**Erin G. (Wilkerson) Webb, Ph.D., P.E.**

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**Research interests**

Develop technologies and systems to produce, harvest, store, process, and transport biomass for conversion to biofuels and biomaterials; build and apply simulation tools to design biomass supply chains that are cost-effective, sustainable, and safe

**Professional Experience**

**Oak Ridge National Laboratory, Environmental Sciences Division, 2007 – present**

**Group Leader, Bioresource Science & Engineering Group, 2020 – present**

Lead strategic visioning and implementation of R&D to develop and apply quantitative tools to advance our understanding of how bioresources can be sustainably and reliably produced, delivered, and utilized to expand the US bioeconomy while also preserving ecosystem services. Supervise and mentor research and business staff members within in group.

**Team Lead, Bioenergy Resource & Engineering Systems Team, Renewable Energy Systems Group, 2018 – 2020**

Supervise and mentor R&D staff members, postdocs and graduate students, and subcontractors. Contribute to ORNL bioenergy program strategic planning activities.

**R&D Senior Staff, 2016-present**

**R&D Staff, 2012 – 2015**

**R&D Associate Staff, 2007 – 2012**

Principal investigator for multiple projects sponsored by the Department of Energy Bioenergy Technologies Office (BETO) and Office of Science focused on simulation and analysis of supply chains to deliver biomass as a feedstock for production of biofuels and biomaterials, reducing risk in biomass supply chains, and development of biomaterials for large-scale additive manufacturing. Serve as lead of the Center for Bioenergy Innovation (CBI) Economics and Sustainability Team (2020-present) and co-lead of the Crosscutting Analysis Team for the BETO Feedstock-Conversion Interface Consortium (2019-preset).

**Univ. of Tennessee, Joint Associate Professor, Biosystems Engineering & Soil Science, 2016 – present**

**Univ. of Kentucky, Adjunct Professor, Biosystems & Agricultural Engineering, 2007-2016**

Served on graduate research committees, contributed to proposal development, and mentored undergraduates in summer research experiences

**Department of Energy, Technical Detailee, Bioenergy Technologies Office, 2008 – 2009**

M&O contractor supporting DOE BETO staff by coordinating preparation of the Biomass Research & Development Board’s Feedstock Logistics Interagency Working Group technical report *Biofuel Feedstock Logistics: Recommendations for Research and Commercialization* and by organizing the 2009 BETO feedstocks platform peer review sessions.

**Univ. of Kentucky, Assistant Extension Professor, Biosystems & Agricultural Engineering, 2005 – 2007**

Led applied research and extension programs for hay storage and livestock handling

**Univ. of Florida, Graduate Research Fellow, Agricultural and Biological Engineering, 2002 – 2005**

**Univ. of Kentucky, Graduate Research Fellow, Biosystems & Agricultural Engineering, 2000 – 2002**

Conducted research projects aimed at developing models of poinsettia root development for controlling mist propagation systems (MS, University of Kentucky, NSF fellowship) and experiments and modeling to determine plant evapotranspiration responses in a low-pressure Mars greenhouse environment (PhD, University of Florida, NSF and NASA fellowships)

**Education**

#### Ph.D., Agricultural and Biological Engineering, University of Florida, 2005

#### M.S., Biosystems and Agricultural Engineering, University of Kentucky, 2002

#### B.S., Agricultural Engineering, Summa Cum Laude, University of Tennessee, 1999

**Professional Licensure**

Professional Engineer, 2007 - present

**Honors and Awards**

* ORNL Environmental Sciences Division Science Serving Society Award, 2017
* ASABE Presidential Citation, 2009
* Outstanding Dissertation, University of Florida Agricultural and Biological Engineering, 2005
* NASA Graduate Student Researchers Program Fellowship, 2003 - 2005
* National Science Foundation Graduate Research Fellowship, 2000 - 2003
* University of Kentucky Gamma Sigma Delta Outstanding M.S. Student, 2001
* AGCO Student Design Competition – Finalist team, 1999
* University of Tennessee Agricultural Engineering Undergraduate with Professional Promise, 1999
* University of Tennessee College of Agricultural Sciences and Natural Resources Outstanding Junior, 1998; Outstanding Senior, 1999
* ASAE Student Honor Award, 1999

**Professional societies and activities**

* American Society of Agricultural and Biological Engineers (ASABE)
	+ Board of Trustees (elected by membership), 2019-2022
	+ *Resource* Magazine, Editorial Committee, 2019 – present; Secretary/Vice Chair, 2019-2021
	+ Boyd-Scott Graduate Student Research Competition Committee, Chair, 2019-present
	+ Professional Engineers Institute
	+ Nominating Committee, 2011-2013
	+ Bioenergy Engineering Conference Planning Committee, 2009
	+ T-11: Energy Committee, 2008-present; Vice-Chair, 2008; Chair, 2009-2010
	+ FPE-709: Biomass Energy & Industrial Products Committee, 2007 - present
	+ M-164: Preprofessional Engineer of the Year Committee, 2008-present; Chair, 2008; Vice-Chair 2009
* Auburn University Biosystems Engineering Department Advisory Council, 2019-present
* AIChE, 2017 - present
* ORNL Postgraduate Program Advisory Committee, EESD representative, 2017-present
* ORNL Women in Science & Engineering committee (WiSE), 2017-present
* University of Tennessee Institute of Agriculture Advisory Council, 2014 – present
* ORNL Energy and Environmental Sciences Division Director’s Roundtable, 2014-2015
* INFORMS, 2014
* University of Kentucky Biosystems and Agricultural Engineering Advisory Council, 2010 - 2013
* ORNL Committee for Women, 2007-2008
* Sigma Xi (research)
* Tau Beta Pi (engineering)
* Gamma Sigma Delta (agriculture)

**Technical working groups**

* Biomass Research & Development Board Interagency (BRDI) Feedstock Logistics Working Group, 2008 – present; Feedstock Production & Management Working Group, 2018 - present
* Biomass Industry Panel on Codes and Standards, Co-chair, 2014 - 2017
* Southeastern Partnership for Integrated Biomass Supply Systems, Switchgrass Team, 2011
* USDA Feedstock Logistics Advisory Team, 2008
* Southern Biomass Transportation and Logistics Working Group, 2008

**Professional Development**

* ORNL Emerging Leader Pathway, 2019-2020; Learning at the Speed of Trust course (2019); Decision Making and Delegation course (2019)
* Situational Leadership course, 2015
* ORNL Mentoring Program, Protégé, 2011
* Project Management Foundation Skills, 2011

**Publications**

1. Oyedeji O, Langholtz M, Hellwinckel C, Webb EG. Supply analysis of preferential market incentive for energy crops. *Biofuels, Bioproducts & Biorefining*. (Submitted)
2. Renee M. Happs, Andrew W. Bartling, Crissa Doeppke, Anne E. Ware, Robin Clark, Erin G. Webb, Mary Biddy, Jin-Gui Chen, Gerald A. Tuskan, Mark F. Davis, Wellington Muchero, and Brian H. Davison. “Economic Impact of Yield and Composition Variation in Bioenergy Crops: Populus trichocarpa”. *Biofuels, Bioproduct, Biorefining* (in press)
3. Grisso, R.; Cundiff, J.S.; Webb, E.G. Predicting Field Efficiency of Round-Baling Operations in High-Yielding Biomass Crops. AgriEngineering 2020, 2, 447-457
4. Zhao X, Li K, Wang Y,Tekinalp H, Larsen G, Rasmussen D, Ginder R, Wang L, Gardner DJ, Tajvidi M, Webb EG, Ozcan, S. High-strength polylactic acid (PLA) biocomposites reinforced by epoxy-modified pine fibers. *ACS Sustainable Chemistry & Engineering* (available online: DOI: 10.1021/acssuschemeng.0c03463).
5. Zhao, X., Li, K., Wang, Y., Tekinalp, H.; Richard, A., Webb, E. and Ozcan, S. (2020) Bio-treatment of poplar via amino acid for interface control in biocomposites. *Composites Part B* 199.
6. Yan, J., Oyedeji, O., Leal, J.H., Donohoe, B.S., Semelsberger, T.A., Li, C., Hoover, A.N., Webb, E., Bose, E., Zeng, Y. and Williams, C.L. et al. (2020) Characterizing variability in lignocellulosic biomass-A review. *ACS Sustainable Chemistry & Engineering* 8, 8059−8085.
7. Oyedeji O; Gitman P; Qu J; Webb E (2020). Understanding the impact of lignocellulosic Biomass variability on size reduction process – A review. *ACS Sustainable Chemistry & Engineering* 8(6): 2327-2343.
8. Zhao X, Li K, Wang Y,Tekinalp H, Larsen G, Rasmussen D, Ginder R, Wang L, Gardner DJ, Tajvidi M, Webb EG, Ozcan, S. High-strength polylactic acid (PLA) biocomposites reinforced by epoxy-modified pine fibers. *ACS Sustainable Chemistry & Engineering*. DOI: 10.1021/acssuschemeng.0c03463.
9. Sharma B, Brandt C, McCullough-Amal D, Langholtz M, Webb E (2020). Assessment of feedstock supply scenarios for single- and multiple-feedstock biorefineries siting in the U.S. and identification of prevalent feedstock mixes. *Bioproducts, Biofuels, & Biorefining.*
10. Xianhui Zhao, Halil Tekinalp, Xianzhi Meng, Darby Ker, Bowie Benson, Yunqiao Pu, Arthur J. Ragauskas, Yu Wang, Kai Li, Erin Webb, Douglas J. Gardner, James Anderson, and Soydan Ozcan (2019). *ACS Applied Bio Materials* 2 (10), 4557-4570. DOI: 10.1021/acsabm.9b00675
11. Kooduvalli, Komal, Bhavna Sharma, Erin Webb, Uday Vaidya, and Soydan Ozcan (2019). “Sustainability Indicators for Biobased Product Manufacturing: A Systematic Review.” *Journal of Sustainable Development* 12 (1): p55. <https://doi.org/10.5539/jsd.v12n1p55>
12. Ilic, Dusan, Kenneth Williams, Richard Farnish, Erin Webb, and Gary Liu (2018). On the challenges facing the handling of solid biomass feedstocks. *Biofuels Bioprod. Biorefining* 12, 187–202.
13. Ebadian, Mahmood, Magen Shedden, Erin Webb, Shahab Sokhansanj, Mark Eisenbies, Timothy Volk, Justin Heavey, and Karl Hallen (2018). Impact of Parcel Size, Field Shape, Crop Yield, Storage Location, and Collection Equipment on the Performance of Single-Pass Cut-and-Chip Harvest System in Commercial Shrub Willow Fields. *BioEnergy Research* <https://doi.org/10.1007/s12155-018-9902-7>
14. Wang, Yu, Mahmood Ebadian, Shahab Sokhansanj, Erin Webb, Hisham Zerriffi, and Anthony Lau (2018). A Novel Risk Analysis Methodology to Evaluate the Economic Performance of a Biorefinery and to Quantify the Economic Incentives for Participating Biomass Producers. *Biofuels, Bioproducts and Biorefining*, 12(3): 453-473 <https://doi.org/10.1002/bbb.1862>
15. Webb, Erin, Robert Chambers, and Keith Webster (2018). Addressing Fire Risk in Biomass Storage. *Resource Magazine* 25(4):4-7.
16. Sharma, Bhavna, Robin Clark, Michael R. Hilliard, and Erin Webb (2018). Simulation Modeling for Reliable Biomass Supply Chain Design under Operational Disruptions. *Frontiers in Energy Research* 6 <https://doi.org/10.3389/fenrg.2018.00100>
17. Oyedeji, O., S. Sokhansanj, and E. Webb. 2017. Spatial Analysis of Stover Moisture Content During Harvest Season in the United States. *Transactions of the ASABE* (in press).
18. Chavez, H., K. K. Castillo-Villar, and E. Webb. 2017. Development of the IBSAL-SimMOpt Method for the Optimization of Quality in a Corn Stover Supply Chain. *Energies* 10:1137.
19. Wang, Y., M. Ebadian, E. Webb, and S. Sokhansanj. 2017. Impact of the biorefinery size on the logistics of corn stover supply - a scenario analysis. *Applied Energy* 198:360-376.
20. Hosseinizanda, H., C. J. Lim, E. Webb, S. Sokhansanj. 2017. Economic analysis of drying microalgae Chlorella in a conveyor belt dryer with recycled heat from a power plant. *Applied Thermal Engineering* 124: 525-532
21. Ebadian, M., S. Sokhansanj, and E. Webb. 2017. Estimating the required logistical resources to support the development of a sustainable corn stover bioeconomy in the USA. *Biofuels, Bioproducts, and Biorefining* 11:129-149
22. U.S. Department of Energy. 2016. 2016 Billion-Ton Report: Advancing Domestic Resources for a Thriving Bioeconomy, Volume 1: Economic Availability of Feedstocks. M. H. Langholtz, B. J. Stokes, and L. M. Eaton (Leads), ORNL/TM-2016/160. Oak Ridge National Laboratory, Oak Ridge, TN. 448p. *{Lead author for Chapter 6 – To the Biorefinery: Delivered Forestland and Agricultural Resources}*
23. Castillo-Villar, K. K, H. Minor-Popocatl, and E. Webb. 2016. Quantifying the Impact of Feedstock Quality on the Design of Bioenergy Supply Chain Networks. *Energies* 9(3):203.
24. Sokhansanj, S., E. G. Webb, and A. T. Turhollow. 2016. Evaluating industrial drying of cellulosic feedstock for bioenergy: a systems approach. *Biofuels, Bioproducts, and Biorefining* 10(1): 47-55.
25. Webb, E., M. Hilliard, C. Brandt, S. Sokhansanj, L. Eaton, and M. Martinez Gonzalez. 2014. *Spatial Analysis of Depots for Advanced Biomass Processing.* ORNL/TM-2014/503.
26. Sokhansanj, S. and E. Webb. 2014. *Investigating Options to Reduce the Logistical Cost of Microalgae Feedstock for Biofuels and Bioproducts.* ORNL/TM-2014/463.
27. Sokhansanj, S., A. Turhollow, and E. Webb. 2014. *Simulation of the DOE High-Tonnage Logistics Projects: Auburn University.* ORNL/TM-2014/505.
28. Sokhansanj, S., E. G. Webb, and A. Turhollow. 2014. *Evaluating industrial drying of cellulosic feedstocks for bioenergy – A systems approach*. ORNL/TM – 2014/165.
29. Davison, B. H., C. C. Brandt, A. M. Guss, U. C. Kalluri, A. V. Palumbo, and E. G. Webb with R. Stouder. 2014. *Report on Impact of Biotechnology on US Bioenergy*.
30. Webb, E. G. and S. Sokhansanj. 2014. *Sensitivity Analysis of Biomass High-Tonnage Logistics Projects*. Oak Ridge National Laboratory. ORNL/TM-2013/568.
31. Lautala, P. T., M. R. Hilliard, E. G. Webb, I. Busch, J. R. Hess, M. S. Roni, J. Hilbert, R. M. Handler, R. Bittencourt, A. Valente, and T. Laitinen. 2015. Opportunities and Challenges in the Design and Analysis of Biomass Supply Chains. *Environmental Management* 56(6):1397-415.
32. Davison, B. H., C. C. Brandt, A. M. Guss, U. C. Kalluri, A. V. Palumbo, R. L. Stouder, and E. G. Webb. 2015. The impact of biotechnological advances on the future of U. S. Bioenergy. *Biofuels, Bioproducts, and Biorefining* 9(5):454-467.
33. Langholtz, M., E. Webb, B. L. Preston, A. Turhollow, N. Breuer, L. Eaton, A. King, S. Sokhansanj, S. S. Nair, and M. E. Downing. 2014. Advancing Climate Risk Management for the U.S. Cellulosic Biofuels Supply Chain. *Climate Risk Management* 3: 96-115.
34. Webb, E. G., S. Sokhansanj, and A. Turhollow. 2013. *Simulation of the DOE High-Tonnage Biomass Logistics Demonstration Projects: AGCO Corporation*. Oak Ridge National Laboratory. ORNL/TM-2013/323*.*
35. Webb, E. G., S. Sokhansanj, and A. Turhollow. 2013. *Simulation of the DOE High-Tonnage Biomass Logistics Demonstration Projects: FDC Enterprises*. Oak Ridge National Laboratory. ORNL/TM-2013/338*.*
36. Webb, E. G., S. Sokhansanj, and A. Turhollow. 2013. *Simulation of the DOE High-Tonnage Biomass Logistics Demonstration Projects: TennEra LLC*. Oak Ridge National Laboratory. ORNL/TM-2013/375.
37. Webb, E. G., S. Sokhansanj, and A. Turhollow. 2013. *Simulation of the DOE High-Tonnage Biomass Logistics Demonstration Projects: SUNY*. Oak Ridge National Laboratory. ORNL/TM-2013/376.
38. Grisso, R. D. and E. G. Webb. 2012. *Determining Available Work Days for Biomass Logistics Systems: Proposed Method*. Oak Ridge National Laboratory. ORNL/TM-2012/260 (*in review*).
39. Webb, E. G. and Y. Wu. 2012. *A case study of agricultural residue availability and cost for a cellulosic ethanol conversion facility in the Henan province of China*. Oak Ridge National Laboratory. ORNL/TM-2011/534.
40. Webb, E., M. Langholtz, E. Barnett, K. Caffrey, M. W. Brummette, M. Downing. 2011. *Utilizing resources of the Oak Ridge Reservation to promote forest health and supply wood chips to the ORNL biomass steam plant*. Oak Ridge National Laboratory. ORNL/TM-2011/525.
41. Langholtz, M., K. Caffrey, E. Barnett, E. Webb, M. W. Brummette, M. Downing. 2011. *Demonstration of the BioBaler harvesting system for collection of small-diameter woody biomass*. Oak Ridge National Laboratory. ORNL/TM-2011/524.
42. Fulcher, A., et al. 2011 "Controlled Environment Technology and Use-Using Transpiration Chambers to Detect Initial Transpiration in Cuttings and Quantify Transpiration in Seedlings." Acta Horticulturae 893: 1037.
43. Turhollow, A. F., E. G. Webb, and M. Downing. 2010. *Review of Sorghum Production Practices: Applications for Bioenergy*. Oak Ridge National Laboratory. ORNL/TM-2010/7.
44. Turhollow, A. F., E. G. Wilkerson, and S. Sokhansanj. 2009. *Cost Methodology for Biomass Feedstocks: Herbaceous Crops and Agricultural Residues*. Oak Ridge National Laboratory. ORNL/TM-2008/105.
45. Wilkerson, E. G. and R. D. Perlack. 2008. Chapter 3 – Resource Assessment, Economics and Technology for Collection and Harvesting. In *Renewable Energy from Forest Resources of the United States*. B. Soloman and V. Luzadis, ed.
46. Gunderson, C. A., E. B. Davis, H. I. Jager, T. O. West, R. D. Perlack, C. C. Brandt, S. D. Wullschleger, L. M. Baskaran, E. G. Wilkerson, and M. E. Downing, 2008. Exploring Potential U. S. Switchgrass Production for Lignocellulosic Ethanol. Oak Ridge National Laboratory, ORNL/TM-2007-183.
47. S. Sokhansanj, A. F. Turhollow, and E. G. Wilkerson. 2008. *Development of the Integrated Biomass Supply Analysis and Logistics (IBSAL) Model*. Oak Ridge National Laboratory, ORNL/TM-2006/57.
48. Wilkerson, E. G., D. B. Blackwelder, R. D. Perlack, D. J. Muth, and J. R. Hess. 2008. *A preliminary assessment of the state of harvest and collection technology for forest residues*. Oak Ridge National Laboratory, ORNL/TM-2007/195.
49. Wilkerson, E. G., R. A. Bucklin, P. A. Fowler, and V. Y. Rygalov. 2007. Convective Heat Transfer of Radish Leaves in Hypobaric Conditions. *Transactions of the ASABE* 50(3): 981-991.
50. Wilkerson, E. G., R. A. Bucklin, and P. A. Fowler. 2007. Development of Small-Scale Hypobaric Plant Chambers. *Applied Engineering in Agriculture* 23(4): 531-537.
51. Wilkerson, E.G., R. S. Gates, S. Zolnier, S. T. Kester, and R. L. Geneve. 2005. Transpiration Capacity in Poinsettia Cuttings at Different Rooting Stages and the Development of a Cutting Coefficient for Scheduling Mist. *Journal of the American Society for Horticultural Science* 130(3):295-301.
52. Wilkerson, E.G., R.S. Gates, S. Zolnier, S.T. Kester, and R.L. Geneve. 2005. Predicting rooting stages in poinsettia cuttings using a root zone temperature-based model. *Journal of the American Society for Horticultural Science* 130(3):302-307.
53. Bucklin, R. A., P. A. Fowler, V. Y. Rygalov, R. M. Wheeler, Y. Mu, I. Hublitz, E. G. Wilkerson. 2004. Greenhouse Design for the Mars Environment: Development of a Prototype, Deployable Dome. *Acta Horticulturae* 659: 127-134.
54. Geneve, R.L., R.S. Gates, S. Zolnier, E. Wilkerson, and S. T. Kester. 2004. Environmental Control Systems for Mist Propagation of Cuttings. *Acta Horticulturae* 630:297-303.
55. Wilkerson, E. G. and R. S. Gates. 2003. Controlled Environment System for Studying Root Zone Temperature Effects on Cutting Propagation. *Applied Engineering in Agriculture* 19(4): 483-489.
56. Pordesimo, L. O., E. G. Wilkerson, A. R. Womac, and C. N. Cutter. 2002.  Process Engineering Variables in the Spray Washing of Meat and Produce.  *Journal of Food Protection* 65(1): 222-237.
57. Shubin S., S. Kester, E. Wilkerson, J. Buxton and R. L. Geneve. 2001. Design of a propagation unit that independently controls atmospheric and medium moisture. *Combined Proceedings International Plant Propagator’s Society* 51:518-520.

**Presentations**

\* *First author is student or postdoc advisee, \*\*Invited*

Webb, E. 2020. Growing the Bioeconomy. *EESD Energy Talks*. August 13, 2020. (ORNL lab-wide seminar series)

\*Xianhui, Zhao, Kai Li, Yu Wang, Halil Tekinalp, Erin Webb, Soydan Ozcan. *Pine as a Biofiber Reinforcement in Composites for Additive Manufacturing.* ASABE Annual International Meeting, Virtual, July 13-16, 2020.

\*Xianhui, Zhao, Kai Li, Yu Wang, Halil Tekinalp, Erin Webb, Soydan Ozcan. *Poplar as a biofiber reinforcement in composites for 3D printing.* ASABE Annual International Meeting, Boston, MA, July 7-12, 2019.

Erin Webb, Xianhui Zhao, Soydan Ozcan, Halil Tekinalp. *Designing biomass logistics systems to supply bioderived materials and biofuels markets.* ASABE Annual International Meeting, Boston, MA, July 7-12, 2019. {poster}

Robin Clark and Erin Webb. Simulation Modeling to Evaluate Supply Chain Impacts of Poplar Genetic Improvements. CBI Annual Meeting, Asheville, NC July 9-11, 2019.

Erin Webb, Soydan Ozcan, Andy Zhao, Halil Tekinalp. 3.1.3.2 *Codes and Standards in IBR's.* DOE Bioenergy Technologies Office (BETO) 2019 Project Peer Review, Denver, CO, March 4-8, 2019. (Score = 8.9/10, avg score in session = 7.6)

Erin Webb, Soydan Ozcan, Andy Zhao, Halil Tekinalp. *2.5.6.105 Bioderived Materials for Large-Scale Additive Manufacturing.* DOE Bioenergy Technologies Office (BETO) 2019 Project Peer Review, Denver, CO, March 4-8, 2019. (Score = 7.8/10, avg score in session = 7.72)

\* Sharma, Bhavna, Robin Clark, Michael Hilliard, Erin Webb. Simulation modeling for reliable biomass supply chain design under operational disruptions. INFORMS Business Analytics Conference, Baltimore, MD, April 15-17, 2018

\*\*Webb, Erin, Robert Chambers, Magen Shedden, Keith Webster, Dan Steppan, John Pieper, Freddie DuPont. Designing corn stover bale storage yards to reduce potential fire growth and spread. 40th Symposium on Biotechnology for Fuels and Chemicals, Clearwater, FL April 28 – May 2, 2018.

Bhavna Sharma, Robin Clark, Michael Hilliard, Erin Webb. Simulation modeling for reliable biomass supply chain design under operational disruptions. ASABE Annual International Meeting, Detroit, MI July 29 – August 1, 2018.

\* Zhao, Xianhui, Erin Webb, Soydan Ozcan, Halil Tekinalp, Tim Theiss, Darby Ker. Bioderived Materials for Large-Scale Additive Manufacturing. ASABE Annual International Meeting, Detroit, MI July 29 – August 1, 2018.

Webb, Erin, Robert Chambers, Timothy Theiss, Joanna Quiah, Keith Webster. Designing corn stover bale storage yards to reduce potential fire growth and spread. ASABE Annual International Meeting, Detroit, MI July 29 – August 1, 2018.

Webb, Erin, John Field, Tom Richard, Mary Biddy, Brian Davison, Wellington Muchero, Katrien Devos, Gerald Tuskan. Technoeconomic Analysis of Biofuel Feedstock Supplies to Inform Plant Development R&D. 2018 Genomic Sciences Program Annual Principal Investigator (PI) Meeting, Tysons’s Corner, VA February 25-28, 2018.

Biddy, Mary, Erin Webb, Nicholas Grundl, Rebecca Hanes, Brian Davison, Gerald Tuskan. Agile Technoeconomic and Life Cycle Assessments at the CBI. 2018 Genomic Sciences Program Annual Principal Investigator (PI) Meeting, Tysons’s Corner, VA February 25-28, 2018.

\*Childs, J. and E. Webb. 2017. Biofiber Reinforcement in 3D printing as a Coproduct for Biofuel Feedstock Supply Chains {poster}. ASABE Annual Meeting, Spokane, WA, July 16-19, 2017.

\*Amal, D., E. Webb, C. Brandt, and L. Eaton. 2017. Modeling Biomass Supply Chain Disruptions in the US {poster}. ASABE Annual Meeting, Spokane, WA, July 16-19, 2017.

\*Shedden, M. and E. Webb. 2017. Optimized perimeter cut to improve headland space for maneuvering equipment and reduced turn time. ASABE Annual Meeting, Spokane, WA, July 16-19, 2017.

Ebadian, M., S. Sokhansanj, M. Shedden, and E. Webb. 2017. Modeling to improve harvest and collection efficiencies for willow and poplar plantations. ASABE Annual Meeting, Spokane, WA, July 16-19, 2017.

\*Sharma, B., C. Brandt, and E. Webb. 2017. Spatial multi-feedstock biomass supply chain modeling framework for the U.S. ASABE Annual Meeting, Spokane, WA, July 16-19, 2017.

\*Amal, D., E. Webb, and A. Salado. 2017. Biomass Supply Chain Risk: A Systematic Review. ASABE Annual Meeting, Spokane, WA, July 16-19, 2017.

Webb, E. Developing strategies to reduce the risk of fire spread in biomass bale storage yards. ASABE Annual Meeting, Spokane, WA, July 16-19, 2017.

\*Chavez, H., E. Webb, K.Castillo-Villar, M. Ebadian, S. Sokhansanj. 2016. Modeling cost of quality in a discrete event biomass supply chain model. IBSS Annual Meeting, Oak Ridge, TN July 27-28, 2016.

\*Fasina, O. and E. Webb. 2016. Answering Logistical Questions in the BT16 with data from the Supply Characterization Model. ASABE Annual Meeting, Orlando, FL, July 17-20, 2016.

\*Fasina, O. and E. Webb. 2016. Answering Logistical Questions in the BT16 with data from the Supply Characterization Model. IBSS Annual Meeting, Oak Ridge, TN July 27-28, 2016.

Hilliard, M., E. Webb, C. Brandt, L. Eaton, G. Gresham, E. Searcy, and S. Sokhansanj. 2016. BT16: To the Biorefinery: Estimating Delivered Costs. Bioenergy 2016, Washington, DC, July 12-13, 2016 (Invited).

McCullough-Amal, D., E. Webb, C. Brandt, T. Alland, L. Eaton. 2016. Modeling Bioenergy Industry Evolution. IBSS Annual Meeting, Oak Ridge, TN July 27-28, 2016.

\*Morris, M. and E. Webb. 2016. Modeling Fire Risk in Biomass Storage Yards. ASABE Annual Meeting, Orlando, FL, July 17-20, 2016.

\*Morris, M. and E. Webb. 2016. Modeling Fire Risk in Biomass Storage Yards. IBSS Annual Meeting, Oak Ridge, TN July 27-28, 2016.

\*Oyedeji, O., S. Sokhansanj, and E. Webb. 2016. Spatial Analysis of Stover Moisture Content During Harvest Season in the United States. ASABE Annual Meeting, Orlando, FL, July 17-20, 2016.

Steppan, D. L. and E. G. Webb. 2016. Biomass Commodity Classification Testing. 2016 NFPA SupDet (Suppression and Detection) Symposium, San Antonio, TX. Presentations are available at: http://www.nfpa.org/2016supdetpapers

\*Ruggeri V., M. Hilliard, E. Webb. 2016. Illustrating Logistical Cost of BioEnergy Feedstocks using Tableau and the Supply Characterization Model. Modeling Bioenergy Industry Evolution. ASABE Annual Meeting, Orlando, FL, July 17-20, 2016.

\*Ruggeri V., M. Hilliard, E. Webb. 2016. Illustrating Logistical Cost of BioEnergy Feedstocks using Tableau and the Supply Characterization Model. Modeling Bioenergy Industry Evolution. IBSS Annual Meeting, Oak Ridge, TN July 27-28, 2016.

\*\*Webb, E. 2016. Addressing biomass fire risk. Industry Outlook into BioMass and Overcoming the Handling Difficulties. International Powder & Bulk Solids Conference, May 3-5, 2016 .

\*\*Webb, E., M. Hilliard, C. Brandt, L. Eaton, G. Gresham, E. Searcy, and S. Sokhansanj. 2016. BT16: To the Biorefinery Delivered Cost Scenarios. ASABE Annual Meeting, Orlando, FL, July 17-20, 2016.

\*\*Webb, E., M. Hilliard, A. Myers, L. Eaton, M. Langholtz. 2016. Interactive BT16 Bioenergy Knowledge Discovery Framework. ASABE Annual Meeting, Orlando, FL, July 17-20, 2016.

Webb, E. G. 2015. Addressing fire risk in biomass handling and storage. *American Society of Agricultural and Biological Engineers Annual International Meeting*, New Orleans, LA.

\*Oluwafemi, O., E.G. Webb, and S. Sokhansanj. 2015. Simulating Field Drying of Corn Stover across the US (poster). *American Society of Agricultural and Biological Engineers Annual International Meeting*, New Orleans, LA.

\*Shedden, M., L. Stewart, E.G. Webb, N.Labbe, T. Rials. 2015. Optimized Stacking of Large Square Bales for In-stack Drying of Switchgrass (poster). *American Society of Agricultural and Biological Engineers Annual International Meeting*, New Orleans, LA.

Webb, E. G. 2015. Addressing fire risk in biomass handling and storage. *American Society of Agricultural and Biological Engineers Annual International Meeting*, New Orleans, LA.

Webb, E.G. 2014. Biomass Industry Panel on Codes and Standards: Mission and organization. BIPCS Working Meeting, Washington DC.

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\*Amaral, M.F.P., R.S. Gates, E.G. Wilkerson, D.G. Overhults, I.F.F. Tinoco, H. Li, R.T. Burns, H. Xin, and J.W. Earnest. 2007. Comparison between two systems for ammonia emission monitoring in broiler houses. *Proceedings of the* *International Symposium on Air Quality and Waste Management for Agriculture*. Broomfield, Colorado, USA.

\*Day, D. L., S. G. McNeill, and E. G. Wilkerson. 2007. Assessment of Safety in Cattle Handling Facilities on Kentucky Farms. *American Society of Agricultural and Biological Engineers Annual International Meeting*, Minneapolis, Minnesota.

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Wilkerson, E.G., R. A. Bucklin, P. A. Fowler, and R. M. Wheeler. 2005. Plant Evapotranspiration in a Greenhouse on Mars. *American Society of Agricultural Engineers Annual International Meeting*, Tampa, Florida.

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Wilkerson, E.G., R. L. Geneve, S. Kester, and R. S. Gates. 2002. Measuring and Quantifying the Root Generation Process Using Rapid Sectioning and Imaging Technologies. *Society of Agricultural Engineers Annual International Meeting*, Chicago, Illinois.

Wilkerson, E.G., R. S. Gates, and R. L. Geneve. 2002. Effects of Root Zone Temperature on Root Development and Water Uptake During Poinsettia Propagation. *Society of Agricultural Engineers Annual International Meeting*, Chicago, Illinois.

Colliver, D. G., R. S. Gates, and E. G. Wilkerson. 2002. Selection of Appropriate Design Weather Conditions for Sizing Evaporative Cooling Systems. ASAE Paper No. 024038. *Society of Agricultural Engineers Annual International Meeting*, Chicago, Illinois.

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Wilkerson, E. G., R. L. Geneve, and R. S. Gates. 2000. Image Analysis for Indication of Seed Germination. *Society of Agricultural Engineers Annual International Meeting,* Milwaukee, Wisconsin.

**Extension Presentations and publications**

* Shedden, M., E. Webb, and K. Goddard. 2013. Producing Switchgrass for Bioenergy – Baling with Twine vs. Net Wrap. UT Extension Publication W 298. Knoxville, TN: University of Tennessee.
* Wilkerson, E. G. 2007. *Planning and Building Hay Barns that Work*. Tennessee Nutrition Conference. Franklin, Tennessee.
* Wilkerson, E. G. 2007. *Buildings and Facilities for Beef Farms*. 2007 KY Advanced Master Cattleman.
* Wilkerson, E. G. 2006. *Diagnosing Stray Voltage Problems in Dairies*. Stray Voltage Awareness Workshop. Bowling Green, Kentucky.
* Bucklin, R. A., J. D. Leary, D. B. McConnell, and E. G. Wilkerson. 2004. *Fan and Pad Greenhouse Evaporative Cooling Systems*. Gainesville, Florida: University of Florida IFAS Extension.

**advising**

* Haley Stauffer, Pennsylvania State University MS Student, 2019 - present
* Bhavna Sharma, Postdoctoral Researcher, 2017-2018
* Devita Amal, Virginia Tech Ph.D. Student, 2016-2018
* Joanna Quiah, Higher Education Research Experience, Summer 2018
* Luke Martin, Science Undergraduate Laboratory Internship, Summer 2018
* Magen Shedden, University of Tennessee M.S. Student, 2016-2018
* Jake Childs, Science Undergraduate Lab Internship, Summer 2017; Higher Education Research Experience, Fall 2017
* Hernan Chavez, University of Texas at San Antonio, Ph.D. awarded in May 2017
* Mackenize Morris, Science Undergraduate Laboratory Internship, Summer 2016
* Vincent Ruggeri, IBSS South East Energy Development Fellowship, Summer 2016
* Dami Fasina, IBSS South East Energy Development Fellowship, Summer 2016
* Oluwafemi Oyedeji, Advanced Short-Term Research Opportunity, 2015
* Johnson Luma, Science Undergraduate Laboratory Internship, Summer 2015
* Steven Gail, Higher Education Research Experience, Summer 2015
* Kirk Copley, IBSS South East Energy Development Fellowship, Summer 2015
* Eric Vogt, IBSS South East Energy Development Fellowship, Summer 2015
* Emma Tobin (co-advised), IBSS South East Energy Development Fellowship, Summer 2015
* Justine Barry, Science Undergraduate Laboratory Internship, Summer 2014
* Thomas Loxley, Higher Education Research Experience, Summer 2014
* Steven Gail, Higher Education Research Experience, Summer 2014
* Taylor Trippe, Higher Education Research Experience, Summer 2014
* Magen Shedden, Higher Education Research Experience, Summer 2014
* Magen Shedden, Higher Education Research Experience, Summer 2013
* Magen Shedden, Southeast Partnership for Integrated Biomass Supply Systems, 2012-2013
* Robert Grisso, HERE Faculty Appointment (sabbatical from Virginia Tech), 2012
* Yun Wu, Post-Master’s appointment, 2010-2011
* M. Wesley Brummette, Higher Education Research Experience, 2011
* Sara Ivy, Tennessee Governor’s Academy Internship, 2010-2011
* Kevin Caffrey, Advanced Short-Term Research Opportunity, 2010
* Jamie R. Marsh, advisory committee, M.S. in Biosystems and Agricultural Engineering, University of Kentucky, completed August 2008

**Courses taught**

* *BAE 581:* *Physics of Plant and Animal Environments*, Spring 2007, Biosystems and Agricultural Engineering, University of Kentucky
* *BAE 427:* *Structures and Environment Design*, Fall 2001, Spring 2006, Spring 2007, Biosystems and Agricultural Engineering, University of Kentucky
* *AOM 4642:* *Structures and Environment*, Fall 2003, Agricultural Operations Management, University of Florida