-7/2015
Thais Carraro	PhD student, Unicamp, Campinas Brazil	7/2014-7/2015
Hassan Younis Hassan Aboelkhair	Assistant Lecturer, Department of Geography and GIS Faculty of Arts, Tanta Univesity, Egypt	1/2014-7/2014
Gleyce Dantes	PhD student, Unicamp, Campinas Brazil	10/2012-2/2013
Troy Ocheltree	Post-Doctoral researcher	7/2012 - 12/2012
Lee Miller	Visiting Post-Doc, Max Planck Institute for Biogeochemistry, Jena, Germany	1-2/2012
Ahmed El Kenawy	PhD student Instituto Pirenaico de Ecologia, Zaragoza, Spain	8-12/2011

Graduate Students			
Student	Degree	Date	Role
J. Delaroy	MS Atmospheric Sciences	Current	Chair
L. Winegar	PhD Geography	Current	Chair
M. Nosschi	PhD Geography	Current	Chair
S. Koerner	MS Atmospheric Sciences	Current	Chair
K. Logan	PhD Geography	Current	Chair
F. V. Cochran	PhD Geography	Current	Chair
L. Hu	PhD Geography	2014	Chair
C. Wilson	MS Atmospheric Sciences	2013	Chair
P. L. Lin	MA Geography	2013	Chair
F. V. Cochran	MA Geography	2011	Chair
D. Huber	MS Atmospheric Sciences	2011	Co-Chair
T. L. Buck	MS Atmospheric Sciences	2010	Chair
M. Petrie [†]	MA Geography	2010	Chair
A. R. Jones [†]	MA Geography	2008	Chair

[†] indicates departmental honors

Graduate Student Honors

A. R. Jones - **2009 College Outstanding Thesis Award**: "Impacts of soil moisture variability on convective precipitation in the Central Plains through land-atmosphere feedbacks"

Undergraduate Research Advisor

[†] indicates that research resulted in a peer-reviewed publication

[‡] indicates presentation at an international/national conference

P. Satcher (2014), M. May (2014), J. Delaroy[‡] (2014, **Honors**), T. Wieland (2013-Present, **McNair Scholars Program, Honors**), N. Wendt[‡] (2012-2013, **Honors**), A. Quick[‡] (2010), C. Wilson[‡] (2010), M. Allen (2009-2010), N. Parks (2009), M. Maksimowicz[‡] (2008-2009), T. Buck[‡] (2008), K. Logan[†] (2008; **Honors**), C. Painter (2007-2008), K. Zimmerman (2006; **McNair Scholars Program**)

PROFESSIONAL ORGANIZATIONS American Geophysical Union, American Meteorological Society, European Geosciences Union, Ecological Society of America

REVIEWER **Proposals**
Department of Energy, National Science Foundation, NASA Postdoctoral Program

Manuscript Reviewer
Agricultural and Forest Meteorology, Applied Geography, Earth Research Letters, Ecosystems, GeoForum, Geophysical Research Letters, International Journal of Climatology, International Journal of Remote Sensing, IEEE Transactions on Geoscience and Remote Sensing, Journal of the American Water Resources Association, Journal of Applied Meteorology and Climatology, Journal of Arid Environments, Journal of Hydrometeorology, Journal of Soil and Water Conservation, Remote Sensing of Environment, Theoretical and Applied Climatology, Water Resources Research