## **CURRICULUM VITAE OF JUSTIN T. SCHOOF**

Updated March 2016

## I. PROFESSIONAL AFFILIATION AND CONTACT INFORMATION

Professor and Chair Department of Geography and Environmental Resources Southern Illinois University Carbondale, IL 62901

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## II. EDUCATION

Ph.D.	Indiana University, Bloomington, IN, USA, 2004
	Atmospheric Science Program, Department of Geography
	Dissertation title: Generation of regional climate change scenarios using
	general circulation models and empirical downscaling
M.Sc.	Indiana University, Bloomington, IN, USA, 1999
	Atmospheric Science Program, Department of Geography
	Thesis title: Synoptic circulation classification and downscaling for the
	Midwestern United States
B.A.	Indiana University, Bloomington, IN, USA, 1997
	Geography/Mathematics (double major)

### III. PROFESSIONAL EXPERIENCE

2016-	Interim Director, Environmental Resources and Policy Program, Southern
	Illinois University, Carbondale, IL, USA
2015-	Professor, Department of Geography and Environmental Resources,
	Southern Illinois University, Carbondale, IL, USA
2012-	Chair, Department of Geography and Environmental Resources, Southern
	Illinois University, Carbondale, IL, USA
2011-2015	Associate Professor, Department of Geography and Environmental
	Resources, Southern Illinois University, Carbondale, IL, USA
2006-2011	Assistant Professor, Department of Geography and Environmental
	Resources, Southern Illinois University, Carbondale, IL, USA
2005	Postdoctoral Research Associate, Center for Ocean-Atmospheric
	Prediction Studies, Florida State University, Tallahassee, FL, USA
2004-2005	Postdoctoral Fellow, Department of Geography, Indiana University,
	Bloomington, Indiana, USA
2003-2004	Research Assistant, Department of Geography, Indiana University,
	Bloomington, Indiana, USA
2003	Instructor (2002-2003 Spring Semester), Department of Geography,
	Indiana University, Bloomington, Indiana, USA

2000-2002	Research Assistant, Department of Geography, Indiana University,
	Bloomington, Indiana, USA
2002	Instructor (2002-2003 Fall Semester), Department of Geography, Indiana
	University – Purdue University at Indianapolis, Indianapolis, Indiana,
	USA
1999	Associate Instructor (1999-2000 Fall Semester), Department of
	Geography, Indiana University, Bloomington, Indiana, USA
1997-1999	Research Assistant, Department of Geography, Indiana University,
	Bloomington, Indiana, USA

### IV. RESEARCH AND CREATIVE ACTIVITY

### A. INTERESTS

- Regional climate downscaling
- Stochastic weather simulation
- Synoptic climatological methods
- Statistical climatology
- Applied climatology

### B. CURRENT FUNDED PROJECTS

- Collaborative Research: Physical drivers of equivalent temperature variability (NSF). PI.
- C. GRANTS APPLIED FOR (pending review or not awarded) (PI or co-PI)
  - 2013 Reconnecting floodplains for multiple benefits in a non-stationary world (NSF). co-PI. Not funded.
  - 2012 Collaborative Research: Physical drivers of equivalent temperature and human heat stress (NSF). PI. Not funded.
  - 2012 Historical and projected impacts of climate change on West Nile Virus in the United States (NIH). PI. Not funded.
  - Windmill-driven autothermal aerobic treatment for pathogens (Bill and Melinda Gates Foundation), co-PI. Not funded.
  - 2011 IGERT: Interdisciplinary, team-based graduate training and research in energy systems for the future (NSF). co-PI. Not funded.
  - 2009 Provisioning of ecosystem services from agricultural watersheds under climate change and policy scenarios (USDA CSREES). co-PI. Not funded.

- 2009 Health Consequences of Regional Heat Waves Under Climate Change, Centers for Disease Control and Prevention (CDC). co-PI. Not funded.
- 2008 Climate Change, Hydrology, and Landscapes of America's Heartland: A Multi-scale Natural-Human System. (NSF). co-PI. Not funded.
- 2008 Downscaled Near-Surface Temperature and Humidity Projections for the Eastern USA. (NSF). PI. Not funded.
- 2008 Modeling the Interactions Among 21<sup>st</sup> Century Climate, Land Use, and Water Quantity and Quality in Representative U.S. Watersheds. (EPA). co-PI. Not funded.
- 2006 Development of a Laboratory Exercise Manual for Instruction of Introductory Meteorology, Excellence Through Commitment Undergraduate Teaching Enhancement Award, SOUTHERN ILLINOIS UNIVERSITY CARBONDALE. Not funded.

### D. GRANTS RECEIVED (PI or co-PI)

- 2013 Collaborative Research: Physical Drivers of Equivalent Temperature Variability, National Science Foundation, Geography and Spatial Science, PI, \$158,254.
- 2012 Assessing Climate Change Education on the SIUC Campus, SIU Carbondale Green Fund.
- 2010 Collaborative Research: Climate Change Impacts on Regional Wind Climates, National Science Foundation, Geography and Spatial Science, PI, \$57,146.
- 2010 Climate Change, Hydrology, and Landscapes of America's Heartland: A Multi-scale Natural-Human System, National Science Foundation, Dynamics of Coupled Natural and Human Systems, co-PI, \$1,430,000.
- 2009 Track 1: Southern Illinois Undergraduate Recruitment and Retention in Geoscience Education (SURRGE), National Science Foundation, Opportunities for Enhancing Diversity in the Geosciences, co-PI, \$186,439.
- 2008 Development and Delivery of Thematically Integrated Courses in Meteorology and Climatology, Excellence Through Commitment Undergraduate Teaching Enhancement Award, SIU Carbondale, 1 month salary.

- 2008 Emissions Pathways and Projections of Extreme Temperatures in the Midwestern USA, ORDA Seed Grant, SIU Carbondale, \$8,598 + ½ month salary
- 2007 Collaborative Research: Development of 21<sup>st</sup> Century Precipitation Scenarios Using Probabilistic Downscaling Techniques, National Science Foundation, Geography and Regional Science, PI, \$95,061.
- 2006 A Comparison of Dynamically and Statistically Downscaled GCM Ensemble Hindcasts for the Southeastern USA, subcontract from Florida State University, \$24,000.

### E. HONORS AND AWARDS

2012-2016	Section Editor, Atmospheric Sciences, Elsevier Reference Modules on
2011	Science Direct.  John Russell Mather Paper of the Year Award, Climate Specialty Group, Association of American Geographers, awarded for Schoof JT, Pryor SC, Surprenant J. 2010. Development of daily precipitation projections for the United States based on probabilistic downscaling.  Journal of Geophysical Research, 115, D13106, doi:10.1029/2009JD013030.
2003-2004	Indiana University College of Arts and Sciences Dissertation Year Research Fellowship. \$13,500
2003	Indiana University James H. Coon Science Prize. Awarded to a student who shows promise in one of the sciences). \$1,500
2003	Indiana University Graduate Student Travel Support Grant. Indiana University College of Arts and Sciences. Awarded to attend American Meteorological Society 2004 Annual Meeting, Seattle, WA, 11-15 January, 2004. \$300
1999-2002	Indiana University Department of Geography Chairman's Graduate Student Recognition Award. Awarded for outstanding academic performance.
2001	Indiana University Department of Geography Departmental Graduate Fellowship Award. Awarded for academic excellence. \$1,500
2000	Indiana University Esther L. Kinsley Master's Thesis Award. Awarded for outstanding theses at Indiana University. \$500
2000	American Meteorological Society Global Change Travel Scholarship. Awarded to attend the American Meteorological Society 81 <sup>st</sup> Annual Meeting, Albuquerque, NM, 14-19 January, 2000. Approximately \$500.
1999	Indiana University Graduate Student Travel Support Grant. Indiana University College of Arts and Sciences. Awarded to attend American Geophysical Union 1999 Spring Meeting, Boston, MA, 1-4 June, 1999. \$200

1999 Indiana University Department of Geography Steven S. Visher Award for Outstanding Paper in Climatology. \$500

# F. PAPERS AND PRESENTATIONS AT PROFESSIONAL MEETINGS AND WORKSHOPS (presenter underlined)

Schoof JT, Ford T (2016): Coupling between eastern United States warm season extreme temperatures and soil moisture in high resolution land surface data, Association of American Geographers Annual Meeting, San Francisco, CA, March 2016.

<u>Schoof JT</u> (2016): Historical changes in the moisture content of heat waves in the United States, American Meteorological Society, New Orleans, LA, January 2016.

<u>Lukancic K</u>, Schoof JT (2016): Sensitivity of strong extratropical cyclones to large-scale climate variability in the United States, American Meteorological Society, New Orleans, LA, January 2016.

Schoof JT (2015): A new perspective on United States heat waves. American Geophysical Union, Fall Meeting, San Francisco, CA, December 2015 (poster)

McLeran K, Schoof JT, Lefticariu L, Therrell M (2015) Delta 18-0 and Delta 13-C analysis in tree rings of *Pterocarpus Angolensis* growing in Zimbabwe. American Geophysical Union, Fall Meeting, San Francisco, CA, December 2015 (poster)

<u>Bhattarai M</u>, Sechhi S, Schoof J (2015): An analysis of the climate change mitigation potential through soil organic carbon sequestration in a corn belt watershed. American Geophysical Union, Fall Meeting, San Francisco, CA, December 2015.

Schoof JT (2015): High-resolution projections of daily near-surface air temperature and extremes for the contiguous United States. Association of American Geographers, Annual Meeting, Chicago, IL, April 2015. (poster)

<u>Teshager A</u>, Secchi S, Schoof J (2015): Assessment of impacts of agricultural scenarios and climate change on water quantity and quality of a watershed in central US. Association of American Geographers, Annual Meeting, Chicago, IL, April 2015.

<u>Bhattarai MD</u>, Secchi S, Schoof J (2015): Mitigation potential of climate change through soil organic carbon sequestration in a corn belt watershed Association of American Geographers, Annual Meeting, Chicago, IL, April 2015.

<u>Bhattarai MD</u>, Secchi S, Schoof J (2015): Mitigation potential of climate change through soil organic carbon sequestration in a corn belt watershed. Seventh International Conference on Climate Change: Impacts and Responses, Vancouver, Canada, April, 2015.

- Secchi S, Perez-Lapena B, Teshager AD, Bhattarai M, Schoof JT (2014): Understanding the links between humans, climate change, water and carbon in a Corn Belt Watershed. American Geophysical Union, San Francisco, CA, December 2014, invited.
- Schoof JT (2014): High resolution projections of 21<sup>st</sup> century daily precipitation for the contiguous USA. American Geophysical Union, San Francisco, CA, December 2014.
- <u>Feng G.</u>, Wang G.X., Schoof, JT (2014): Monitoring drought intensity in Illinois with a combined index. Association of American Geographers, Annual Meeting, Tampa, FL, April 2014.
- <u>Feng G.</u>, Wang G.X., Schoof, JT (2014): Monitoring drought intensity in Illinois with a combined index. American Society for Photogrammetry and Remote Sensing, Annual Meeting, Louisville, KY, March 2014.
- Schoof J.T., Heern Z. (2014): Variability and trends in average and extreme near-surface equivalent temperature in the Eastern USA. American Meteorological Society, Annual Meeting, Atlanta, February 2014.
- Schoof J.T., Pryor S.C., and Barthelmie R.J.(2013): Observed and AOGCM simulated relationships between US winds and large scale modes of climate variability. American Geophysical Union, Fall Meeting, San Francisco, December 2013.
- Schoof J.T. (2013): Multivariate downscaling of CMIP5 projections for the central United States: Overview of results and assessment of value added. Association of American Geographers Annual Meeting, Los Angeles, April 2013.
- <u>Teshager A.</u>, Secchi S., Misgna G., and Schoof J (2013): Predicting climate change and policy influences on future agricultural landscapes of the American Heartland. Association of American Geographers Annual Meeting, Los Angeles, April 2013.
- <u>Pryor S.C.</u>, Barthelmie R.J. and J. Schoof (2012): Changes in extreme and intense wind speeds over the contiguous USA. NCDC Workshop, Asheville, Jan 2012.
- <u>Pryor S.C.</u>, Barthelmie R.J. and J. Schoof (2011): Wind climates in the NARCCAP model suite, American Geophysical Union, San Francisco, Dec 2011.
- <u>Miller G</u>, Schoof JT, and Therrell M. Developing curriculum to help students explore the Geosciences' cultural relevance. American Geophysical Union, December 2011, San Francisco. (poster)

Schoof JT, Pryor SC, and Surprenant J. Development of daily precipitation projections for the United States based on probabilistic downscaling. Association of American Geographers, April 2011, Seattle, WA. Climate Specialty Group John Russell Mather Paper of the Year Award presentation.

<u>Schoof JT</u> and Chakraborty S. Understanding historical and projected changes in human heat stress in the United States. Association of American Geographers, April 2011, Seattle, WA. (poster)

<u>Schoof JT</u>. Stochastic weather generators: Applications, modeling approaches, and model evaluation. American Society of Agronomy, November 2010, Long Beach, CA, **invited**.

<u>Schoof JT</u>. Projections of human heat stress for the Midwestern USA. Workshop on Climate Change Impacts, Vulnerability, and Adaptability in the Midwest USA, Indiana University, October 2010.

Pryor SC, <u>Barthelmie RJ</u>, Schoof JT, Clausen NE, Drews M, E. Kjellstrom. Will global climate change impact extreme and intense wind speeds? World Renewable Energy Congress XI, 25-30 September 2010, Abu Dhabi, UAE.

<u>Pryor SC</u>, Barthelmie RJ, Schoof JT, Clausen NE, Drews M. Changes in extreme and intense wind speeds in Northern Europe. European Wind Energy Conference. Warsaw, Poland, 2010.

<u>Pryor SC</u>, Barthelmie RJ, Schoof JT, Clausen NE, Kjellstrom E, Drews M. Intense and extreme wind speeds over the Nordic countries. Future Climate and Renewable Energy – Impacts, Risks and Adaptation. Oslo, Norway, 2010.

<u>Pryor SC</u>, Barthelmie RJ, Schoof JT, Clausen NE, Drews M. Quantifying possible changes in extreme and intense wind speeds. American Wind Energy Conference, Dallas, TX, 2010.

Ratnapradipa D, Schoof JT, Ruffing A. Environmental health impacts and lessons learned from a regional wind event. National Environmental Health Association 2010 Annual Educational Conference & Exhibition. Albuquerque, NM, June 2010.

<u>Kaini P</u>, Nicklow JW, Schoof JT. Impact of climate change projections and best management practices on river flows and sediment load. World Environment & Water Resources Congress 2010, Providence, RI, May 2010.

<u>Ratnapradipa D</u>, Schoof JT, Middleton W. Environmental health perspectives on climate change. 2009 National Environmental Public Health Conference, Atlanta, GA, October 2009.

- <u>Schoof JT</u>, Pryor SC, Surprenant JL. Probabilistic downscaling of 21<sup>st</sup> century daily precipitation occurrence and intensity in the United States. American Geophysical Union Joint Assembly, Toronto, Ontario, Canada, May 2009.
- <u>Schoof JT</u>. Contributions of temperature and humidity to trends in apparent temperature in the Midwestern USA. West Lakes Meeting of the Association of American Geographers, Bloomington, IN, November 2008.
- <u>Schoof JT</u>, Pryor SC. On the proper order of Markov chain for precipitation occurrence, 88<sup>th</sup> Annual Meeting of the American Meteorological Society, New Orleans, LA, January 2008.
- <u>Schoof JT</u>. Assessing the proper order of Markov chain for simulation of daily precipitation occurrence in the Midwestern USA. West Lakes Meeting of the Association of American Geographers, Champaign-Urbana, IL, November 2007.
- <u>Schoof JT</u>. Robeson SM. Historical and projected changes in the length of the frost free season in the Midwestern United States, 30<sup>th</sup> Applied Geography Conference, Indianapolis, IN, October 2007.
- <u>Schoof JT</u>. Statistically downscaled temperature projections for the Midwestern USA. Workshop on Climate Variability, Predictability & Change in the Midwest, Indiana University, October 2007.
- <u>Schoof JT</u>. Teleconnections and circulation patterns in the Midwestern USA. Observations vs. GCMs. Workshop on Climate Variability, Predictability & Change in the Midwest, Indiana University, October, 2007.
- <u>Pryor SC</u>, Barthelmie RJ, Schoof JT. Developing robust projections of wind energy resources under climate change, European Conference on Impacts of Climate Change on Renewable Energy Sources, Reykjavik, Iceland, June, 2006.
- Schoof JT, Shin DW, LaRow T, Cocke S. Assessment of spatial and temporal skill associated with dynamically and statistically downscaled seasonal temperature forecasts in the Southeastern USA, American Geophysical Union 2006 Joint Assembly, Baltimore, May, 2006.
- <u>Pryor S.</u> Barthelmie R, Schoof J. Projections of near-surface winds under climate change scenarios for use in the wind energy industry, European Geosciences Union, General Assembly 2006, Vienna, Austria, April, 2006.
- <u>Schoof JT</u>, Arguez A, Brolley J, O'Brien JJ. A new weather generator based on spectral properties of surface air temperature. *American Meteorological Society 18<sup>th</sup> Conference on Probability and Statistics in the Atmospheric Sciences*, Atlanta, GA, February, 2006.

- <u>Bellow JG</u>, Shin D-W, Schoof JT, Jones J, O'Brien JJ. Contribution of temperature, precipitation, and solar radiation from dynamically downscaled global climate model output to predicting peanut yields and phenology in the SE USA. American Society of Agronomy, Southern Branch Meeting, Orlando, February, 2006.
- <u>Pryor SC</u>, Barthelmie RJ, Schoof JT, Kjellström E, Roeckner E. Developing wind climate projections. *Intergovernmental Panel on Climate Change Workshop*, Honolulu, March 2005.
- Pryor SC, <u>Barthelmie RJ</u>, Schoof JT. How coherent is inter-annual variability of wind indices across Europe and what are the implications for large scale penetration by wind energy of electricity markets? *European Wind Energy Conference*, London, November 2004.
- <u>Pryor SC</u>, Barthelmie RJ, Schoof JT. Wind energy prognoses for the Baltic region. 4<sup>th</sup> Study Conference on BALTEX (Baltic Sea Experiment). Gudhjem, Bornholm, Denmark, May 2004.
- <u>Pryor SC</u>, Barthelmie RJ, Schoof JT. Historical and prognostic changes in 'a normal wind year': A case study from the Baltic. *European Wind Energy Association Special Topic Conference: The Science of Making Torque From Wind*. Delft University of Technology, The Netherlands, April, 2004.
- <u>Schoof JT</u>, Pryor SC. An evaluation of two GCMs: North American teleconnections and synoptic phenomena. *15<sup>th</sup> AMS Symposium on Global Change and Climate Variations*, Seattle, WA, January, 2004.
- Pryor SC, <u>Schoof JT</u>, Barthelmie RJ. Near-surface flow regimes: Recent changes and tools for prognoses. *15<sup>th</sup> AMS Symposium on Global Change and Climate Variations*, Seattle, WA, January, 2004 (poster).
- <u>Pryor SC</u>, Barthelmie RJ, Schoof JT. Observed and predicted flow variability over the Baltic Region: Implications of climate change for wind energy viability. *AGU/EGS Joint Assembly*, Nice, France, April 2003.
- <u>Barthelmie RJ</u>, Pryor SC, Schoof JT. Evidence of trends in near-surface wind speeds over the Baltic. *Offshore Wind Energy in the Mediterranean and other European Seas (OWEMES)*, 2003, Sicily, April 2003.
- <u>Schoof JT</u>, Robeson SM. Seasonal and spatial variability of serial and cross-correlation matrices used by stochastic weather generators. *American Meteorological Society 13<sup>th</sup> Conference on Applied Climatology*, Portland, OR, May 2002.
- Pryor S, Barthelmie R, Carreiro M, Davis M, <u>Hartley A</u>, Jensen B, Oliphant A, Randolph J, Schoof J. Forest canopy uptake of atmospheric nitrogen at a Midwestern

US mixed hardwood site and possible implications for carbon storage. *American Geophysical Union*, San Francisco, CA. December 2001.

<u>Pryor SC</u>, Barthemlie R, Carreiro M, Davis M, Hartley A, Jensen B, Oliphant A, Randolph J, Schoof J. Nitrogen deposition to a mid-Latitude deciduous forest and ecosystem response. *2nd International Nitrogen Conference*. Washington, D.C., October 2001

Schoof JT A comparison of two synoptic circulation classifications for the Midwestern United States. *Annual Meeting of the Association of American Geographers*, New York City, NY, March 2001.

<u>Pryor SC</u>, Barthelmie RJ, Davis ML, Schoof JT, Hirzy KC, Hartley A, Carreiro M, Jensen B. Nitrogen deposition to and cycling in a forest ecosystem. *Annual Meeting of the Association of American Geographers*, New York City, NY, March 2001.

<u>Pryor SC</u>, Barthelmie RJ, Schoof J, Erickson D. Modeling heterogeneous chemistry on sea spray: implications for nitrogen deposition. *American Association for Aerosol Research Annual Conference*, St. Louis, MO, November 2000.

<u>Pryor SC</u>, Barthelmie RJ, Jensen B, Hirzy K, Schoof J, Davis M. An investigation of the role of particles in observations of the bidirectionality of ammonia fluxes. *American Association for Aerosol Research Annual Conference*, St. Louis, MO, November 2000 (poster).

<u>Pryor SC</u>, Barthelmie RJ, Schoof J, Erickson D. Modeling heterogeneous chemistry in sea salt droplets. *European Aerosol Conference*, Dublin, Ireland, September 2000. (invited)

<u>Pryor SC</u>, Barthelmie RJ, Schoof JT, Sorensen LL, Erickson III DJ. Implications of heterogeneous chemistry for nitrogen deposition to marine ecosystems: Observations and modeling, *Sixth International Conference on Air-Surface Exchange of Gases and Particles*, Edinburgh, UK, July 2000.

Schoof JT, Pryor SC. Synoptic circulation classification and downscaling for the Midwestern United States, *American Meteorological Society 15<sup>th</sup> Conference on Probability and Statistics in the Atmospheric Sciences*, Asheville, NC, May 2000.

Schoof JT, Pryor SC. Synoptic circulation classification and statistical downscaling for the midwestern United States, *American Geophysical Union Spring Meeting*, Boston, MA, June 1999 (poster).

<u>Grimmond S</u>, Zutter H, Potter S, Schoof J, Souch C. Evaluation and application of automated methods for measuring sky view factors in urban areas, *International Conference on Urban Climate*, 1999, Sydney Australia, November 1999. (poster).

<u>Grimmond CSB</u>, Robeson SM, Schoof J. Variability in below-canopy climatic conditions during the growing season within an eastern North American deciduous forest. *International Conference on Biometeorology (ICB)*, Sydney, Australia, November 1999.

Robeson SM, <u>Grimmond CSB</u>, Schoof J. Comparison of open-site and below-canopy climatic conditions within an eastern North American deciduous forest. *American Meteorological Society 23<sup>rd</sup> Conference on Agricultural and Forest Meteorology*, Albuquerque, NM, November 1998.

### V. PUBLICATIONS AND CREATIVE WORKS

### A. BOOKS

None at this time.

#### B. ARTICLES IN PROFESSIONAL JOURNALS

Stoebner T, Lant CL, Schoof JT. The effect of climate change on rural land cover patterns in the central United States. *Climatic Change*, in review.

Pryor SC, Schoof JT. Evaluation of near-surface temperature, humidity, and equivalent temperature from regional climate models applied in type-II downscaling. *Journal of Geophysical Research-Atmospheres*, in review.

Teshager AD, Gassman PW, Schoof JT, Sechhi S. Assessment of impacts of agricultural and climate change scenarios on watershed ecosystem services. *Hydrology and Earth System Science*, in review.

Bhattarai M, Secchi S, Schoof J. Projecting corn and soybean yields under climate change in a corn belt watershed. *Global Environmental Change*, in review.

Wodika A, Schoof J. Assessing climate change education on a Midwestern college campus. *Applied Environmental Education and Communication*, in review.

Teshager AD, Gassman PW, Secchi S, Schoof JT, Misgna G. 2016. Modeling agricultural watersheds with the Soil and Water Assessment Tool (SWAT): Calibration and validation with a novel procedure for spatially explicit HRUs. *Environmental Management*, doi:10.1007/s00267-015-0636-4.

Schoof JT, Robeson SM. 2016. Projecting changes in regional temperature and precipitation extremes in the United States. *Weather and Climate Extremes* (invited), 11, 28-40, doi:10.1016/j.wace.2015.09.004.

Schoof JT. 2015. High resolution projections of 21<sup>st</sup> century daily precipitation for the contiguous USA. *Journal of Geophysical Research - Atmospheres*, doi:10.1002/2014JD022376.

Schoof JT, Heern ZA, Therrell MD, Jemo JWF. 2014. Assessing trends in lower tropospheric heat content in the Central USA using equivalent temperature. *International Journal of Climatology*, doi: 101002/joc.4175.

Schoof JT, Pryor SC. 2014. Assessing the fidelity of AOGCM-simulated relationships between large-scale modes of climate variability and wind speeds. *Journal of Geophysical Research - Atmospheres*, **119**, doi:10.1002/2014JD021601.

Romano AJ, Therrell M, Schoof JT, Gibson DJ. 2013. Response of non-native invasive plants to large scale wind damage. *Natural Areas Journal*, **33**, 307-315.

Schoof JT. 2013. Statistical downscaling in climatology (invited review article). *Geography Compass*, **7**, 249-265.

Fisher SM, Schoof JT, Lant CL, Therrell MD. 2013. The effects of geographical distribution on the reliability of wind energy. *Applied Geography*, **40**, 83-89.

Pryor SC, Barthelmie RJ, Schoof JT. 2013. Downscaled projections of climate risks for the Midwestern USA. *Climate Research*, **56**, 61-79.

Pryor SC, Barthelmie RJ, Schoof JT. 2012. Past and future wind climates over the contiguous USA based on the North American Regional Climate Change Assessment Program model suite. *Journal of Geophysical Research – Atmospheres*, **117**, D19119, doi:10.1029/2012JD014779.

Schoof JT. 2012. Scale issues in the development of future precipitation scenarios. *Journal of Contemporary Water Research and Education*, 147, 8-16.

Mann, D, Lant CL, Schoof JT. 2012. Using map algebra to explain and project spatial patterns of wind energy development in Iowa. *Applied Geography* 34, 219-229.

Pryor SC, Schoof JT. 2010. Importance of the SRES in projections of climate change impacts on near-surface wind regimes. *Meteorologische Zeitschrift*, 19, 267-274.

Schoof JT, Pryor SC, Surprenant J. 2010. Development of daily precipitation projections for the United States based on probabilistic downscaling. *Journal of Geophysical Research - Atmospheres*, 115, D13106, doi:10.1029/2009JD013030.

Lim Y-K, Cocke S, Shin DW, Schoof JT, LaRow TE, O'Brien JJ. 2010. Downscaling large-scale NCEP CFS to resolve fine-scale seasonal precipitation and extremes for the crop growing seasons over the southeast United States. *Climate Dynamics*, doi: 10.1007/s00382-009-0671.

Schoof JT, Shin DW, Cocke S, LaRow TE, Lim Y-K, O'Brien JJ. 2009. Dynamically and statistically downscaled seasonal temperature and precipitation hindcast ensembles for the southeastern USA. *International Journal of Climatology*, **29**, 243-257.

Pryor SC, Schoof JT. 2008. Changes in the seasonality of precipitation over the contiguous USA. *Journal of Geophysical Research - Atmospheres*, **113**, D21108, doi:10.1029/2008JD010251.

Schoof JT, Pryor SC. 2008. On the proper order of Markov chain model for precipitation occurrence in the contiguous United States. *Journal of Applied Meteorology and Climatology*, **47**, 2477-2486.

Schoof JT. 2008. Application of the multivariate spectral weather generator to the contiguous United States. *Agricultural and Forest Meteorology*, **148**, 517-521.

Pryor SC, Barthelmie RJ, Schoof JT, Binkowski FS, Delle Monache L, Stull R. 2008. Modeling the impact of sea spray on particle concentrations in a coastal city, *Science of the Total Environment*, **391**, 132-142.

Lim Y, Shin DW, Cocke S, LaRow TE, Schoof JT, O'Brien JJ, Chassignet E. 2007. Dynamically and statistically downscaled seasonal forecasts of maximum surface air temperature over the southeast United States. *Journal of Geophysical Research - Atmospheres*, **112**, D24201, doi:10.1029/2007JD008764.

Brolley JM, O'Brien JJ, Schoof JT, Zierden D. 2007. Experimental drought threat forecast for Florida. *Agricultural and Forest Meteorology*, **145**, 84-96.

Schoof JT, Pryor SC, Robeson SM. 2007. Downscaling daily maximum and minimum air temperature in the Midwestern USA: A hybrid empirical approach. *International Journal of Climatology* **27**, 439-454.

Pryor SC, Schoof JT, Barthelmie RJ. 2006. Winds of change? Projections of near surface winds under climate change scenarios, *Geophysical Research Letters* **33**, L11702, doi:10.1029/2006GL02600.

Pryor SC, Barthelmie RJ, Schoof JT. 2006. Inter-annual variability of wind indices over Europe. *Wind Energy* **9**, 27-38.

Schoof JT, Pryor SC. 2006. An evaluation of two GCMs: Simulation of North American teleconnection indices and synoptic phenomena. *International Journal of Climatology* **26**, 267-282.

Schoof JT, Arguez A, Brolley J, O'Brien JJ. 2005. A new weather generator based on spectral properties of minimum surface air temperature and diurnal temperature range. *Agricultural and Forest Meteorology* **135**, 241-251.

Pryor SC, Schoof JT, Barthelmie RJ. 2005. Empirical downscaling of wind speed probability distributions. *Journal of Geophysical Research – Atmospheres* **110**: D19110.

Pryor SC, Schoof JT, Barthelmie RJ. 2005. Climate change impacts on wind speeds and wind energy density in northern Europe: Results from empirical downscaling of multiple AOGCMs. *Climate Research* **29**: 183-198.

Pryor SC, Barthelmie RJ, Schoof JT. 2005. The impact of non-stationarities in the climate system on the definition of 'a normal wind year': A case study from the Baltic. *International Journal of Climatology* **25**: 735-752.

Schoof JT, Pryor SC. 2003. Evaluation of the NCEP/NCAR reanalysis in terms of synoptic scale phenomena: A case study from the Midwestern USA. *International Journal of Climatology* **23**: 1725-1741.

Schoof JT, Robeson SM. 2003. Seasonal and spatial variations of cross-correlation matrices used by stochastic weather generators. *Climate Research* **24**, 95-102.

Schoof JT, Pryor SC. 2001. Downscaling temperature and precipitation: a comparison of regression-based methods and artificial neural networks. *International Journal of Climatology* **21**, 773-790.

Pryor SC, Barthelmie RJ, Carreiro M, Davis ML, Hartley A, Jensen B, Oliphant A, Randolph JC, Schoof JT. 2001. Nitrogen deposition to and cycling in a deciduous forest. In Optimizing Nitrogen Management in Food and Energy Production and Environmental Protection: *Proceedings of the 2nd International Nitrogen Conference on Science and Policy. The Scientific World* 1(S2), 245-254.

Pryor SC, Barthelmie RJ, Schoof JT, Sorensen LL, Erickson DJ. 2001. Implications of heterogeneous chemistry of nitric acid for nitrogen deposition to marine ecosystems: Observations and modeling. *Water, Air, and Soil Pollution: Focus* 1: 99-107.

Grimmond CSB, Robeson SM, Schoof JT. 2000. Spatial variability of micro-climatic conditions within a mid-latitude deciduous forest. *Climate Research* **15**, 137-149.

#### C. CONFERENCE PROCEEDINGS

Pryor SC, Barthelmie RJ, Schoof JT, Clausen NE, Drews M. Quantifying possible changes in extreme and intense wind speeds. *Proceedings of the American Wind Energy Association*. 2010.

Pryor SC, Barthelmie RJ, Schoof JT. Developing robust projections of wind energy resources under climate change. *European Conference on Impacts of Climate Change on Renewable Energy Sources*, Reykjavik, Iceland, June, 2006.

Schoof JT, Arguez A, Brolley J, O'Brien JJ. A new weather generator based on spectral properties of surface air temperature. *Proceedings of the American Meteorological Society 18<sup>th</sup> Conference on Probability and Statistics in the Atmospheric Sciences*, Atlanta, GA, February 2006.

Pryor S, Barthelmie R, Schoof J. How coherent is inter-annual variability of wind energy indices over Europe and what are the implications for large scale penetration by wind energy of electricity markets? *Proceedings of European Wind Energy Conference*, London, UK, November 2004 (refereed).

Pryor SC, Barthelmie RJ, Schoof JT. Wind energy prognoses for the Baltic region. *Proceedings for the 4<sup>th</sup> Study Conference on BALTEX (Baltic Sea Experiment)*. Bornholm, Denmark, May 2004.

Schoof JT, Pryor SC. An evaluation of two GCMs: North American teleconnections and synoptic phenomena. *Proceedings of the 15<sup>th</sup> AMS Symposium on Global Change and Climate Variations*, Seattle, WA, January 2004.

Pryor SC, Schoof JT, Barthelmie RJ. Near-surface flow regimes: Recent changes and tools for prognoses. *Proceedings of the 15<sup>th</sup> AMS Symposium on Global Change and Climate Variations*, Seattle, WA, January 2004.

Barthelmie RJ, Pryor SC, Schoof JT. 2003. Evidence of trends in near-surface wind speeds over the Baltic. *Proceedings of Offshore Wind Energy in the Mediterranean and other European Seas (OWEMES)* 2003, Naples, April 2003, 35-49.

Schoof JT, Robeson SM. 2002. Seasonal and spatial variability of serial and cross-correlation matrices used by stochastic weather generators. *Proceedings of the American Meteorological Society 13<sup>th</sup> Conference on Applied Climatology*. 4pp. Portland, OR, May 2002.

Pryor S, Barthelmie R, Carreiro M, Davis M, Hartley A, Jensen B, Oliphant A, Randolph J, Schoof J. 2001. Nitrogen deposition to a mid-latitude deciduous forest and ecosystem response. *Proceedings of 2<sup>nd</sup> International Nitrogen Conference, ESA*. Washington, D.C., October 2001.

Pryor SC, Barthelmie RJ, Jensen B, Davis ML, Hirzy KC, Schoof JT, Sorensen LL. 2001. Bidirectionality of ammonia fluxes: Observations over a deciduous forest, *Proceedings of the Sixth International Conference on Air-Surface Exchange of Gases and Particles*, CEH, Edinburgh, 36-41.

Schoof JT, Pryor SC. 2000. Synoptic circulation classification and downscaling for the Midwestern United States. *Proceedings of the American Meteorological Society 15<sup>th</sup> Conference on Probability and Statistics in the Atmospheric Sciences*, J4-J7. Asheville, NC, May 2000.

Pryor SC, Barthelmie RJ Schoof JT, Sørensen LL, Erickson DJ. 2000. Modeling heterogeneous chemistry of nitrogen gases in/on sea spray. *Journal of Aerosol Science Supplement. Proceedings of European Aerosol Conference* 1033-1034.

Grimmond CSB, Robeson SM, Schoof J. 1999. Variability in below-canopy climatic conditions during the growing season within an eastern North American deciduous forest. R.J. de Dear and J.C. Potter (eds) *Proceedings of the International Conference on Biometeorology (ICB)*, Sydney, Australia, November 1999. ICBP03.05. 4pp.

Robeson SM, Grimmond CSB, Schoof J. 1998. Comparison of open-site and below-canopy climatic conditions within an eastern North American deciduous forest. *Proceedings of the American Meteorological Society 23rd Conference on Agricultural and Forest Meteorology*, 184-187. Albuquerque, NM, November 1998.

#### D. CHAPTERS/SECTIONS IN PROFESSIONAL BOOKS

Schoof JT. 2016. The Earth's Climate. In Oxford Bibliographies in Ecology, Ed. David Gibson, New York, Oxford University Press, forthcoming.

Schoof JT. 2014. Atmospheric Composition and Structure. In Oxford Bibliographies in Geography, Ed. Barney Warf, New York, Oxford University Press.

Schoof JT. 2013. Atmospheric Science. Reference Module in Earth Systems and Environmental Science, Elsevier.

Schoof JT. 2013. Historical and projected changes in human heat stress in the Midwestern USA. In: <u>Climate Change in the Midwest: Impacts, Risk, Vulnerability,</u> and Adaptation, Ed: SC Pryor, Indiana University Press.

Schoof JT. 2009. Overview: Thermal regimes. In: <u>Understanding Climate Change:</u> <u>Climate Variability, Predictability, and Change in the Midwestern United States,</u> Ed: SC Pryor, Indiana University Press, p 19-28.

Schoof JT. 2009. Historical and projected changes in the length of the frost-free season in the Midwestern USA. In: <u>Understanding Climate Change: Climate</u>

<u>Variability, Predictability, and Change in the Midwestern United States,</u> Ed: SC Pryor, Indiana University Press, p 42-54.

Pryor SC, Kunkel KE, Schoof JT. 2009. Did precipitation regimes change during the twentieth century? In: <u>Understanding Climate Change: Climate Variability</u>, <u>Predictability</u>, and <u>Change in the Midwestern United States</u>, Ed: SC Pryor, Indiana University Press, p 100-112.

Schoof JT, Pryor SC. 2009. Teleconnections and circulation patterns in the Midwestern United States: Observations vs. General Circulation Models. In: <u>Understanding Climate Change: Climate Variability, Predictability, and Change in the Midwestern United States</u>, Ed: SC Pryor, Indiana University Press, p 196-206.

Schoof JT. 2010. "The Hadley Cell" in <u>The Encyclopedia of Geography</u>, edited by Barney Warf, Sage.

Schoof JT, Therrell MD. 2009. "Climate Change" in <u>The Encyclopedia of Organic, Sustainable and Local Food</u>, edited by Leslie Duram, Greenwood Press.

#### E. BOOK REVIEWS

<u>Climatic Changes Since 1700.</u> Stefan Brönniman, Springer. 2015. CHOICE: *Current Reviews for Academic Libraries. Science and Technology.* 

Eco-Hustle! Global Warming, Greenwashing, and Sustainability. Bruce E. Johansen, Praeger. 2015. CHOICE: Current Reviews for Academic Libraries. Science and Technology.

<u>Understanding Climate Change.</u> Science, Policy, and Practice. Sarah L. Burch and Sara E. Harris, University of Toronto Press. 2014. CHOICE: *Current Reviews for Academic Libraries. Science and Technology*.

<u>Can Science Fix Climate Change?</u> Mike Hulme, Polity Press, 2014. CHOICE: Current Reviews for Academic Libraries. Science and Technology. May 2015.

Behind the Curve: The Science and Politics of Global Warming. Joshua P. Howe, University of Washington Press, 2014. CHOICE: Current Reviews for Academic Libraries. Science and Technology. October 2014.

<u>Climate-Challenged Society</u>. John S. Dryzek, Richard B. Norgaard, and David Schlosberg, Oxford, 2013. CHOICE: *Current Reviews for Academic Libraries*. *Science and Technology*. July 2014.

<u>Climate dynamics</u>. Kerry H. Cook, 2013. CHOICE: *Current Reviews for Academic Libraries*. *Science and Technology*. March 2014.

<u>Climate change science: A modern synthesis.</u> G. Thomas Farmer and John Cook, Springer, 2013. CHOICE: *Current Reviews for Academic Libraries. Science and Technology*. December 2013.

Experimenting on a small planet. William W. Hay, Springer, 2013. CHOICE: Current Reviews for Academic Libraries. Science and Technology. September 2013.

Managing the risks of extreme events and disasters to advance climate change adaptation. Special report of the IPCC (2012). CHOICE: Current Reviews for Academic Libraries. Science and Technology. April 2013.

<u>Future climate change</u>. Mark Maslin and Samuel Randalls, Routledge, 2012. CHOICE: *Current Reviews for Academic Libraries*. *Science and Technology*. November 2012.

The hockey stick and the climate wars: dispatches from the front lines. Michael E. Mann, Columbia, 2012. CHOICE: Current Reviews for Academic Libraries. Science and Technology.

<u>Climate change and cities</u>. Cynthia Rosenzweig, et al. (editors), Cambridge, 2011. CHOICE: *Current Reviews for Academic Libraries*. *Science and Technology*. March 2012.

<u>Earth: The operator's manual.</u> Richard B. Alley, W.W. Norton and Company, 2011. CHOICE: *Current Reviews for Academic Libraries. Science and Technology.* November 2011.

<u>Climate change: Global risks, challenges, and decisions.</u> K. Richardson, W. Steffen, and D. Liverman, Cambridge, 2011. CHOICE: *Current Reviews for Academic Libraries. Science and Technology.* October 2011.

<u>The warming papers</u>. D. Archer and R. Pierrehumbert (editors), Wiley-Blackwell, 2011. CHOICE: *Current Reviews for Academic Libraries*. *Science and Technology*. August 2011.

<u>The challenge of climate change: Which way now?</u> D.D. Perlmutter and R.L. Rothstein, Wiley-Blackwell, 2011. CHOICE: *Current Reviews for Academic Libraries. Science and Technology.* June, 2011.

Coming climate crisis?: Consider the past, beware the big fix, C.L. Parkinson, Rowman and Littlefield, 2010. CHOICE: Current Reviews for Academic Libraries. Science and Technology. October, 2010.

<u>Climate change science and policy</u>, S.H. Schneider (ed), Island Press, 2010. CHOICE: *Current Reviews for Academic Libraries. Science and Technology*., June, 2010. Empirical-statistical downscaling, Benestad, Hanssen-Bauer, and Chen, 2008. *Bulletin of the American Meteorological Society* **90**, 1557-1559, October, 2009.

Global climate change impacts in the United States, U.S. Global Change Research Program. Cambridge University Press, 2009. CHOICE: Current Reviews for Academic Libraries. Science and Technology, April, 2010.

Why we disagree about climate change: Understanding controversy, inaction, and opportunity, Hulme, Cambridge University Press, 2009. CHOICE: Current Reviews for Academic Libraries. Science and Technology, November, 2009.

<u>Climate of extremes: Global warming science they don't want you to know,</u> Michaels and Balling Jr., Cato Institute, 2009. CHOICE: *Current Reviews for Academic Libraries. Science and Technology*, June, 2009.

<u>Six degrees: Our future on a hotter planet</u>, Lynas, National Geographic, 2008. CHOICE: *Current Reviews for Academic Libraries*. *Science and Technology*., February, 2009.

<u>Climate extremes and society</u>, Diaz and Murnane (editors), Cambridge University Press, 2008. CHOICE: *Current Reviews for Academic Libraries*. *Science and Technology*, December 2008.

<u>It's the sun, not your SUV: CO<sub>2</sub> won't destroy Earth,</u> Zyrkowski, St. Augustine Press, 2008. CHOICE: *Current Reviews for Academic Libraries. Science and Technology*, December 2008.

<u>Ice, mud and blood: Lessons from climates past,</u> Turney, Macmillan, 2008. CHOICE: *Current Reviews for Academic Libraries. Science and Technology*, October 2008.

<u>Climate change: A multidisciplinary approach</u>, Burroughs, Cambridge University Press, United Kingdom, 2<sup>nd</sup> Edition, 2007. CHOICE: *Current Reviews for Academic Libraries*. *Science and Technology*, June 2008.

Fighting for love in the century of extinction: how passion and politics can stop global warming, Goodstein, University of Vermont Press, Burlington, VT. 2007. CHOICE: Current Reviews for Academic Libraries. Science and Technology, February, 2008.

<u>Under a green sky</u>, Ward, Collins Publishing, New York, NY, 2007. CHOICE: *Current Reviews for Academic Libraries. Science and Technology*, October, 2007.

<u>Heat: how to stop the planet from burning</u>, Monbiot, South End Press, Cambridge, MA, 2007. CHOICE: *Current Reviews for Academic Libraries. Science and Technology*, October, 2007.

Kicking the carbon habit: Global warming and the case for renewable and nuclear energy, Sweet, Columbia, 2006, 256 pp, CHOICE: Current Reviews for Academic Libraries. Science and Technology, December, 2006

Field notes from a catastrophe: Man, nature and climate change, Kolbert, Bloomsbury, 2006, 210 pp, CHOICE: *Current Reviews for Academic Libraries*. *Science and Technology*. December, 2006.

Global warming: Myth or reality?, Leroux, Springer/Praxis, 2005, 509p, CHOICE: Current Reviews for Academic Libraries. Science and Technology, February, 2006.

<u>Intraseasonal variability in the atmosphere-ocean climate system</u>, Lau and Waliser, Praxis, 2005, 436p, CHOICE: *Current Reviews for Academic Libraries*. *Science and Technology*, November 2005.

<u>Understanding weather: a visual approach</u>, Mayes and Hughes, Arnold 2004, 188p, CHOICE: *Current Reviews for Academic Libraries. Science and Technology*. June 2005.

### F. WEBSITE REVIEWS

Skeptical Science (skepticalscience.com). CHOICE: Current Reviews for Academic Libraries. Science and Technology. August 2015.

#### VI. TEACHING INTERESTS AND SPECIALTIES

### A. TEACHING INTERESTS AND SPECIALTIES

- Meteorology and climatology
- Physical geography
- Global and regional environmental change
- Statistical methods and their application to problems in geography and climatology

### B. TEACHING AND TRAINING GRANTS

*Egyptian High School Summer Enrichment Program,* SIU Carbondale College of Education and Human Services, August 2011, funded collaborator.

Development and delivery of thematically integrated courses in meteorology and climatology, Southern Illinois University Excellence Through Commitment Undergraduate Teaching Enhancement Award, 2008.

# C. TEACHING AWARDS AND HONORS None at this time

### D. CURRENT GRADUATE FACULTY STATUS:

Direct Dissertation Status, approved 2008.

# E. NUMBER OF MASTER'S AND PH.D. COMMITTEES ON WHICH YOU HAVE SERVED

Wendi Middleton, Ph.D., 2015 (Health Education)
Kristen Bouska, Ph.D., 2014 (Environmental Resources and Policy)
Tim Stoebner, Ph.D., 2014 (Environmental Resources and Policy)
Alicia Wodika, Ph.D., 2013 (Health Education and Recreation)
Brendan Lutz, Ph.D., 2011 (Environmental Resources and Policy)

Terri Thomas, Ph.D., 2009 (Environmental Resources and Policy)

Diane Benbella, M.S., 2016 (Geography and Environmental Resources)

Ryan Larimore, M.S., 2015 (Geography and Environmental Resources) Ashley Suiter, M.S., 2015 (Geography and Environmental Resources)

Mohamed Mahgoub, M.S., 2014 (Geography and Environmental Resources)

Samir Shrestha, M.S., 2014 (Geography and Environmental Resources)

Guanling Feng, M.S., 2014 (Geography and Environmental Resources)

Sydney Klein, M.S., 2014 (Geography and Environmental Resources)

Brooke Lopeman, M.S., 2014 (Geography and Environmental Resources)

Andrew Johnson, M.S., 2013 (Geography and Environmental Resources)

Melva Trevino-Pena, M.S., 2013 (Geography and Environmental Resources)

Ivan Remane, M.S., 2013 (Geography and Environmental Resources)

Kerry McLeran, M.S., 2013 (Geography and Environmental Resources)

Dana Murphy, M.S., 2013 (Geography and Environmental Resources)

Ryan Verbanaz, M.S., 2013 (Geology)

Tony Romano, M.S., 2012 (Geography and Environmental Resources)

Adam Oller, M.S., 2012 (Geography and Environmental Resources)

David Mann, M.S., 2011 (Geography and Environmental Resources)

Andrew Fleming, M.S., 2011 (Geography and Environmental Resources)

Sarah Waggoner, M.S., 2011 (Geography and Environmental Resources)

Hannah Kalk, M.S., 2011 (Plant Biology)

Rahul Prabhakar, M.S., 2010 (Electrical and Computer Engineering)

Nick Longbucco, M.S., 2010 (Geography and Environmental Resources)

Clara Mundia, M.S., 2010 (Geography and Environmental Resources)

Olga Guajardo, M.S., 2008 (Geography and Environmental Resources)

Christiane Bohn, M.S., 2007 (Geography and Environmental Resources)

# F. NAMES OF STUDENTS WHO HAVE COMPLETED MASTER'S THESES AND DOCTORAL DISSERTATIONS UNDER YOUR DIRECTION

Awoke Teshager, Ph.D., 2016 (Environmental Resources and Policy) Modeling Impacts of Agricultural Scenarios, Climate Change, and Best Management Practices on Watershed Water Quantity and Quality, and Crop Production the Midwestern USA.

Brooke Haldeman, M.S. 2015 (Geography and Environmental Resources) *Influence of Synoptic Scale Circulation on Equivalent Temperature Extremes in Chicago, IL* (1948-2014)

Zach Heern, M.S., 2013 (Geography and Environmental Resources) *Investigating Trends in Lower Tropospheric Heat Content and Heat Waves Over the Central United States Using Equivalent Temperature* (1951-2011).

Johannes Mack, M.S., 2013 (Geography and Environmental Resources) *The Cryosphere and North Atlantic Tropical Cyclone Activity: Statistical Forecasting and Physical Mechanisms* 

Ravi Dhungel, M.S., 2012 (Geography and Environmental Resources / Computer Science) Web Mapping and Application Towards A Cloud: Enabling a WEBGIS Prototype in an Open Source Environmental

Samuel Fisher, M.S., 2012 (Geography and Environmental Resources) Improving the Reliability of Wind Power Through Geographic Dispersion of Wind Generation.

Audrey Wagner, M.S., 2011 (Geography and Environmental Resources)

Investigating Climatic Drivers of the Warming Hole Through Empirical Downscaling of Eastern U.S. Summertime Maximum Temperatures

Mark Carlos, Ph.D., 2010 (Environmental Resources and Policy)

An Analysis of Wind Power Plant Prospecting in the Central United States

Jeremy Surprenant, M.S., 2009 (Geography and Environmental Resources) A Synoptic Climatology of Wildfires in the Central Hardwood Region of the Midwestern United States

### G. COURSES TAUGHT

Instructor, Department of Geography and Environmental Resources, Southern Illinois University, Carbondale, IL, USA: *GEOG 490: Readings in Geography*.

Fall 2007 (Severe and Hazardous Weather, 1 student) Spring 2007 (Severe and Hazardous Weather, 3 students) Spring 2008 (Climatology, 2 students) Fall 2012 (Aviation Weather Hazards, 1 student) Spring 2014 (Synoptic Climatology with Matlab, 1student)

Instructor, Department of Geography and Environmental Resources, Southern Illinois University, Carbondale, IL, USA: **GEOG** *591: Independent Studies*.

Spring 2008 (Urban Climatology, 1 student)

Spring 2009 (Statistical Downscaling, 1 student)

Fall 2009 (Climate Change and Coastal Hazards, 1 student)

Spring 2010 (Applied Statistics, 1 student)

Spring 2010 (Advanced Statistics, 1 student)

Fall 2010 (Data Analysis, 1 student)

Summer 2011 (Wind Energy, 1 student)

Fall 2011 (Matlab Programming, 2 students)

Fall 2011 (Climate and Human Health, 1 student)

Fall 2012 (Matlab/R Programming, 1 student)

Spring 2014 (Synoptic Climatology with Matlab, 1student)

Fall 2014 (Climatology of Africa, 1 student)

Instructor, Department of Geography and Environmental Resources, Southern Illinois University, Carbondale, IL, USA: *ER&P 599: Individual Research*.

Summer 2007 (Wind Climatology, 1 student)

Summer 2011 (Climate Model Evaluation, 1 student)

Instructor, Department of Geography and Environmental Resources, Southern Illinois University, Carbondale, IL, USA: *GEOG 303: Physical Geography* 

Spring 2012 (1 section, approximately 60 students)

Instructor, Department of Geography and Environmental Resources, Southern Illinois University, Carbondale, IL, USA: *GEOG 330: Meteorology* 

Spring 2006 (1 section, approximately 80 students)

Fall 2006 (1 section, approximately 80 students)

Spring 2007 (1 section, approximately 60 students)

Fall 2007 (1 section, approximately 80 students)

Spring 2008 (1 section, approximately 60 students)

Fall 2008 (1 section, approximately 65 students)

Spring 2009 (1 section, approximately 45 students)

Fall 2009 (1 section, approximately 55 students)

Spring 2010 (1 section, approximately 45 students)

Fall 2010 (1 section, approximately 46 students)

Fall 2011 (1 section, approximately 68 students)

Fall 2013 (1 section, approximately 60 students)

Fall 2014 (1 section, approximately 40 students)

Instructor, Department of Geography and Environmental Resources, Southern Illinois University, Carbondale, IL, USA: *GEOG 412/512: Applied Statistics in Geography* Fall 2007 (1 section, approximately 15 students)

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Fall 2008 (1 section, approximately 10 students)
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Fall 2009 (1 section, approximately 20 students)

Spring 2011 (1 section, approximately 24 students)

Fall 2011 (1 section, approximately 22 students)

Fall 2012 (1 section, approximately 29 students)

Fall 2013 (1 section, approximately 25 students)

Fall 2014 (1 section, approximately 25 students)

Instructor, Department of Geography and Environmental Resources, Southern Illinois University, Carbondale, IL, USA: *GEOG 431/531: Climatology* 

Spring 2006 (1 section, approximately 12 students)

Spring 2007 (1 section, approximately 15 students)

Spring 2008 (1 section, approximately 11 students)

Spring 2009 (1 section, approximately 12 students)

Spring 2010 (1 section, approximately 20 students)

Spring 2011 (1 section, approximately 15 students)

Spring 2012 (1 section, approximately 12 students)

Spring 2013 (1 section, approximately 16 students)

Spring 2015 (1 section, approximately 10 students)

Instructor, Department of Geography and Environmental Resources, Southern Illinois University, Carbondale, IL, USA: *GEOG 439/539: Global Climate Change*,

Fall 2006 (1 section, approximately 11 students)

Fall 2010 (1 section, approximately 19 students)

Instructor, Department of Geography, Indiana University, Bloomington, Indiana, USA: *G109 Weather and Climate* 

Spring 2003 (1 section, approximately 165 students)

Instructor, Department of Geography, Indiana University – Purdue University at Indianapolis, Indianapolis, Indiana, USA: *G111 Hurricanes* 

Fall 2002 (1 section, approximately 26 students)

Associate Instructor, Department of Geography, Indiana University, Bloomington, Indiana, USA: *G109 Weather and Climate* 

Fall 1999 (3 lab sections, approximately 90 students)

### H. GUEST/INVITED LECTURES

### **Guest Lectures**

Schoof JT. Climate Modeling, Geography and Environmental Resources 439, SIU Carbondale, April 2014.

Schoof JT. Global Climate Change, Geography and Environmental Resources 470, SIU Carbondale, March 2014, October 2014.

Schoof JT. Wind energy. Geology 588, SIU Carbondale. This guest lecture has been given four times: Summer 2011-2014.

Schoof JT. Climate change and human health. Health Education 588, SIU Carbondale.

This guest lecture has been given six times: Summer 2009-2014.

Schoof JT. GEOG 500, Principles of Research, SIU Carbondale. This guest lecture has been given nine times: 2006-2014.

Schoof JT. Anthropogenic climate change. Agribusiness Economics 442, SIU Carbondale. This guest lecture has been given six times: 2008-2014.

Schoof JT. Global (Climate) Change. Environmental Resources and Policy (ERP 500), SIU Carbondale. This guest lecture has been given four times: 2006-2013.

Schoof JT. Projections of human heat stress for the Midwestern USA. ER&P 598, SIU Carbondale, Fall 2010.

Schoof JT. Development of a regional-scale seasonal temperature and precipitation forecasting system for the Southeastern USA. ER&P 598, SIU Carbondale, Spring 2008.

Schoof JT. Severe Weather Hazards. Geography and Environmental Resources 436 - Natural Hazards, SIU Carbondale. 2008-2009.

Schoof JT. 20<sup>th</sup> century climate variability. Department of Geography, G475/575 Climate Change, Indiana University, Fall 2003.

Schoof JT. Synoptic climatological classification. Department of Geography, G433 Synoptic Meteorology and Climatology, Indiana University, Spring 2001.

### **Invited Seminar Presentations**

Schoof JT. Observed and GCM-simulated relationships between US wind speeds and large scale modes of climate variability, Geology Department, SIU Carbondale, Fall 2013.

Schoof JT. Quantitative Research, McNair Scholars Program, SIU Carbondale, Summer 2012.

Schoof JT. Probabilistic downscaling of 21<sup>st</sup> century precipitation occurrence and intensity. Illinois State Water Survey Center for Atmospheric Science, Champaign, IL, December 2009.

Schoof JT. Using statistical precipitation models to study historical and projected climate change. Indiana University Department of Geography colloquium. September, 2008.

Schoof JT. Recent climate change: Are we approaching a tipping point? Keynote address for "The Cascading Effects of Global Warming", a forum organized by the Jackson County League of Women Voters and the United Nations Association of Southern Illinois, September 2008.

Schoof JT. Dynamically and statistically downscaled seasonal temperature and precipitation hindcast ensembles for the southeastern USA. St. Louis University, Department of Earth and Atmospheric Sciences, April 2008.

Schoof JT. Changes in the length of the frost-free season in the Midwestern USA from historical records and climate model projections. SIU Center for Ecology, SIU Carbondale, April 2008.

Schoof JT. Climate Modeling. Symposium titled "Changing climates: Evidence of long term trends and their social consequences. Sponsored by the Center for Delta Studies, Southern Illinois University, Carbondale, February 2008.

Schoof JT. Climate projections for the Midwest. The Center for Ocean-Atmospheric Prediction Studies (COAPS), Florida State University, October 2004.

Schoof JT. Climate projections for the Midwest. Department of Geography Colloquium, Indiana University, October 2004.

Schoof JT. 21<sup>st</sup> Century Climate Projections. Dean's Advisory Board, Indiana University, September 2004.

### <u>Invited Service Presentations</u>

Schoof JT. Global and Regional Climate Change Science. Lecture honoring David Christensen, Varsity Theater, Carbondale, January 2015.

Schoof JT. Panel Member, Illinois News Broadcasters Association (INBA) panel on severe weather, Rent One Park, Marion, IL, October 2014.

Schoof JT. Weather and Climate. University of Illinois Master Naturalist course, Crab Orchard Wildlife Refuge Visitors Center, March 2014.

Schoof JT. Global Climate Change. SIU Carbondale Fossil Fuel Divestment Movement presentation, December 2013.

Schoof JT. Twenty-First Century Climate Risks for the Midwestern USA. Sierra Club, Shawnee Group, January 2013.

Schoof JT. Drought and the Mississippi River, National Public Radio (NPR) On Point with Tom Ashbrook, January 2013.

Schoof JT. Understanding Regional Climate Change Projections, Science Café, Science Center of Southern Illinois, November 2012. A WSIU radio interview with Jennifer Fuller was also conducted as part of the Science Café series.

Schoof JT. Global Warming. Rotary Club of Carbondale, April 2008.

Schoof JT. Technology and Science. Project Next Generation, Carbondale Public Library, Carbondale, IL, 2007.

Schoof JT. Climate Change. Girl Scouts of America, Carbondale, IL, 2006.

### I. Mentoring

Mentor, McNair Scholars Program, Advisee: Mercedes Gomez, Summer 2012.

Internship Mentor (Emma Bialecki): Illinois Department of Natural Resources, Summer 2007.

Undergraduate Research Assistantship (Justin Hassler): Visualization of 20<sup>th</sup> Century Climate Variations, Fall 2006, Spring 2007.

Undergraduate Research Assistantship (Brett Murphy): Development of a Stochastic Weather Generator for Heat Stress, Spring 2009.

### J. Current Graduate Students

- a. PhD Students
  - Yao Xue (ER&P, chair)
  - Kerry McLeran (ER&P, IGERT, chair)
  - Mukesh Bhattarai (ER&P, committee member)
  - Santosh Rijal (ER&P, committee member)
  - Anastasia Kymanidou (Geosciences, committee member)
  - Minzi Wang (ER&P, committee member)
- b. MS Students
  - Khara Lukancic (chair)
  - Mercedes Gomez (chair)
  - Kelsey Lyons (chair)
  - Molly Hacker (committee member, Plant Biology)

### VII. UNIVERSITY SERVICE

### A. DEPARTMENTAL SERVICE

2014-2015	Undergraduate Program Director, Department of Geography &
	Environmental Resources, SIU Carbondale
2009-	Curriculum Committee, Department of Geography &
	Environmental Resources, SIU Carbondale
2006-2012	Undergraduate Program Director, Department of Geography &
	Environmental Resources, SIU Carbondale

### B. COLLEGE AND UNIVERSITY SERVICE

College of Liberal Arts, Budget and Planning Committee
Member, Bargaining Team for GAU contract negotiation
Chair, Task Force on Hydrology, SIU Carbondale
Chair, College of Liberal Arts (CoLA) Council, SIU Carbondale
Tuition-on-grants Committee
University-Level Teaching Excellence Award Committee
College of Liberal Arts, Budget and Planning Committee
Chairperson, Communications and Outreach Committee, College
of Liberal Arts (CoLA) Council, SIU Carbondale
Member, College of Liberal Arts (CoLA) Council, SIU Carbondale
Member, College of Liberal Arts (CoLA) Council, SIU Carbondale
Executive Board Member of the Indiana University Commission
on Multicultural Understanding (COMU); Co-Convener for the
Faculty and Staff Policy Issues Committee

### VIII. PROFESSIONAL SERVICE

### A. MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS

American Geophysical Union (AGU) American Meteorological Society (AMS) Association of American Geographers (AAG) Sigma Xi (Secretary of SIU Chapter)

# B. OFFICES HELD AND HONORS AWARDED IN PROFESSIONAL ASSOCIATIONS

American Meteorological Society (AMS) Committee of Judges of Undergraduate Awards (2011-current)

Consortium of Universities for the Advancement of Hydrologic Science (CUAHSI), SIU representative.

### C. CONSULTANTSHIPS

None at this time.

# D. EVALUATION OF MANUSCRIPTS FOR JOURNALS AND BOOK PUBLISHERS AND OF GRANT PROPOSALS FOR AGENCIES

**Book Reviews:** 

Cambridge (prospectus review): 1 review (2013) Southern Illinois University Press: 1 review (2013)

Prentice Hall (textbook): 1 review (2010). Brooks/Cole (textbook): 1 review (2008).

John Wiley & Sons (textbooks): 2 reviews (2007, 2008).

### Manuscript Reviews:

Agricultural and Forest Meteorology: 1 review (2008)

Applied Geography: 2 reviews (2013, 2015)

Atmosphere-Ocean: 4 reviews (2010, 2012, 2013 (2))

Climate Research: 8 reviews (2005, 2008, 2011(2), 2012, 2013(2), 2014)

*Climatic Change*: 3 reviews (2010, 2012, 2014)

Environmental and Ecological Statistics: 1 review (2010)

Environmental Monitoring and Assessment: 1 review (2009)

Geography Compass: 2 reviews (2007, 2015)

Geophysical Research Letters: 2 reviews (2005, 2013)

International Journal of Climatology: 15 reviews (2005, 2006, 2007, 2008(2),

2009(2), 2010(2), 2011, 2012 (2), 2013, 2014 (2))

*Inverse Problems in Science and Engineering*: 1 review (2011)

*Journal of Applied Meteorology and Climatology*: 4 reviews (2008, 2010, 2013, 2015)

Journal of Atmospheric and Oceanic Technology: 1 review (2013)

Journal of Climate: 2 reviews (2005, 2011)

Journal of Climatology: 1 review (2013)

Journal of Environmental Management: 1 review (2007)

Journal of Geophysical Research – Atmospheres: 13 reviews (2010(4), 2011(4), 2012 (2), 2013 (3))

Journal of Hydrology: 4 reviews (2012, 2013(3))

Journal of the American Water Resources Association: 3 reviews (2008, 2010, 2012)

Neural Computing and Applications: 1 review (2012)

Physical Geography: 3 reviews (2010, 2013, 2014)

Polish Journal of Environmental Studies: 1 review (2009)

Scientific Research and Essays: 1 review (2013) Southeastern Geographer: 2 reviews (2007, 2009) Weather and Climate Extremes: 1 review (2015)

Wind Energy: 1 review (2007)

### Proposal Reviews:

National Science Foundation, Panel Review: 2012 NOAA Climate Program Office (CPO): 1 review (2009)

USGS Maine Water Resources Institute Program Grants: 1 review (2009)

National Science Foundation ad-hoc reviews: 6 reviews (2007, 2011 (2), 2012 (2),

2014)

Czech Science Foundation: 1 review (2005) Estonian Science Foundation: 1 review (2011)

### E. PAPERS AND PRESENTATIONS AT PROFESSIONAL MEETINGS (see IV F)

### IX. COMMUNITY SERVICE

2014	Judge, Sigma Xi Poster Competition, SIU Carbondale
2013	Judge, Southern Illinois Junior Academy of Science Region 8 Science Fair
2012	Judge, Sigma Xi Poster Competition, SIU Carbondale
2010	Judge, Southern Illinois Junior Academy of Science Region 8 Science Fair
2009	Judge, Southern Illinois Junior Academy of Science Region 8 Science Fair
2007	Judge, Southern Illinois Junior Academy of Science Region 8 Science Fair