

CURRICULUM VITA (abbr)
G. PHILIP ROBERTSON

University Distinguished Professor
W.K. Kellogg Biological Station and
Dept. of Plant, Soil, and Microbial Sciences
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Education

1976 B. A. Hampshire College, Amherst, Massachusetts
1980 Ph.D. Biology (Ecology & Evolutionary Biology), Indiana University

Professional Experience

1985-now Assistant, Associate, Professor, and University Distinguished Professor, Dept. of Plant, Soil, and Microbial Sciences and W.K. Kellogg Biological Station, Michigan State University
1981-1985 Postdoctoral Research Associate, Dept. of Crop and Soil Sciences and Dept. of Microbiology and Public Health, Michigan State University
1980-1981 SCOPE-Mellon Postdoctoral Fellow, UNEP International Nitrogen Unit, Royal Swedish Academy of Sciences, Stockholm

Professional Honors and Affiliations

Fellow, Ecological Society of America (2024)
LTAR Founders Award, USDA Agricultural Research Service (2022)
Clarivate highly cited researcher (from 2018)
Fellow, AAAS (2015)
MSU Distinguished Faculty Award (2005)
Fellow, Soil Science Society of America (2003)
GW Leeper Lecture, Australia Soil Science, Melbourne (2018)
Philip C. Hamm Memorial Lecture Award, University of Minnesota (2012)
William E. Larson and Raymond R. Allmaras Lecture, University of Minnesota (2009)
William E. Pierre Soil Science Lecture, Iowa State University (2003)
Member of AAAS, AIBS, Ecological Society of America, Soil Science Society of America, AGU

Primary Grant Support (past 3 years)

current DOE Office of Science (Biological and Environmental Sciences Division): Great Lakes Bioenergy Research Center; co-PI with T. Donohue (PI; UW-Madison) and others; 60 co-I's. \$138M (2022-2027).
current USDA (ARS): Collaborative Long-term Agroecosystem Research (LTAR): Ecosystem services from row-crop agriculture; PI with co-PIs S.K. Hamilton, N. Haddad. \$4.3M (2020-2025).
current USDA (NIFA-DSFAS): Machine learning with multi-source data to improve quantitative models for agricultural nitrous oxide flux predictions. Co-PI with D. Saha (PI), C. Subhadeep, K. Armen. \$650,000 (2023-2025).
current NSF (Division of Environmental Biology): LTER: KBS – Ecological and social mechanisms of resilience in agroecosystems. Co-PI with N. Haddad (co-lead), S. Evans (co-lead), B. Basso, A. Kravchenko, J. Lau, S. Marquart-Pyatt, C. Sprunger, P. Zarnetske; \$7.65M (2022-2028).
2018-2023 NSF (Division of Environmental Biology): The ecological significance of nitrogen fixation in perennial grasses; co-PI with S.S. Roley (PI; Washington State), D. Buckley (Cornell Univ); \$1.1M (2018-2023).

Professional Service (last 5 years)

current Member, National Leadership Team, USDA LTAR Network (from 2019)
Secretary (past chair), AAAS Section on Agriculture, Food, and Renewable Resources (from 2020)
2024 Panelist, DOE Distinguished Scientist Fellows Program

- 2020-2023 Member, Scientific Advisory Board, Center for Advanced Biofuels and Bioproducts (CABBI), University of Illinois
- 2023 Panelist, DOE Ernest Orlando Lawrence Award
- 2022 Member, DOE Office of Science BERAC Subcommittee on Integrative Science
- 2021 Member, NSF Panel on Open Environmental Data Centers
- Member, NSF LTER Site Review team
- 2020-2021 Program chair, NSF NEON Workshop for Complex Landscapes
- 2010-2020 DOE Office of Science Biological and Environmental Research Advisory Committee (BERAC)
- 2020 Program chair and host, LTAR Network Annual Science Meeting (2020)

Past Editorships

Plant and Soil, Ecology, Ecological Monographs, Biogeochemistry, PNAS (guest)

Invited Presentations (last 5 years)

- 2024 Keck Workshop on Soil Organic Carbon for Climate Change Mitigation (Pasadena, Feb 2024)
Future Energy Transitions Symposium, Clean Air Task Force, New York
- 2022 iFAST Microbial Ecology Symposium (keynote), Oklahoma (virtual; April 2022)
- 2021 Bayer Crop Science, International Sustainability Group (virtual; Jan 2021)
Iowa State University Carbon Forum (keynote), Ames (virtual; Apr 2021)
North Central Soil Health Nexus Workshop (keynote), Michigan (Sep 2021)
American Society of Agronomy Symposium on Carbon Farming, Salt Lake City (Nov 2021)
K12 Climate Series Symposium, Climate Change and Agriculture (virtual; Feb 2021)
- 2020 US-UK Forum on Sustainable Agriculture, National Academy of Science, Washington DC (Mar 2020)
Biology Department, Kent State University (Jan 2020)
Global Challenges in Food, Soil, & Environmental Quality, American Society of Agronomy (Nov 2020)
North Central Soil Fertility Industry Conference, Des Moines (Nov 2020)
- 2019 Nobel Nitrogen Symposium, Nobel Research Institute, OK (Mar 2019)
DOE Bioenergy Research Centers Modeling Workshop, Chicago IL (May 2019)
CABBI Annual Science Meeting, University of Illinois Urbana-Champaign, (June 2019)
Bioenergy Symposium, Ecological Society of America Annual Meeting, Louisville KY (Aug 2019)
DOE-BETO Bio-Restore Workshop, Chicago IL (Sep 2019)
ICHe Bioenergy Sustainability Symposium, Nashville TN (Oct 2019)
American Society of Agronomy MegaSymposium, San Antonio TX (Nov 2019)
Flagship Pioneering, Webinar (Dec 2019)
Resilience Institute, Indiana University, Bloomington (Apr 2019)

Publications – last 5 years (>270 total; <https://scholar.google.com>)

- Dai, T., N. C. Ellebracht, E. J. H. Sellars, H. M. Goldstein, W. Li, C. M. Hellwinckel, L. Price, A. A. Wong, P. Nico, B. Basso, **G.P. Robertson**, J. Pett-Ridge, M. Langholtz, S. E. Baker, S. Pang, and C. D. Scown. (in review). Land resources and the implications for scaling engineered carbon dioxide removal in the United States.
- Córdova, S.C., A.N. Kravchenko, J.R. Miesel, and **G.P. Robertson**. (in revision). Whole-profile changes in soil carbon and nitrogen after 25 years of agricultural and conservation management.
- Falvo, G. and **G.P. Robertson**. (in revision). Nature-based climate solutions can help repay the climate debt of deforestation.
- Robertson, G.P.** and B. Basso. (in press). Climate mitigation and nitrogen: Agricultural opportunities to abate nitrous oxide (N₂O) emissions. Negative Carbon Agriculture, National Academy of Science, Engineering, and Medicine, Washington, D.C.
- Guo, T., S. Marquart-Pyatt, and **G.P. Robertson**. (in press). Building ties at multi-stakeholder engagement events

to facilitate social learning about contentious issues in natural resource management. *Agriculture and Human Values*

- Robertson, G.P.**, B. Wilke, T.C. Ulbrich, N. Haddad, S.K. Hamilton, D.G. Baas, B. Basso, J. Blesh, T.J. Boring, L. Campbell, K. Cassida, C. Charles, J. Chen, J. Doll, T. Guo, A.N. Kravchenko, D.A. Landis, S.T. Marquart-Pyatt, M. Singh, C.D. Sprunger, and J. Stegink. (in press). The LTAR Cropland Common Experiment at the Kellogg Biological Station (KBS). *Journal of Environmental Quality*. doi: 10.1002/jeq2.20638
- Chen, J., C. Lei, H. Chu, X. Li, M. Torn, Y.-P. Wang, P. Sciusco, and **G.P. Robertson**. 2024. Overlooked cooling effects of albedo in terrestrial ecosystems. *Environmental Research Letters* 19:093001. doi: 10.1088/1748-9326/ad661d
- Chipkar, S., D. Debrauske, K. Kahmark, S. Bohm, M.Z. Hussain, L. Joshi, K. Krieg, B. Cronk, E. Burke, J. Cassidy, J. Aguado, A. Senyk, **G.P. Robertson**, T. Sato, S.K. Hamilton, K. Thelen, and R.G. Ong. 2024. High temperatures and low soil moisture synergistically reduce switchgrass yield and inhibit biofuel production from marginal field sites. *GCB Bioenergy* 16:e13119. doi:10.1111/gcbb.13119
- Dhaliwal, J. K., D. Panday, **G.P. Robertson**, and D. Saha. 2024. Machine learning reveals dynamic controls of soil nitrous oxide (N₂O) emissions from diverse long-term cropping systems. *Journal of Environmental Quality*. doi:10.1002/jeq2.20637
- Guillevic, P. C., B. Aouizerats, R. Burger, N. Den Besten, D. Jackson, M. Ridderikhoff, A. Zajdband, R. Houborg, T. E. Franz, **G.P. Robertson**, and R. De Jeu. 2024. Planet's Biomass Proxy for monitoring aboveground agricultural biomass and estimating crop yield. *Field Crops Research* 316:109511. doi:10.1016/j.fcr.2024.109511
- Lee, J.-H., T.C. Ulbrich, M. Geers-Lucas, **G.P. Robertson**, A.K. Guber, and A.N. Kravchenko. 2024. Very fine roots differ among switchgrass (*Panicum virgatum* L.) cultivars and differentially affect soil pores and carbon processes. *Soil Biology & Biochemistry* 199:109640. doi:10.1016/j.soilbio.2024.109610
- Lei, C., J. Chen, I. Ibanez, P. Sciusco, G. Shirkey, M. Lei, B. Reich Peter, and **G.P. Robertson**. 2024. Albedo of crops as a nature-based climate solution to global warming. *Environmental Research Letters* 19:084032. doi:10.1088/1748-9326/ad5fa2
- Li, Z., A. N. Kravchenko, A. Cupples, A. K. Guber, Y. Kuzyakov, **G.P. Robertson**, and E. Blagodatskaya. 2024. Composition and metabolism of microbial communities in soil pores. *Nature Communications* 15:3578. doi:10.1038/s41467-024-47755-x
- Liebig, M. A., L. J. Abendroth, **G.P. Robertson**, D. Augustine, E. H. Boughton, G. Bagley, D. L. Busch, P. Clark, A. W. Coffin, B. J. Dalzell, C. J. Dell, A. Fortuna, A. Freidenreich, P. Heilman, C. Helseth, D. R. Huggins, J. M. F. Johnson, M. Khorchani, K. King, J. L. Kovar, M. A. Locke, S. B. Mirsky, M. C. Schantz, M. R. Schmer, M. L. Silveira, D. R. Smith, K. J. Soder, S. Spiegel, J. Stinner, D. Toledo, M. Williams, and J. Yost. 2024. The LTAR Common Experiment: Facilitating improved agricultural sustainability through coordinated cross-site research. *Journal of Environmental Quality* doi:10.1002/jeq2.20636
- Mosier, S., L. Kelly, E. Ozlu, and **G.P. Robertson**. 2024. Switchgrass (*Panicum virgatum* L.) cultivars have similar impacts on soil carbon and nitrogen stocks and microbial function. *GCB Bioenergy* 16:e13125. doi:10.1111/gcbb.13125
- Robertson, G.P.** and P.M. Groffman. 2024. Nitrogen transformations. Pages 407-438 in E.A. Paul and S.D. Frey, editors. *Soil Microbiology, Ecology, and Biochemistry*, 5th edition. Elsevier, Cambridge MA. doi:10.1016/B978-0-12-822941-5.00014-4
- Schreiner-Mcgraw, A.P., J.M. Baker, J.D. Wood, M. Abraha, J. Chen, T.J. Griffis, and **G.P. Robertson**. 2024. Surface resistance controls differences in evapotranspiration between croplands and prairies in U.S. Corn Belt sites. *Water Resources Research* 60: e2023WR035819. doi:10.1029/2023WR035819
- Vizza, C., M.A. Belanger, J. Jones, S.J. Murphy, D.H. Buckley, **G.P. Robertson**, and S.S. Roley. 2024. Rainfall events stimulate episodic associative nitrogen fixation in switchgrass. *Biogeochemistry* doi:10.1007/s10533-024-01180-w
- Xie, Y., S.A. Spawn-Lee, V.C. Radeloff, H. Yin, **G.P. Robertson**, and T.J. Lark. 2024. Cropland abandonment between 1986 and 2018 across the United States: spatiotemporal patterns and current land uses. *Environmental Research Letters* 19:044009. doi:10.1088/1748-9326/ad2d12
- Grandy, A.S. and **G.P. Robertson**. 2023. Managing soils as systems in temperate region landscapes. Pages 45-54 in N. Uphoff and J. Thies, editors. *Biological Approaches to Regenerative Soil Systems*, 2nd edition. CRC Press (New York, NY).
- Guo, T., S.T. Marquart-Pyatt, and **G.P. Robertson**. 2023. Using three consecutive years of farmer survey data to

- identify prevailing conservation practices in four midwestern US states. *Renewable Agriculture and Food Systems* 38:E44. doi:10.1017/S1742170523000364
- Hussain, M.Z., S.K. Hamilton, and **G.P. Robertson**. 2023. Soil phosphorus drawdown by perennial bioenergy cropping systems in the Midwestern US. *GCB Bioenergy* 15:254-263. doi:10.1111/gcbb.13020
- Jayawardena, D.M., **G.P. Robertson**, G.R. Sanford, and K.D. Thelen. 2023. Comparative productivity of six bioenergy cropping systems on marginal lands in the Great Lakes Region, United States. *Agronomy Journal* 115:2451-2468. doi:10.1002/agj2.21416
- Kim, S., B.E. Dale, R. Martinez-Feria, B. Basso, K. Thelen, C.T. Maravelias, D. Landis, T.J. Lark, and **G.P. Robertson**. 2023. Global warming intensity of biofuel derived from switchgrass grown on marginal land in Michigan. *GCB Bioenergy* 15:319-331. doi:10.1111/gcbb.13024
- Lei, C., J. Chen, and **G.P. Robertson**. 2023. Climate cooling benefits of cellulosic bioenergy crops from elevated albedo. *GCB Bioenergy* 15:1373-1386. doi: 10.1111/gcbb.13098
- Liang, K., X. Zhang, X.-Z. Liang, V. L. Jin, G. Birru, R. Schmer Marty, **G.P. Robertson**, G. W. McCarty, and G. E. Moglen. 2023. Simulating agroecosystem soil inorganic nitrogen dynamics under long-term management with an improved SWAT-C model. *Science of the Total Environment* 879:162906. doi:10.1016/j.scitotenv.2023.162906
- Lucas, M., J. Gil, **G.P. Robertson**, N.E. Ostrom, and A. Kravchenko. 2023. Changes in soil pore structure generated by the root systems of maize, sorghum and switchgrass affect in situ N₂O emissions and bacterial denitrification. *Biology and Fertility of Soils*. doi:10.1007/s00374-023-01761-1
- Perry, S., G. Falvo, S. Mosier, and **G.P. Robertson**. 2023. Long-term changes in soil carbon and nitrogen fractions in switchgrass, native grasses, and no-till corn bioenergy production systems. *Soil Science Society of America Journal* 87:1365-1375. doi:10.1002/saj2.20575
- Robertson, G.P.** 2023. Denitrification and the challenge of scaling microsite knowledge to the globe. *mLife* 2:229-238. doi:10.1002/mlf2.12080
- Tejera-Nieves, M., M. Abraha, J. Chen, S.K. Hamilton, **G.P. Robertson**, and B.H. Walker. 2023. Seasonal decline in leaf photosynthesis in perennial switchgrass explained by sink limitations and water deficit. *Frontiers in Plant Science* 13:1023571. doi:10.3389/fpls.2022.1023571
- Menefee, D., R.L. Scott, M. Abraha, J.G. Alfieri, J. Baker, D.M. Browning, J. Chen, J. Gonetg, J.M.F. Johnson, G.R. Miller, R. Nifong, **G.P. Robertson**, E.S. Ressel, N. Saliendra, A.P. Schreiner-Mcgraw, A.E. Suyker, P. Wagle, C. Wente, P.M. White, and D. Smith. 2022. Unraveling the effects of management and climate on carbon fluxes of U.S. croplands using the USDA Long-Term Agroecosystem (LTAR) network. *Agricultural and Forest Meteorology* 326:109154. doi:10.1016/j.agrformet.2022.109154
- Pan, D., I. Gelfand, L. Tao, M. Abraha, K. Sun, X. Guo, J. Chen, **G.P. Robertson**, and M.A. Zondlo. 2022. A new open-path eddy covariance method for nitrous oxide and other trace gases that minimizes temperature corrections. *Global Change Biology* 28:1446-1457. doi:10.1111/gcb.15986
- Robertson, G.P.**, S.K. Hamilton, K. Paustian, and P. Smith. 2022. Land-based climate solutions for the United States. *Global Change Biology*. 28:4912-4919. doi:10.1111/gcb.16267
- Sciusco, P., J. Chen, V. Giannico, M. Abraha, C. Lei, G. Shirkey, J. Yuan, and **G.P. Robertson**. 2022. Albedo-induced global warming impact at multiple temporal scales within an upper Midwest USA watershed. *Land* 11:283. doi:10.3390/land11020283
- Vitousek, P.M., X. Chen, Z. Cui, X. Liu, P.A. Matson, I. Ortiz-Monasterio, **G.P. Robertson**, and F. Zhang. 2022. Climate-change-induced temporal variation in precipitation increases nitrogen losses from intensive cropping systems: analysis with a toy model. *Frontiers of Agricultural Science and Engineering* 9:457-464. doi:10.15302/J-FASE-2022452
- Abraha, M., J. Chen, S. K. Hamilton, P. Sciusco, C. Lei, G. Shirkey, J. Yuan, and **G.P. Robertson**. 2021. Albedo-induced global warming impact of Conservation Reserve Program grasslands converted to annual and perennial bioenergy crops. *Environmental Research Letters* 16:084059. <http://dx.doi.org/10.1088/1748-9326/ac1815>
- Aoda, M. I., A.J.M. Smucker, S.S. Majeed, H.A. Mohammed, F.H. Al-Sahaf, and **G.P. Robertson**. 2021. Novel root zone soil water retention improves production with half the water in arid sands. *Agronomy Journal* 113:2398-2406.
- Belanger, M., C. Vizza, **G.P. Robertson**, and S. S. Roley. 2021. Quantifying and correcting for premature CO₂ loss in short-term carbon mineralization assays. *SOIL* 7:47-52.

- Grace, P. R. and **G.P. Robertson**. 2021. Soil carbon sequestration potential and the identification of hotspots in the eastern Corn Belt of the United States. *Soil Science Society of America Journal* 85:1410-1424. <https://doi.org/10.1002/saj2.20273>
- Hussain, M. Z., S. K. Hamilton, **G.P. Robertson**, and B. Basso. 2021. Phosphorus availability and leaching losses in annual and perennial cropping systems in an upper US Midwest landscape. *Scientific Reports* 11:20367. <https://doi.org/10.1038/s41598-021-99877-7>
- Kravchenko, A. N., H. Zheng, Y. Kuzyakov, **G.P. Robertson**, and A. K. Guber. 2021. Belowground interplant carbon transfer promotes soil carbon gains in diverse plant communities. *Soil Biology and Biochemistry* 159:108297.
- Liang, D. and **G.P. Robertson**. 2021. Nitrification is a minor source of nitrous oxide (N₂O) in an agricultural landscape and declines with increasing management intensity. *Global Change Biology* 27:5599-5613. <https://doi.org/10.1111/gcb.15833>
- Lowry, C., **G.P. Robertson**, and D. C. Brainard. 2021. Strip-tillage decreases soil nitrogen availability and increases the potential for N losses in a cover cropped organic system. *Agriculture, Ecosystems & Environment* 319:107524.
- Mosier, S., S. C. Córdova, and **G.P. Robertson**. 2021. Restoring soil fertility on degraded lands to meet food, fuel, and climate security needs via perennialization. *Frontiers in Sustainable Food Systems* 5:706142. <https://lter.kbs.msu.edu/docs/robertson/mosier-et-al-2021-front-sus-food-sys.pdf>
- O'Neill, B., C. D. Sprunger, and **G.P. Robertson**. 2021. Do soil health tests match farmer experience? Assessing biological, physical, and chemical indicators in the upper Midwestern United States. *Soil Science Society of America Journal* <https://doi.org/10.1002/saj2.20233>.
- Roley, S. S., T. C. Ulbrich, and **G.P. Robertson**. 2021. Nitrogen fixation and resorption efficiency differences among twelve upland and lowland switchgrass cultivars. *Phytobiomes Journal* 5:97-107. <https://lter.kbs.msu.edu/docs/robertson/role-et-al-2020-phytobiomes.pdf>
- Saha, D., B. Basso, and **G.P. Robertson**. 2021. Machine learning improves predictions of agricultural nitrous oxide (N₂O) emissions from intensively managed cropping systems. *Environmental Research Letters* 16:024004.
- Spawn-Lee, S. A., T. J. Lark, H. K. Gibbs, R. A. Houghton, C. J. Kucharick, C. Malins, R. E. O. Pelton, and **G.P. Robertson**. 2021. Comment on 'Carbon intensity of corn ethanol in the United States: state of the science'. *Environmental Research Letters* 16:118001.
- Udvardi, M., F. E. Below, M. J. Castellano, A. J. Eagle, K. E. Giller, J. K. Ladha, X. Liu, T. M. Maaz, B. Nova-Franco, N. Raghuram, **G.P. Robertson**, S. Roy, M. Saha, S. Schmidt, M. Tegeder, L. M. York, and J. W. Peters. 2021. A research road map for responsible use of agricultural nitrogen. *Frontiers in Sustainable Food Systems* 5:660155.
- Bowles, T. M., M. Mooshammer, Y. Socolar, F. Calderón, M. A. Cavigelli, S. W. Culman, W. Deen, C. F. Drury, A. Garcia Y Garcia, A. C. M. Gaudin, W. S. Harkrom, R. M. Lehman, S. L. Osborne, **G.P. Robertson**, J. Salerno, M. R. Schmer, J. Strock, and A. S. Grandy. 2020. Long-term evidence shows crop rotation diversification increases agricultural resilience to adverse growing conditions in North America. *One Earth* 2:284-293.
- Cusser, S., C. A. Bahlai, S. M. Swinton, **G.P. Robertson**, and N. M. Haddad. 2020. Long-term research needed to avoid spurious trends in sustainability attributes of no-till. *Global Change Biology* doi: 10.1111/gcb.15080
- Gelfand, I., S.K. Hamilton, A.N. Kravchenko, R.D. Jackson, K.D. Thelen, and **G.P. Robertson**. 2020. Empirical evidence for the potential climate benefits of decarbonizing light vehicle transport in the U.S. with bioenergy from purpose-grown biomass with and without BECCS. *Environmental Science & Technology* 54: 2961-2974. doi:10.1021/acs.est.9b07019
- Grace, P., T. J. van der Weerden, D. W. Rowlings, C. Scheer, C. Brunk, R. Kiese, K. Butterbach-Bahl, R. M. Rees, **G.P. Robertson**, and U. M. Skiba. 2020. Global Research Alliance N₂O chamber methodology guidelines: Considerations for automated flux measurement. *Journal of Environmental Quality* doi: 10.1002/jeq2.20124
- Hess, L., E. S. Hinckley, **G.P. Robertson**, and P. A. Matson. 2020. Rainfall intensification increases nitrate leaching from tilled but not no-till cropping systems of the U.S. Midwest. *Agriculture, Ecosystems and Environment* 290:106747.
- Hussain, M. Z., **G.P. Robertson**, B. Basso, and S. K. Hamilton. 2020. Leaching losses of dissolved organic carbon and nitrogen from agricultural soils in the upper US Midwest. *Science of the Total Environment* 734:139379.

doi:10.1016/j.scitotenv.2020.139379

- Liang, D., Y. Ouyang, L. K. Tiemann, and **G.P. Robertson**. 2020. Niche differentiation of bacterial versus archaeal soil nitrifiers induced by ammonium inhibition along a management gradient. *Frontiers in Microbiology* 11:568588.
- Reed, D., J. Chen, M. Abraha, **G.P. Robertson**, and K. Dahlin. 2020. The shifting role of mRUE for regulating ecosystem production. *Ecosystems* 23:359-369. doi:10.1007/s10021-019-00407-4
- Roley, S. S., T. C. Ulbrich, and **G.P. Robertson**. 2020. Nitrogen fixation and resorption efficiency differences among twelve switchgrass varieties. *Phytobiomes* doi: 10.1094/PBIOMES-11-19-0064-FI
- Ruan, L. and **G.P. Robertson**. 2020. No-till establishment improves the climate benefit of bioenergy crops on marginal grasslands. *Soil Science Society of America* 84:1280-1295. doi: 10.1002/saj2.20082
- Sciusco, P., J. Chen, M. Abraha, C. Lei, **G.P. Robertson**, R. Laforteza, G. Shirkey, Z. Ouyang, R. Zhang, and R. John. 2020. Spatiotemporal variations of albedo in managed agricultural landscapes: Inferences to global warming impacts (GWI). *Landscape Ecology* doi: 10.1007/s10980-020-01022-8
- Abraha, M.*, J. Chen, S. K. Hamilton, and **G.P. Robertson**. 2019. Long-term evapotranspiration rates for rainfed corn vs. perennial bioenergy crops in a mesic landscape. *Hydrological Processes* 34:810-822. doi: 10.1002/hyp.13630
- Abraha, M.*, I. Gelfand, S.K. Hamilton, J. Chen and **G.P. Robertson**. 2019. Carbon debt of field-scale Conservation Reserve Program grasslands converted to annual and perennial bioenergy crops. *Environmental Research Letters* doi: 10.1088/1748-9326/aafc10
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- Duncan, D. S., L. G. Oates, I. Gelfand, N. Millar, **G.P. Robertson**, and R. D. Jackson. 2019. Environmental factors function as constraints on soil nitrous oxide fluxes in bioenergy feedstock cropping systems. *Global Change Biology Bioenergy* 11:416-426. doi: 10.1111/gcbb.12572.
- Hussain, M. Z., A. K. Bhardwaj, B. Basso, **G.P. Robertson**, and S. K. Hamilton. 2019. Nitrate leaching from continuous corn, perennial grasses, and poplar in the US Midwest. *Journal of Environmental Quality* 48:1849-1855.
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- Kravchenko, A.N., A.K. Guber, B. S. Rasavi, J. Koestel, M.Y. Quigley, **G.P. Robertson**, and Y. Kuzyakov. 2019. Microbial spatial footprint as a driver of soil carbon stabilization. *Nature Communications* 10:3121
- Roley, S.S., C. Xue, S.K. Hamilton, J.M. Tiedje, **G.P. Robertson**. 2019. Isotopic evidence for episodic nitrogen fixation in switchgrass (*Panicum virgatum* L.). *Soil Biology and Biochemistry* 129:90-98.
- Shcherbak, I. and **G.P. Robertson**. 2019. Nitrous oxide (N₂O) from subsurface soils of agricultural ecosystems. *Ecosystems* 22:1650-1663.
- Wang, S., G. R. Sanford, **G.P. Robertson**, R. D. Jackson, and K. D. Thelen. 2019. Perennial bioenergy crop yield and quality response to nitrogen fertilization. *BioEnergy Research* 13: 157-166. doi:10.1007/s12155-019-10072-z.
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