

Gregory Starr
Curriculum Vitae

Academic Address

Department of Biological Sciences
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Education

Ph.D.	2000	Biological Sciences, Florida International University
M.S.	1998	Biological Sciences, Florida International University
B.S.	1994	Biological Sciences, University of Nevada Las Vegas

Academic Appointments

08/23 - present	Alabama Water Institute Distinguished Fellow, The University of Alabama
08/17 – present	Professor of Global Change Ecology, Department of Biological Sciences, The University of Alabama.
01/18 – 12/18	Jean d'Alembert Research Chair, University of Paris Saclay. France.
08/13 – 08/17	Associate Professor of Global Change Ecology, Department of Biological Sciences, The University of Alabama.
01/08 – 08/13	Assistant Professor of Plant Physiological Ecology, Department of Biological Sciences, The University of Alabama.
01/08 – 12/11	Adjunct Assistant Professor, School of Forest Resources and Conservation (SFRC), University of Florida.
10/03 - 12/07	Assistant Research Scientist and Member of Graduate Faculty, School of Forest Resources and Conservation (SFRC), University of Florida (non-tenure).
08/00 - 10/03	Postdoctoral Research Associate and Co-PI, School of Forest Resources and Conservation (SFRC), University of Florida.

External Appointments

01/08 - present	Adjunct Research Scientist, The Joseph W. Jones Ecological Research Center.
01/18 – 12/18	Visiting Research Professor, French National Institution of Agricultural Research (INRA), Grignon, France.
05/15 – 01/19	Swedish Research Council – Panelist for Natural and Engineering Sciences Program. Stockholm
09/13 – 08/15	Adjunct Professor, Department of Biology, Courtesy Graduate Faculty Member, Georgia Southern University

Research Interests

Plant and ecosystem physiology, ecosystem ecology and their role in the coupling of biogeochemical cycles, particularly in response to climate change and anthropogenic influences; the measurement and modeling of the exchange of water, heat, and trace gases like carbon dioxide and methane between the terrestrial surface and the atmosphere

Professional Affiliations

American Geophysical Union
Ecological Society of America
European Geophysical Union
Botanical Society of America
Ameriflux Network
Fluxnet Network
International Tundra Experiment Network (ITEX)
Everglades Coastal LTER (Senior Personnel)
Toolik Lake Arctic LTER (Senior Personnel)

External Professional Activities

National Service

Committees, Panelist, and Working Group Member

Department of Energy, Committee Member Ameriflux Research Program, Diversity, Equity, and Inclusion (DEI) Committee, 11/2021 - 02/2025
National Science Foundation, Panelist, Infrastructure, Spring 2022.
National Science Foundation, Panelist (DEB), Spring 2019
National Science Foundation, Panelist 2017, 2018, 2019, 2020, 2021.
Ecological Society of America, Session Organizer, Interactions of Climate Change and Water Management on Productivity Among Wetland Ecosystems, Ft. Lauderdale, FL. August 12, 2016.
Department of Energy, Office of Biological and Environmental Research Terrestrial Ecosystem Sciences (TES), Critical Ecosystems Review Panel, April 2016, Washington, DC.
Ecological Society of America, Session Organizer, Understanding the Structure and Function of Fire Maintain Ecosystems: Honoring the Research Influences of Dr. Robert Mitchell, Sacramento, CA. August 15, 2014.
Institute of Arctic Biology, University of Alaska Fairbanks, Working Group Member, developing the future direction of science support at Toolik Lake Field Station. March 2012 – present.
Department of Energy, Biological and Environmental Research Division (DOE-BER), invited panelist for Next Generation of Ecosystem Experiments, 2011.
Department of Energy, Office of Science (DOE), invited panelist for Graduate Fellowship Program. February 2010 and 2012.
NEON Inc., Airborne Flux Working Group Member. January 2013 – August 2017.
NEON Inc., MicroMet/Flux FIU Working Group Member. November 2010 – August 2017.
NEON Inc., Soils Working Group Member. November 2010 – March 2016.
NEON Inc., FIU (Fundamental Instrumentation Unit) Tiger Team Member. October 2008 – April 2010.
NEON Inc., Domain Site Review Team Member, May 2008 – April 2009.

Tenure and Promotion Reviews

- Department of Soil Sciences, University of Tennessee.
- Department of Biology, University of Arkansas.
- The Jones Center at Ichauway
- Department of Marine Biology, University of Jordan

Proposal Reviews

Department of Energy (DOE) - Office of Science

- National Institute for Global and Environmental Change (NIGEC)
- National Institute for Climate Change Research (NICCR)
- Terrestrial Carbon Cycle Program
- Terrestrial Ecosystem Science Program
- Critical Ecosystems (Arctic)

National Science Foundation (NSF)

- Ecosystems
- Arctic System Science Program
- Arctic Natural Science Program
- Evolutionary and Ecological Physiology Program
- Atmospheric Chemistry
- Emerging Topics in Biogeochemical Cycles
- Ecosystems Science Cluster
- Atmospheric Sciences
- Long-term Ecological Research Program

National Atmospheric and Space Administration (NASA)

- Earth Systems

International Service

Franco-American Commission – Fulbright Applicant Review Panel – Interview French Applicant for Fulbright Research Fellowships to the United States. Paris, France. March 27-April 3, 2018.

ENVR^{plus} – Panelist for “Science Across Observatory Networks’ workshop”. Zandvoort, Netherlands, May 9, 2016.

Swedish Research Council – Panelist for Natural and Engineering Sciences Program. Review of 33 proposals and panelist for the meeting in Stockholm, Sweden. September 2015, 2016, 2017, 2018, 2019.

Australian Research Council – invited reviewer of research proposals 2015.

Swiss National Science Foundation – invited reviewer of arctic research proposals 2014, 2015.

National Science and Engineering Research Council of Canada – invited reviewer of arctic research proposals 2013.

National Centre of Environmental Research and Training (CENICA), Mexico City, Mexico – Panelist on developing and maintaining a Mexican CO₂ Flux network. February 21-22, 2012.

Instituto Nacional De Ecología (INE), Mexico City, Mexico – Professional consultation on conducting CO₂ flux measurements in a Super City. January 2012 – January 2013.

Journal Peer Review

Associate Editor, *Arctic, Antarctic, and Alpine Research*, 2012 – present

Editorial Board Member, *Ecosystem Health, and Sustainability*, 2016 – present

Reviewer for

Biotropica
Hydrological Processes
Australian Journal of Ecology
Agricultural & Forest Meteorology

Biogeosciences
Canadian Journal of Botany
Canadian Journal of Forest Research
Wetlands

Arctic, Antarctic, and Alpine Research
 Plant Biology
 Journal of Applied Ecology
 Journal of Ecology
 Ecological Applications
 Ecosystems
 PLOS ONE
 Oecologia
 New Phytologist
 Ecological Applications

Ecosystems
 Ecosystem Health and Sustainability
 Journal of Geophysical Research
 Ecology
 Functional Ecology
 Global Change Biology
 Polar Biology
 Ecological Monographs
 Ecosphere
 Forests

Book Reviews

Terrestrial Ecosystem Research Infrastructures: Challenges, New developments, and Perspectives. (A. Chabbi, H. W. Loescher, Editors). CRC Press.

University Service

04/23 - present	Faculty Senator - University Faculty Senate
01/08 - present	Academic Advising (~30 students per semester)
08/21 - 8/24	College of Arts and Sciences, Academy of Research, Scholarship, and Creative Activity (CARSCA) Grant Evaluation Committee
08/20 - 12/23	Department of Biological Sciences Communication Committee
11/09 - 08/22	Department of Biological Sciences Executive Committee
09/21 - 03/22	Bishop Endowed Professor search, Department of Biological Sciences
06/12 - 12/19	University of Alabama, Physics and Astronomy Department Review Member
09/15 - 01/17	Department of Biological Sciences Co-Director of Graduate Programs
09/15 - 08/16	Department of Biological Science Public Relations Committee
08/15 - 12/15	Member, Search Committee, Clinical Lecturer in Biology
08-13 - 12/13	Member, Search Committee, Freshwater Ecologist
08/11 - 09/15	Department of Biological Sciences Graduate Student Program Committee
08/08 - 09/15	Department of Biological Sciences Library Committee
08/10 - 03/11	College of Engineering, Environment Institute Cluster Hire Search Committee (7 Faculty cluster hire)
01/08 – 12/10	Department of Biological Sciences Tanglewood Committee
09/05 - 12/07	Member, Austin Cary Memorial Forest (University of Florida) Steering Committee
01/05 - 12/07	Academic Advisor to University of Florida Men's Rugby Team
07/05 - 07/06	Member, Recruiting Seminar for incoming University of Florida Students

Thesis and Dissertation

Starr, G. 1998. Effects of lengthened growing season and soil warming on the phenology and physiology of *Polygonum bistorta*. M.S. Thesis, Department of Biological Sciences, Florida International University, Miami FL, 94 p.

Starr, G. 2000. A multi-scale assessment of physiological processes in arctic tundra plants under natural and simulated climate change scenarios. Ph.D. Dissertation, Department of Biological Sciences, Florida International University, Miami FL, 103 p.

Publications (^v represents undergraduates, * graduate student and ^Φ post-doctoral authorship from my research group which authored or coauthored publication)

Refereed Journal Articles

- Duarte, H. F., G. Sun, M. Aguilos, S. G. McNulty, J. B. Kim, G. Starr, J. Xiao (*In review*). Assessing the Community Land Model (CLM5) for quantifying energy, water, and carbon balances in loblolly and longleaf pine ecosystems in southeastern United States. *JGR-Biogeosciences*.
- Doughty, C. L., Q. Ying, E. Ward, E. Delaria, G. M. Wolfe, S. L. Malone, D. E. Reed, T. Troxler, J. S. Kominoski, E. Castañeda-Moya, W. B. Shoemaker, D. Yannick, G. Starr, S. F. Oberbauer, C. Amaral, A. Barenblitt, A. Campbell, S. Charles, L. Fatoyinbo, J. Gewirtzman, T. Hanisco, R. Hannun, S. Kawa, D. Lagomasino, L. Lait, A. Lindquist, P. Newman, P. Raymond, J. Rosentreter, K. Thornhill, D. Vaughn, B. Poulter (*In review*). Compounded effects on wetland greenhouse-gas fluxes from climate change and water management along a saline to freshwater gradient. *PNAS*.
- Beugnon, R., B. Cheneka et al. (~1100 authors) (*In review*). The Microclimate DataBase - turning the global SoilTemp project into an accessible archive for microclimate data. *Data Science*.
- Wang, J., D. E. Reed, A. T. Classen, A. Knohl, A. Varlagin, A. Ouimette, A. R. Desai, B. Heinesch, C. V. Hanson, C. M. Gough, C. Still, D. Bonal, D. Yakir, D. Baldocchi, E. S. Tuittil, E. P. Sanchez-Cañete, E. Vivoni, E. Euskirchen, G. Manca, **G. Starr**, G. Simioni, J. M. Limousin, J. Wood, J. Chen, J. Dušek, L. Sigut, L. Montagnani, L. Gu, M. A. Arain, M. S. Bret-Harte, M. Schmidt, M. Ueyama, M. Peichl, M. Rodeghiero, N. Delpierre, Nina Buchmann, P. D. Blanken, R. M. Staebler, S. L. Malone (*In review*). Thermal acclimation dampens the warming-induced increase in ecosystem respiration. *Nature*.
- *Yannick, D., S. F. Oberbauer, C. S. Staudhammer, **G. Starr** (*In review*). Evaluating the Energy Balance of Coastal Wetlands Undergoing a State-Change. *Agricultural and Forest Meteorology*
- *Reed, D. E., H. Chu, B. G. Peter, J. Chen, M. Abraha, B. Amiro, R. G. Anderson, M. A. Arain, P. Arruda, G. A. Barron-Gafford, C. Bernacchi, D. P. Beverly, S. C. Biraud, T. A. Black, P. D. Blanken, G. Bohrer, R. Bowler, D. R. Bowling, M. S. Bret-Harte, M. Bretfeld, N. A. Brunsell, S. H. Bullock, G. Celis, X. Chen, A. T. Classen, D. R. Cook, A. Cueva, H. J. Dalmagro, K. Davis, A. Desai, A. J. Duff, A. L. Dunn, D. Durden, C. W. Edgar, E. Euskirchen, R. Bracho, B. Ewers, L. B. Flanagan, C. Florian, V. Foord, I. Forbrich, B. R. Forsythe, J. Frank, J. Garatuza-Payan, S. Goslee, C. Gough, M. Green, T. Griffis, M. Helbig, A. C. Hill, R. Hinkle, J. Horne, E. Humphreys, H. Ikawa, G. Iwahana, R. Jassal, B. Johnson, M. Johnson, S. A. Kannenberg, E. Kelsey, J. King, J. F. Knowles, S. Knox, H. Kobayashi, T. Kolb, R. Kolka, K. W. Krauss, L. Kutzbach, B. Lamb, B. Law, S. C. Lee, X. Lee, H. Liu, H. W. Loescher, S. L. Malone, R. Matamala, M. Mauritz, S. Metzger, G. Meyer, B. Mitra, J. W. Munger, Z. Nesic, A. Noormets, T. L. O'Halloran⁷⁵, P. T. O'Keefe, S. F. Oberbauer, W. Oechel, P. Oikawa, P. C. Olivas, A. Ouimette, G. Pastorello, J. F. Perez-Quezada, C. Phillips, G. Posse, B. Qu, W. L. Quinton, M. L. Reba, A. D. Richardson, V. Picasso, A. V. Rocha, J. C. Rodriguez, R. Ruzol, S. Saleska, R. L. Scott, A. P. Schreiner-McGraw, E. A. G. Schuur, M. Silveira, O. Sonnentag, D. L. Spittlehouse, R. Staebler, **G. Starr**, C. Staudhammer, C. Still, C. Sturtevant, R. C. Sullivan, A. Suyker, D. Trejo, M. Ueyama, R. Vargas, B. Viner, E. R. Vivoni, D. Wang, E. J. Ward, S. Wiesner, L. Windham-Myers, D. Yannick, E. A. Yepez, T. Zenone, J. Zhao, D. Zona (2025). Network of Networks: Time-Series Clustering of AmeriFlux Sites. *Agricultural and Forest Meteorology*. <https://doi.org/10.1016/j.agrformet.2025.110686>
- *Hazhir K., M. Binford, W. Kleindl, **G. Starr**, B.A. Murphy, A.R. Desai, C.-S. Fu, M.C. Dietze, C.L. Staudhammer (2025). Drivers of forest productivity in two regions of the United States: Relative impacts of management and environmental variables. *Science of the Total Environment*. <https://doi.org/10.1016/j.jenvman.2025.124040>.

- Liu, N., G. Sun, Y. Yang, M. Aguilos, **G. Starr**, T. O'Halloran, A. C. Oishi, Y. Zhang, D. M. Amatya, C. Trettin (2025). Potential for Augmenting Water Yield by Restoring Longleaf Pine (*Pinus palustris*) Forests in the Southeastern U.S. *Water Resources Research*, 61, e2024WR037444. <https://doi.org/10.1029/2024WR037444>
- Delaria, E. R., G. M. Wolfe, K. Blanock, R. Hannun, K. L. Thornhill, P. A. Newman, L. R. Lait, S. R. Kawa1, J. Alvarez, S. Blum, E. Castaeda-Moya, C. Holmes, D. Lagomasino, S. Malone, D. Murphy, S. F. Overbauer, C. Pruett, A. Serre, G. Starr, R. Szot, T. Troxler, D. Yannick, B. Poulter (2024). Assessment of Landscape-Scale Fluxes of Carbon Dioxide and Methane in Subtropical Coastal Wetlands of South Florida. *JGR-Biogeosciences*. 129, e2024JG008165. <https://doi.org/10.1029/2024JG008165>
- Tang, X., **G. Starr**, C.L. Staudhammer, K. Zhang, L. Li, N. Li, F.H. Ajloon, Y. Gong (2024). VCPNET: A new dataset to benchmark vegetation carbon phenology metrics. *Ecological Informatics*. <https://doi.org/10.1016/j.ecoinf.2024.102741>
- *Wright-Osment, N., C.L. Staudhammer, S.F. Oberbauer, B. Mortazavi, **G. Starr** (2024) Recovery of Metabolites via subnivean Photosynthesis in Arctic tundra plants: implications for climate change. *Ecosphere*. <https://doi.org/10.1002/ecs2.4936>
- *Yannick, D., S.F. Oberbauer, C. Staudhammer, J. Cherry, **G. Starr** (2024). Carbon Dynamics of a Coastal Wetland Transitioning to Mangrove Forest. *Biogeosciences*. 129, e2023JG007991. <https://doi.org/10.1029/2023JG007991>
- Whelan, A.W., S. W. Bigelow, C. L. Staudhammer, **G. Starr**, J. B. Cannon (2024). Damage prediction for planted longleaf pine in extreme winds. *Forest Ecology and Management*. <https://doi.org/10.1016/j.foreco.2024.121828>
- Aguilos, M., G. Sun, N. Liu, Y. Zhang, **G. Starr**, A. Oishi, T. L. O'Halloran, J. Forsythe, J. Wang, M. Zhu, D. Amatya, B. Baniya, S. McNulty, A. Noormets, J. King (2024) Energy availability and leaf area index dominate the controls on ecosystem evapotranspiration in the southeastern U.S. *Agricultural and Forest Meteorology*. <https://doi.org/10.1016/j.agrformet.2024.109960>
- *Bracho, R., T. A. Martin, J. G. Vogel, W. P. Cropper Jr, G. Celis, K. Clark, H. L. Gholz, G. Gorman, H. W. Loescher, T. L. Powell, S. Sager, M. Shrestha, **G. Starr** (2023). Two decades of carbon dynamics in an actively managed, naturally regenerated longleaf/slash pine forest, *Forest Ecology and Management*, <https://doi.org/10.1016/j.foreco.2023.121408>.
- Puhlick, J. J., T. L. O'Halloran, **G. Starr**, R. B. Abney, L. S. Pile Knapp, R. McCleery, K. D. Klepzig, S. T. Brantley, R. K. McIntyre, and B. S. Song (2023). Strategies for improving for carbon management in longleaf pine ecosystems. *Forests*. 14(5), 874; <https://doi.org/10.3390/f14050874>
- *Wright-Osment N., **G. Starr**, D. P. Aubrey, B. M. Rau, C. L. Staudhammer (2023). The Effect of Rapid Development on Soil CO₂ Efflux in a Cellulosic Biofuel Stand. *Forests*. 14(2):258. <https://doi.org/10.3390/f14020258>
- *Yu, Z., C. L. Staudhammer, S. L. Malone, S. F. Oberbauer, S. Charles, J. Zhao, **G. Starr** (2023). Biophysical Factors and Water Dynamics Impact Methane Fluxes in Everglades Freshwater Marshes. *Ecosystems*. <https://doi.org/10.1007/s10021-022-00787-0>
- *Ruzol, R., C. L. Staudhammer, S. Younger, D. Aubrey, H. W. Loescher, C. R. Jackson, **G. Starr** (2022). Water use from a young loblolly pine bioenergy plantation: effects of intensive management on stand evapotranspiration. *Ecosphere*. 13(6): e4100. <https://doi.org/10.1002/ecs2.4100> ECOSPHERE 19 of 19
- *Lambert, C. S. Landry, A. Koeser, M. Andreu, **G. Starr**, C.L. Staudhammer (2022). Impact of model choice in predicting urban forest storm damage when data is uncertain. *Landscape and Urban Planning*. <https://doi.org/10.1016/j.landurbplan.2022.104467>
- *Staudhammer, C. L., S. L. Malone J. Zhao, Z. Yu, **G. Starr**, S.F. Oberbauer (2022). Methane emissions from subtropical wetlands: An evaluation of data filtering on annual methane budgets. *Agricultural and Forest Meteorology*. <https://doi.org/10.1016/j.agrformet.2022.108972>

- *Gong, Y., C. L. Staudhammer, S. Wiesner, Y. Zhang, J. B. Cannon, **G. Starr** (2022). Uncertainty in parameterizing a flux-based phenological model with ecosystem respiration: Evidence from two longleaf pine sites. *Ecosphere*. 13(5): e4101. <https://doi.org/10.1002/ecs2.4101>
- Malone, S. L., Y. Oh, K. A. Arndt, G. Burba, R. Commene, A. R. Contosta, J. P. Goodrich, H. W. Loescher, **G. Starr**, R. K. Varner (2022). Gaps in Network Infrastructure limit our understanding of biogenic methane emissions for the United States. *Biogeosciences*. <https://doi.org/10.5194/bg-2021-256>
- Patrick, C. J., J. S. Kominoski, W. H. McDowell, B. Branoff, D. Lagomasino, M. Leon, E. Hensel, M. J. S. Hensel, B. A. Strickland, T. M. Aide, A. Armitage, M. Campos-Cerqueira, V. M. Congdon, T. A. Crowl, D. J. Devlin, S. Douglas, B. E. Erisman, R. A. Feagin, S. J. Geist, N. S. Hall, A. K. Hardison, M. R. Heithaus, J. A. Hogan, J. D. Hogan, S. Kinard, J. J. Kiszka, T. C. Lin, K. Lu, C. J. Madden, P. A. Montagna, C. S. O'Connell, C. E. Proffitt, B. K. Reese, J. W. Reustle, K. L. Robinson, S. A. Rush, R. O. Santos, A. Schnetzer, D. L. Smee, R. S. Smith, **G. Starr**, B. A. Stauffer, L. M. Walker, C. A. Weaver, M. S. Wetz, E. R. Whitman, S. S. Wilson, J. Xue, X. Zou (2022). A universal pattern of trade-offs between ecosystem resistance and resilience to tropical cyclones. *Science Advances*. <https://www.science.org/doi/10.1126/sciadv.ab19155>
- *Kenney, G., C. L. Staudhammer, S. Wiesner, S. Brantley, S. Bigelow, **G. Starr** (2021). Hurricane Michael altered the structure and function of longleaf pine woodlands. *JGR-Biogeosciences*, 126, e2021JG006452. <https://doi.org/10.1029/2021JG006452>
- *Flanagan, S. A., J. K. Hiers, M. A. Callahan Jr., S. Goodrick, J. J. O'Brien, **G. Starr**, S. Wiesner, K. D. Klepzig, E. L. Loudermilk (2021). A Model Comparison of Fire Return Interval Impacts on Carbon and Species Dynamics in a southeastern U.S. Pineland. *Ecosphere*. 12(11):e03836. 10.1002/ecs2.3836
- Φ*Zhao, J., S. L. Malone, C. L. Staudhammer, **G. Starr**, H. Hartmann, S. F. Oberbauer (2021). Wetland plants respond nonlinearly to inundation over a sustained period. *American Journal of Botany*. 108, 1917-1931.
- Φ*Malone, S. L., J. Zhao, J. S. Kominoski, **G. Starr**, C. L. Staudhammer, P. C. Olivas, J.C. Cummings, S. F. Oberbauer (2021) Integrating aquatic metabolism and net ecosystem CO₂ balance in calcareous short- and long-hydroperiod subtropical freshwater wetlands. *Ecosystems*. doi.org/10.1007/s10021-021-00672-2
- Zhang, C., D. Brodylo, M. Sirianni, X. Comas, T. A. Douglas, W. B. Shoemaker, **G. Starr** (2021) Mapping CO₂ Fluxes of Cypress Swamp and Marshes in the Greater Everglades Using Eddy Covariance Measurements and Landsat Data. *Remote Sensing of Environment*. <https://doi.org/10.1016/j.rse.2021.112523>
- Chu, H., X. Luo, Z. Ouyang, S. Chan, S. Dengel, S. C. Biraud, M. S. Torn, S. Metzger, J. Kumar, M. A. Arain, T. J. Arkebauer, D. Baldocchi, C. Bernacchi, D. Billesbach, T. A. Black, P. D. Blanken, G. Bohrer, R. Bracho, S. Brown, N. Brunzell, J. Chen, X. Chen, K. Clark, A. Desai, T. Duman, D. Durden, E. Humphreys, S. Fares, I. Forbrich, J. Gamon, C. M. Gough, T. Griffis, D. Hollinger, M. Helbig, H. Ikawa, H. Iwata, Y. Ju, J. F. Knowles, S. Knox, H. Kobayashi, T. Kolb, B. Law, X. Lee, M. Litvak, H. Liu, J. W. Munger, A. Noormets, K. Novick, S. F. Oberbauer, W. Oechel, P. Oikawa, S. Papuga, E. Pendall, P. Prajapati, J. Prueger, W. L. Quinton, A. D. Richardson, E. S. Russell, R. L. Scott, **G. Starr**, R. Staebler, P. C. Stoy, E. Stuart-Haëntjens, O. Sonnentag, R. Sullivan, A. Suyker, M. Ueyama, R. Vargas, J. D. Wood, D. Zona. (2021). Footprint Representativeness of Eddy-Covariance Flux Measurements Across AmeriFlux Sites. *Agricultural and Forest Meteorology*. doi.org/10.1016/j.agrformet.2021.108350
- *Gong, Y., C. L. Staudhammer, G. Kenney, S. Wiesner, Y. Zhang, **G. Starr** (2021) Vegetation structure drives forest phenological recovery after hurricane. *Science of the Total Environment*. <https://doi.org/10.1016/j.scitotenv.2021.145651>
- *Gong, Y., C. L. Staudhammer, S. Wiesner, **G. Starr**, Y. Zhang (2021). Characterizing Growing Season Length of Subtropical Coniferous Forests with a Phenological Model. *Forests*. 12, 95. <https://doi.org/10.3390/f12010095>

- *Wiesner, S., **G. Starr**, L. R. Boring, J. Cherry, P. C. Stoy, C. L. Staudhammer (2020). Variations in metabolic energy efficiency and entropy production during temperature extremes across a longleaf pine savanna. *Agricultural and Forest Meteorology*. doi.org/10.1016/j.agrformet.2020.108252
- Hogan, J. A., R. A. Feagin, **G. Starr**, M. Ross, T. C. Lin, C. O'Connell, B. A. Stauffer, K. L. Robinson, M. Chapela Lara, J. Xue, B. K. Reese, S. J. Geist., E. R. Whitman, S. Douglas, V. M. Congdon, J. W. Reustle, R. S. Smith, D. Lagomasino, B. A. Strickland, S. S. Wilson, C. E. Proffitt, J. D. Hogan, B. L. Branoff, A. R. Armitage, S. A. Rush, R. O. Santos, M. Campos-Cerqueira, P. A. Montagna, B. Erisman, L. Walker, W. L. Silver, T. A. Crowl, M. Wetz, N. Hall, X. Zou, S. C. Pennings, L. Wang, C. Chang, M. Leon, W. H. McDowell, J. S. Kominoski, C. J. Patrick (2020). A research framework to investigate ecosystem responses to tropical cyclones. *BioScience*. doi:10.1093/biosci/biaa034
- *Wiesner, S., P. C. Stoy, C. L. Staudhammer, **G. Starr** (2020). Using metabolic energy density metrics to understand differences in ecosystem function during drought. *JGR-Biogeosciences*. doi:10.1029/2019JG005335
- Natali, S. M., J. D. Watts, S. Potter, B. M. Rogers, S. M. Ludwig, A. K. Selbmann, P. F. Sullivan, B. W. Abbott, K. A. Arndt, L. Birch, M. P. Björkman, A. Bloom, G. Celis, T. R. Christensen, C. T. Christiansen, R. Commene, E. J. Cooper, P. Crill, C. Czimczik, S. Davydov, J. Du, J. E. Egan, B. Elberling, E. S. Euskirchen, T. Friborg, H. Genet, M. Göckede, J. P. Goodrich, P. Grogan, M. Helbig, E. E. Jafarov, J. D. Jastrow, A. A. M. Kalhori, Y. Kim, J. Kimball, L. Kutzbach, M. J. Lara, K. S. Larsen, M. M. Loranty, M. Lund, M. Lupascu, N. Madani, A. Malhotra, J. McFarland, A. D. McGuire, A. Michelsen, C. Minions, W. C. Oechel, D. Olefeldt, F. J. W. Parmentier, N. Pirk, B. Poulter, W. Quinton, F. Rezanezhad, D. Risk, T. Sachs, K. Schaefer, J. Schimel, N. M. Schmidt, E. A.G. Schuur, P. R. Semenchuk, G. Shaver, O. Sonnentag, **G. Starr**, C. C. Treat, M. P. Waldrop, Y. Wang, J. Welker, C. Wille, X. Xu, Z. Zhang, Q. Zhuang, D. Zona (2019). Substantial carbon losses from the Arctic during the winter shift the Arctic to a carbon source under current and future climates. *Nature Climate Change*. 9(11), 852-857.
- Flanagan, S. A., E. L. Loudermilk, S. Bhotika, C. Hawley, **G. Starr**, S. Wiesner, J. K. Hiers, J. J. O'Brien, S. Goodrick, M. A. Callahan, R. M. Scheller, K. D. Klepzig, R. S. Taylor (2019). Quantifying carbon and species dynamics under different fire regimes in a southeastern U.S. pineland. *Ecosphere*. 10(6): e02772. 10.1002/ecs2.2772
- ^ΦZhao, J., S. L. Malone, S. F. Oberbauer, P. C. Olivas, J. L. Schedlbauer, C. L. Staudhammer, **G. Starr** (2019). Intensified inundation shifts a freshwater wetland from a CO₂ sink to a source. *Global Change Biology*. doi.org/10.1111/gcb.14718
- *Wiesner, S., P. C. Stoy, C. L. Staudhammer, L. R. Boring, **G. Starr** (2019). Quantifying ecosystem energy use efficiency via maximum entropy production: A case study from longleaf pine ecosystems. *Biogeosciences*. doi.org/10.5194/bg-16-1845-2019
- ^υ*Wiesner, S., C. L. Staudhammer, C. Javaheri, J. K. Hiers, L. R. Boring, R. Michell, **G. Starr** (2019). The role of understory phenology and productivity on the carbon dynamics of Longleaf Pine Savannas. *Ecosphere*. 10(4): e02675. 10.1002/ecs2.2675
- Hiers, J.K., C. L. Staudhammer., J. Hom, J. J. O'brien, H. L. Gholz, T. A. Martin, **G. Starr** (2019). Fuel Moisture Dynamics for a flatwood pine ecosystem with a Palmetto (*Serenoa repens*) dominated understory. *Agricultural and Forest Meteorology*. doi:10.1016/j.agrformet.2018.11.038
- Griffiths, N. A., B. M. Rau, K. B. Vaché, **G. Starr**, M. M. Bitew, D. P. Aubrey, J. A. Martin, E. Benton, C. R. Jackson (2018). Environmental effects of short-rotation woody crops for bioenergy: what is and isn't known. *Global Change Biology, Bioenergy*. doi.org/10.1111/gcbb.12536
- ^ΦZhao, J., P. C. Olivas, S. Kunwor, S. L. Malone, C. L. Staudhammer, **G. Starr**, S. F. Oberbauer (2018). Comparison of sensible heat flux measured by large aperture scintillometer and eddy covariance in a seasonally inundated wetland. *Agricultural and Forest Meteorology*. 259, 345-354.
- Roberti, J. A., E. Ayres, H. W. Loescher, J. Tang, **G. Starr**, D. J. Durden, D. E. Smith, E. de la Reguera, K. Morkeski, M. McKlveen, H. Benstead, M. D. San Clements, R. Lee, M. Gebremedhin, R. C.

- Zulueta (2018). A robust calibration method for Continental-scale soil water content measurements. *Vadose Zone*. doi: 10.2136/vzj2017.10.0177
- ^ΦZhao, J., S. F. Oberbauer, P. C. Olivas, J. L. Schedlbauer, J. L. May, J. G. Moser, S. Malone, C. L. Staudhammer, **G. Starr** (2018). Contrasting photosynthetic responses of co-dominant macrophytes to seasonal inundation: implications for future hydrological changes in Everglades freshwater marshes. *Wetlands*. doi.org/10.1007/s13157-018-1038-1
- Kleindl, W. J., P. C. Stoy, M. Binford, A.R. Desai, M. C. Dietze, C. Schultz, **G. Starr**, C. Staudhammer, D. J. A. Wood. (2018). Toward a Socioecological Theory of Forest Macrosystem Ecology. *Forests*. doi:10.3390/f9040200
- *Wiesner, S., H. W. Loescher, C. L. Staudhammer, A. Baron, C. L., L. Boring, R. J. Mitchell, **G. Starr** (2018). Interactions among abiotic drivers, net ecosystem exchange, and soil respiration in a subtropical savanna. *Ecosystems*. doi.org/10.1007/s10021-018-0246-0
- ***Starr, G.**, J. R. Jarnigan, C. L. Staudhammer, J. A. Cherry (2018). Variation in ecosystem carbon dynamics of saltwater marshes in the northern Gulf of Mexico. *Wetland Ecology and Management*. doi.org/10.1007/s11273-018-9593-z
- Chang, K., L. Xu, **G. Starr**, K. T. Paw U (2017). A Drought Indicator reflecting Ecosystem Responses to Water Availability: The Normalized Ecosystem Drought Index. *Agricultural and Forest Meteorology*. doi.org/10.1016/j.agrformet.2017.12.001
- Kunwor, S., **G. Starr**, H.W. Loescher, and C.L. Staudhammer (2017) Preserving the variance of long-term eddy-covariance measurements using parameter prediction in gap filling. *Agricultural and Forest Meteorology*. 232, 635 - 649.
- Viner, B., M. Parker, P. Varnedoe, M. Leclerc, **G. Starr**, D. Aubrey, G. Zhang, H. Duarte (2016). Micrometeorological conditions before, during, and after a prescribed fire in a longleaf pine forest. *Journal Geophysical Research-Biogeosciences*. http://doi: 10.1002/2016JG003351
- Blood, A., **G. Starr**, F. Escobedo, A. Chappelka, E. Wiseman, R. Sivakumar, and C.L. Staudhammer (2016) Resolving uncertainties in allometric relationships for urban trees of the Southeastern United States: local and general equations for 98 common species. *Urban Forestry and Urban Greening*. 20, 282 – 294.
- *Malone, S.L., J. Barr, J. Fuentes, S. F. Oberbauer, C. L. Staudhammer, E. Gaiser, **G. Starr** (2016). Sensitivity to low temperature episodes: implications for CO2 dynamics in coastal wetland ecosystems. *Wetlands*. doi:10.1007/s13157-016-0810-3
- Blood, A., **G. Starr**, F. Escobedo, A. Chappelka and C.L. Staudhammer (2016). How do urban forests compare? Tree diversity in urban and periurban forests of the Southeastern US. *Forests*. doi:10.3390/f7060120
- ***Starr, G.**, C. L. Staudhammer, S. Wiesner, S. Kunwor, H. W. Loescher, A. F. Baron, A. Whelan, R. J. Mitchell, L. Boring (2016). Carbon dynamics of *Pinus palustris* ecosystems following drought. *Forests*. http://doi:10.3390/f7050098
- Abbott, B.W., J. B. Jones, E. A. G. Schuur, F. S. Chapin III, W. B. Bowden, H. Epstein, M. Flannigan, T. K. Harms, T. N. Hollingsworth, M. C. Mack, S. M. Natali, A. V. Rocha, S. E. Tank, M. R. Turetsky, J. E. Vonk, K. P. Wickland, G. R. Aiken, H. D. Alexander, R. M. W. Amon, B. W. Benschoter, Y. Bergeron, K. Bishop, O. Blarquez, B. Bond-Lamberty, A. L. Breen, I. Buffam, Y. Cai, C. Carcaillet, S. K. Carey, J. M. Chen, H. Chen, T. R. Christensen, L. W. Cooper, J. H. C. Cornelissen, W. de Groot, T. H. DeLuca, E. Dorrepaal, N. Fetcher, J. C. Finlay, B. C. Forbes, N. H. F. French, S. Gauthier, M. P. Girardin, S. J. Goetz, J. G. Goldammer, L. Gough, P. Grogan, L. Guo, P. E. Higuera, L. Hinzman, F. S. Hu, G. Hugelius, E. E. Jafarov, R. Jandt, J. F. Johnstone, J. Karlsson, E. S. Kasischke, G. Kattner, R. Kelly, F. Keuper, G. W. Kling, P. Kortelainen, J. Kouki, P. Kuhry, H. Laudon, I. Laurion, R. W. Macdonald, P. J. Mann, P. J. Martikainen, J. W. McClelland, U. Molau, S. F. Oberbauer, D. Olefeldt, D. Paré, M. A. Parisien, S. Payette, C. Peng, O. S. Pokrovsky, E. B. Rastetter, P. A. Raymond, M. K. Reynolds, G. Rein, J. F. Reynolds, M. Robards, B. M. Rogers, C. Schädel, K. Schaefer, I. K. Schmidt, A. Shvidenko, J. Sky, R. G. M. Spencer, **G. Starr**, R. G. Striegl, S. E. Tank, R. Teisserenc, L. J. Tranvik, T. Virtanen, J. M.

- Welker, S. Zimov (2016). Biomass offsets little or none of permafrost carbon release from soils, streams, and wildfire. An expert assessment. *Environmental Research Letters*. 11(3): 034014. <http://doi:10.1088/1748-9326/11/3/034014>.
- Moser, J.G., S. F. Oberbauer, L. S. L. Sternberg, P. Z. Ellsworth, **G. Starr**, B. Mortazavi, P. C. Olivas (2016). Water uptake of Arctic tundra evergreens during the Alaskan winter-spring transition. *American Journal of Botany*. 103(2): 1-9.
- Zhou, Y., X. Wu, W. Ju, J. M. Chen, S. Wang, Huimin Wang, W. Yuan, A. Black, R. Jassal, A. Ibrom, S. Han, J. Yan, H. Margolis, O. Roupsard, Y. Li, F. Zhao, G. Kiely, **G. Starr**, M. Pavelka, L. Montagnani, G. Wohlfahrt, P. D'Odorico, D. Cook, M. A. Arain, D. Bonal, J. Beringer, P. Blanken, B. Loubet, M. Leclerc, G. Matteucci, Z. Nagy, J. Olejnik, K. Paw U, A. Varlagin (2015). Global parameterization and validation of a two-leaf light use efficiency model for predicting gross primary production across FLUXNET sites. *Journal Geophysical Research-Biogeosciences*. DOI: 10.1002/2014JG002876.
- Khorsand Rosa, R., S. Oberbauer, **G. Starr**, E. Pop, L. Ahlquist, I. Parker and T. Baldwin (2015). Plant phenological responses to a long-term experimental extension of growing season and soil warming in tussock tundra of Alaska. *Global Change Biology*. DOI: 10.1111/gcb.13040.
- *Whelan, A., **G. Starr**, C. L. Staudhammer, H. W. Loescher and R. Mitchell (2015). Energy exchange in frequently burned longleaf pine ecosystems along an edaphic moisture gradient. *Ecosphere*. 6(7):128. <http://dx.doi.org/10.1890/ES15-00111.1>.
- Φ*Malone, S.L., C. Keough, C.L. Staudhammer, M.G. Ryan, W.J. Parton, S.F. Oberbauer, P. Olivas, J. Schedlbauer, **G. Starr** (2015). Ecosystem persistence in the face of climate change: A case study from the freshwater marshes of the Florida Everglades. *Ecosphere*. 6(4):57. <http://dx.doi.org/10.1890/ES14-00404.1>.
- ΦBecknell, J.M., A. Desai, M. Dietze, **G. Starr**, J. Franklin, A. Pourmokhtarian, J. Hall, P. Stoy, P. Duffy, M. Binford, C. L. Staudhammer (2015). Assessing the effects of interactions among changing climate, management, and disturbance on forest ecosystems. *Biosciences*. 65(3), 263 – 274.
- ***Starr, G.**, C. L. Staudhammer, H. W. Loescher, R. Mitchell, A. Whelan, J. K. Hiers, J. J. O'Brien (2015). Time series analysis of forest carbon dynamics: recovery of *Pinus palustris* physiology following a prescribed. *New Forests*. DOI: 10.1007/s11056-014-9447-3.
- Φ*Malone, S.L., C.L. Staudhammer, S.F. Oberbauer, P. Olivas, M.G. Ryan, J. Schedlbauer, H. Loescher, **G. Starr** (2014). The El Niño Southern Oscillation (ENSO) enhances CO2 exchange rates in freshwater marsh ecosystems in the Florida Everglades. *PLoS ONE*. 10.1371/journal.pone.0115058.
- Φ*Malone, S.L., C.L. Staudhammer, H. Loescher, P. Olivas, S.F. Oberbauer, M.G. Ryan, J. Schedlbauer, **G. Starr** (2014). Hydrological influences on energy partitioning of two freshwater marsh ecosystems in the Florida Everglades. *Journal Geophysical Research-Biogeosciences*. DOI: 10.1002/2014JG002700.
- Mitchell, R.J., Y. Liu, J.J. O'Brien, K.J. Elliott, **G. Starr**, C.F. Maniat, J.K. Hiers (2014). Future Climate and Fire Interactions in the Southeastern Region of the United States. *Forest Ecology and Management*. <http://dx.doi.org/10.1016/j.foreco.2013.12.003>.
- Troxler, T.G., E. Gaiser, J. Barr, J. Fuentes, R. Jaffe, D.L. Childers, L. Collado-Vides, V. Rivera-Monroy, E. Castenada, W. Anderson, R. Chambers, M. Chen, C. Coronado-Molina, S.E. Davis, V. Engel, C. Fitz, J. Fourqurean, T. Frankovich, J. Kominoski, C. Madden, S.L. Malone, S.F. Oberbauer, P. Olivas, R. Price, J. Richards, C. Saunders, J. Schedlbauer, L. Scinto, F. Sklar, T. Smith, J. Smoak, **G. Starr**, R. Twilley, K. Whelan (2013). Integrated carbon budget models for the Everglades terrestrial-coastal-oceanic gradient: current status and needs for inter-site comparisons. *Oceanography*. dx.doi.org/10.5670/oceanog.2013.51.
- *Malone, S., **G. Starr**, C. L. Staudhammer, and M. G. Ryan (2013). Effects of simulated drought on the greenhouse carbon balance of Everglades short-hydroperiod marsh ecosystems. *Global Change Biology*. DOI: 10.1111/gcb.12211.

- Potosnak, M.J., B. M. Baker, L. LeSturgeon, S. Disher, K. L. Griffin, M. S. Bret-Harte, **G. Starr** (2013). Isoprene emissions from a tundra ecosystem. *Biogeosciences*. 10, 871-889. DOI: 10.5194/bg-10-1-2013.
- *Whelan, A., R. Mitchell, C. L. Staudhammer, **G. Starr** (2013). The cyclic occurrence of fire and its role in carbon dynamics along an edaphic moisture gradient in longleaf pine ecosystems. *PLoS ONE*. 8(1): e54045. DOI 10.1371/journal.pone.0054045.
- ^ΦPatankar, R., B. Mortazavi, S. Oberbauer and **G. Starr** (2013) Diurnal patterns of gas-exchange and metabolic pools in tundra plants during three phases of the arctic growing season. *Ecology and Evolution*. DOI: 10.1002/ece3.467.
- ^{Φv}Patankar, R., **G. Starr**, B. Mortazavi, S. Oberbauer, A. Rosenblum (2013). The effects of mite galling on the ecophysiology of two arctic willows. *Arctic Antarctic and Alpine Research*. 45(1), 99-106.
- ^Φ*Jimenez, K. L., **G. Starr**, C. L. Staudhammer, J. L. Schedlbauer, H. W. Loescher, and S.F. Oberbauer (2012). Carbon dioxide exchange rates from short- and long-hydroperiod Everglades freshwater marsh. *Journal Geophysical Research-Biogeosciences*. DOI: 10.1029/2012JG002117
- *Wright, J. K., M. Williams, **G. Starr**, J. McGee, R. Addington, R. J. Mitchell (2012). Measuring and modelling the productivity of *Pinus palustris* across a soil moisture gradient. *Plant Cell and Environment*. DOI: 10.1111/j.1365-3040.2012.02590.x.
- ^ΦGenet, H., S. F. Oberbauer, S. Colby, C. Staudhammer and **G. Starr** (2012). Growth responses of *Sphagnum* spp. to a season lengthening manipulation in the arctic tundra of Alaska. *Polar Biology*. DOI: 10.1007/s00300-012-1236-x.
- ^ΦSchedlbauer, J. L., J. W. Munyon, S. F. Oberbauer, E. E. Gaiser, **G. Starr** (2012). Controls on ecosystem carbon dioxide exchange in short- and long-hydroperiod Florida Everglades freshwater marshes. *Wetlands*. DOI:10.1007/s13157-012-0311-y.
- Bracho, R., **G. Starr**, H. L. Gholz, T. A. Martin, W. P. Cropper Jr., and H. W. Loescher (2012). Controls on carbon dynamics by ecosystem structure and climate for southeastern U.S. pine plantations. *Ecological Monographs*. 82, 101 -128.
- ^Φ*Schedlbauer, J. L., S. F. Oberbauer, **G. Starr**, K. L. Jimenez (2011). Controls on sensible heat and latent energy fluxes from a short-hydroperiod Florida Everglades marsh. *Journal of Hydrology*. 411, 331-341.
- Yuan, W., Y. Luo, X. Li, S. Liu, G. Yu, T. Zhou, M. Bahn, A. Black, A. R. Desai, A. Cescatti, B. Marcolla, C. Jacobs, J. Chen, M. Aurela, C. Bernhofer, B. Gielen, G. Bohrer, D. R. Cook, D. Dragoni, A. L. Dunn, D. Gianelle, T. Grünwald, A. Ibrom, M. Y. Leclerc, A. Lindroth, H. Liu, L. Belelli Marchesini, L. Montagnani, G. Pita, M. Rodeghiero, A. Rodrigues, **G. Starr** and P. C. Stoy (2011). Redefinition and global estimation of basal ecosystem respiration rate. *Global Biogeochemical Cycles*. doi:10.1029/2011GB004150.
- Xiao, J., Q. Zhuang, B. E. Law, D. D. Baldocchi, J. Chen, A. D. Richardson, J. M. Melillo, K. J. Davis, D. Y. Hollinger, S. Wharton, R. Oren, A. Noormets, M. L. Fischer, S. B. Verma, D. R. Cook, G. Sun, S. McNulty, S. C. Wofsy, P. V. Bolstad, S. P. Burns, P. S. Curtis, B. G. Drake, M. Falk, D. R. Fosterv, L. Gu, J. L. Hadley, G. G. Katul, M. Litvak, S. Ma, T. A. Martin, R. Matamala, T. P. Meyers, R. K. Monson, J.W. Munger, W. C. Oechel, K. T. Paw U, H. P. Schmid, R. L. Scott, **G. Starr**, A. E. Suyker, M. S. Torn (2011). Assessing net ecosystem carbon exchange of U.S. terrestrial ecosystems by integrating eddy covariance flux measurements and satellite observations. *Agricultural and Forest Meteorology*. 151, 60-69.
- McDermitt, D., G. Burba, L. Xu, T. Anderson, A. Komissarov, J. Schedlbauer, **G. Starr**, D. Zona, W. Oechel, S. Oberbauer, and S. Hastings (2010). A low-power, open path instrument for measuring methane flux by eddy covariance. *Applied Physics B*. DOI 10.1007/s00340-010-4307-0.
- Amiro, B. D., A. G. Barr, J. G. Barr, T. A. Black, R. Bracho, M. Brown, J. Chen, K. L. Clark, K. J. Davis, A. R. Desai, S. Dore, V. Engel, J. D. Fuentes, M. L. Goulden, T. E. Kolb, M. B. Lavigne, B. E. Law, H. A. Margolis, T. Martin, J. H. McCaughey, M. Montes-Helu, A. Noormets, J. T. Randerson, **G. Starr**, J. Xiao (2010). Ecosystem carbon dioxide fluxes after disturbance in

- forests of North America. *Journal of Geophysical Research – Biogeosciences*. 115, G00K02, doi:10.1029/2010JG001390.
- Yi, C., D. Ricciuto, X. Xu, R. Li, M. Nilsson, L. Aires, J. D. Albertson, B. Amiro, C. Ammann, M. A. Arain, A. C. de Araujo, M. Aubinet, M. Aurela, D. D. Baldocchi, Z. Barcza, A. Barr, P. Berbigier, J. Beringer, C. Bernhofer, A. T. Black, P. V. Bolstad, F. C. Bosveld, M. S. J. Broadmeadow, N. Buchmann, S. P. Burns, P. Cellier, J. Chen, J. Chen, P. Ciais, R. Clement, B. D. Cook, P. S. Curtis, D. B. Dail, K. J. Davis, E. Dellwik, N. Delapierre, A. R. Desai, H. Dolman, S. Dore, D. Dragoni, B. G. Drake, E. Dufrêne, A. Dunn, J. Elbers, W. Eugster, M. Falk, C. Feigenwinter, L. B. Flanagan, T. Foken, J. Frank, J. Fuhrer, D. Gianelle, A. Goldstein, M. Goulden, A. Granier, T. Grünwald, L. Gu, H. Guo, A. Hammerle, S. Han, N. P. Hanan, L. Haszpra, B. Heinesch, C. Helfter, D. Hendriks, D. Y. Hollinger, L. B. Hutley, A. Ibrom, C. Jacobs, T. Johansson, M. Jongen, G. Katul, G. Kiely, K. Klumpp, A. Knohl, T. Kolb, W. L. Kutsch, P. Lafleur, T. Laurila, B. E. Law, R. Leuning, A. Lindroth, H. Liu, B. Loubet, G. Manca, M. Marek, H. A. Margolis, T. A. Martin, W. J. Massman, R. Matamala, G. Matteucci, H. McCaughey, L. Merbold, T. Meyers, M. Migliavacca, F. Miglietta, L. Misson, M. Mölder, J. Moncrieff, R. K. Monson, L. Montagnani, M. Montes-Helu, E. Moors, C. Moureaux, M. M. Mukelabai, J. W. Munger, M. Myklebust, Z. Nagy, A. Noormets, W. Oechel, R. Oren, S. G. Pallardy, D. Papale, K. T. Paw U, J. S. Pereira, K. Pilegaard, K. Pintér, C. Pio, G. Pita, T. L. Powell, S. Rambal, J. T. Randerson, C. von Randow, C. Rebmann, M. Reichstein, A. D. Richardson, J. Rinne, F. Rossi, N. Roulet, R. J. Ryel, J. Sagerfors, N. Saigusa, M. J. Sanz, G. S. Mugnozza, H. P. Schmid, G. Seufert, M. Siqueira, J. F. Soussana, **G. Starr**, P. Stoy, M. A. Sutton, J. Tenhunen, Z. Tuba, J. P. Tuovinen, R. Valentini, T. Vesala, C. S. Vogel, S. Wang, W. Wang, L. R. Welp, X. Wen, S. Wharton, M. Wilkinson, C. A. Williams, S. C. Wofsy, G. Wohlfahrt, S. Yamamoto, G. Yu, R. Zampieri, X. Zhang, B. Zhao, X. Zhao (2010). Climate control of terrestrial carbon exchange across biomes and continents. *Environmental Research Letters*. doi:10.1088/1748-9326/5/034007.
- ^Φ*Schedlbauer, J. L., S. F. Oberbauer, **G. Starr**, K. L. Jimenez (2010). Seasonal differences in the CO₂ exchange of a short-hydroperiod Florida Everglades marsh. *Agricultural and Forest Meteorology*. 150: 994-1006.
- Xiao, J., Q. Zhuang, B. E. Law, J. Chen, D. D. Baldocchi, D. R. Cook, R. Oren, A. D. Richardson, S. Wharton, S. Ma, T. A. Martin, S. B. Verma, A. E. Suyker, R. L. Scott, R. K. Monson, M. Litvak, D. Y. Hollinger, G. Sun, K. J. Davis, P. V. Bolstad, S. P. Burns, P. S. Curtis, B. G. Drake, M. Falk, M. L. Fischer, D. R. Foster, L. Gu, J. L. Hadley, G. G. Katul, R. Matamala, S. McNulty, T. P. Meyers, J. W. Munger, A. Noormets, W. C. Oechel, K. T. Paw U, H. P. Schmid, **G. Starr**, M. S. Torn, S. C. Wofsy (2010). A continuous measure of gross primary production for the conterminous U.S. derived from MODIS and AmeriFlux data. *Remote Sensing of Environment*. 114: 576-591.
- Lavoie, M., **G. Starr**, M. C. Mack, T. A. Martin, H. L. Gholz (2010). Impact of prescribed fire on understory biomass production and nutrient availability in a naturally regenerated longleaf pine-slash pine forest in north central Florida. *Natural Areas Journal*. 30(1): 82-94.
- Mitchell, R. J., J. K. Hiers, J. J. O'Brien, **G. Starr** (2009). Ecological forestry in the southeast: understanding the ecology of fuels. *Journal of Forestry*. 391-397.
- Yuan, W., Y. Luo, A. D. Richardson, R. Oren, S. Luyssaert, I. A. Janssens, R. Ceulemans, X. Zhou, T. Grünwald, M. Aubinet, C. Bernhofer, D. D. Baldocchi, J. Chen, A. L. Dunn, J. Deforest, D. Dragoni, A. H. Goldstein, E. Moors, J. W. Munger, R. K. Monson, A. E. Suyker, **G. Starr**, R. L. Scott, J. Tenhunen, S. B. Verma, T. Vesala, S. C. Wofsy (2009). Latitudinal Patterns of Magnitude and Interannual variability in net ecosystem exchange regulated by biological and environmental variables. *Global Change Biology*. doi 10.1111/j.1365-2486.2009.01870.x .
- Xiao, J., Q. Zhuang, D. D. Baldocchi, B. E. Law, A. D. Richardson, J. Chen, R. Oren, **G. Starr**, A. Noormets, S. Ma, S. B. Verma, S. Wharton, S. Wofsy, P. Bolstad, S. P. Burns, D. R. Cook, P. S. Curtis, B. G. Drake, M. Falk, M. L. Fischer, D. R. Foster, L. Gu, J. L. Hadley, D. Y. Hollinger, G. G.

- Katul, M. Litvak, T.A. Martin, R. Matamala, S. McNulty, T.P. Meyers, R.K. Monson, J.W. Munger, W.C. Oechel, K.T. Paw U, H. P. Schmid, R.L. Scott, G. Sun, A.E. Suyker, M.S. Torn (2008). Estimation of net ecosystem carbon exchange for the conterminous United States by Combining MODIS and AmeriFlux Data. *Agricultural and Forest Meteorology*. 148, 1827-1847.
- Powell, T., H. L. Gholz, K. L. Clark, **G. Starr**, W. P. Cropper, and T. A. Martin (2008). Carbon exchange of a mature, naturally regenerated slash pine forest in North Florida. *Global Change Biology*. 14, 1-16.
- Karipot, A., M. Y. Leclerc, G. Zhang, G. Hendrey, K. Lewin, J. Nagy, and **G. Starr** (2008). On the influence of low-level jets on nocturnal CO₂ flux measurements. *Journal of Geophysical Research*. 113, D10102, doi:10.1029/2007JD009149.
- Starr, G.**, S. F. Oberbauer, L. A. Alhquist (2008). The photosynthetic response of tundra plants to an experimental lengthening of the growing season and soil warming. *Arctic, Antarctic, and Alpine Research*. 40(1), 181-191.
- Oberbauer, S. F., C. E. Tweedie, J. M. Welker, J. T. Fahnestock, G. H. Henry, P. J. Webber, M.D. Walker, E. Elmore, A. Kuchy, and **G. Starr** (2007). Tundra carbon fluxes in response to experimental warming along moisture and latitudinal gradients. *Ecological Monographs*. 77(2), 221-238.
- Binford, M. W., H. L. Gholz, **G. Starr** and T. A. Martin (2006). Regional carbon dynamics of the Southeastern Coastal Plain: balancing ecosystem type, timber harvesting, environmental variation, and fire. *Journal of Geophysical Research*. 111, doi10.1029/2005JD006820.
- Loescher, H. W., **G. Starr**, T. A. Martin, M. Binford, H. L. Gholz (2006). The effect of daytime circulations on carbon dioxide flux measurements over a *Pinus elliottii* canopy. *Agricultural and Forest Meteorology*. 45, 1127-1140.
- Karipot, A., M. Y. Leclerc, G. Zhang, T. A. Martin, **G. Starr**, L. Hipps, S. Verma, D. Hollinger and D. Anderson. (2006). Impact of low-level jets on eddy-covariance fluxes inside and above a forest canopy. *Journal of Theoretical and Applied Climatology*. DOI 10.1007/500704-005-0183-7.
- Powell, T., **G. Starr**, K. L. Clark, H. L. Gholz, and T. A. Martin (2005). Water and energy exchange of a mature, naturally regenerated slash pine forest in North Florida. *Canadian Journal of Forest Research*. 35(7), 1568-1580.
- Starr, G.**, D.S. Newman, S.F. Oberbauer (2004). Ecophysiological analysis of two arctic sedges under reduced root temperatures. *Physiologia Plantarum*. 120, 458-464.
- Starr, G.**, and S.F. Oberbauer (2003). Photosynthesis of arctic evergreens under snow: Implications for tundra ecosystem carbon balance. *Ecology*. 84(6), 1415-1420.
- Pop, E.W., S. F. Oberbauer, **G. Starr** (2000). Predicting bud break in two arctic deciduous shrubs: *Betula nana* and *Salix pulchra*. *Oecologia*. 124, 176-184.
- Starr, G.**, S. F. Oberbauer, E. W. Pop (2000). Effects of lengthened growing season and soil warming on the phenology and physiology of *Polygonum bistorta*. *Global Change Biology*. 6, 357-369.
- Arft, A. M., M. D. Walker, J. Gurvitch, J. M. Alatalo, M. S. Bret-Harte, M. Dale, M. Diemer, F. Gugerli, G. H. R. Henry, M. H. Jones, R. D. Hollister, I. S. Jonsdottir, K. Laine, E. Levesque, G. M. Marion, U. Molau, P. Molgaard, U. Nordenhall, V. Raszhivin, C. H. Robinson, **G. Starr**, A. Stenstrom, M. Stenstrom, O. Totland, P. L. Turner, L. J. Walker, P. J. Webber, J. M. Welker, P. A. Wookey (1999). Responses of tundra plant species to experimental warming: meta-analysis of the International Tundra Experiment. *Ecological Monographs*. 69(4): 491-511.
- Oberbauer, S.F., **G. Starr**, and E.W. Pop (1998). Effects of extended growing season and soil warming on carbon dioxide and methane exchange of tussock tundra in Alaska. *Journal of Geophysical Research*. 103(D22): 29,075-29,082.

Other refereed publications

- Staudhammer, C. L., W. Kleindl, C. S. Fu, A. Desai, M. Dietze, P. Duffy, M. Marsik, C. Rollinson, C. Schultz, **G. Starr**, P. Stoy (2018). The future of US forest function under changing environment,

- disturbance, and forest management. *Geophysical Research Abstracts* Vol. 20, EGU2018-8857. European Geosciences Union General Assembly.
- Wiesner, S., P. C. Stoy, C. L. Staudhammer, **G. Starr** (2018). Metabolic energy density reveals biodiversity-related differences in resilience to disturbances in longleaf pine ecosystems. *Geophysical Research Abstracts* Vol. 20, EGU2018-3716. European Geosciences Union General Assembly.
- *Wright, J., M. Williams, R. Mitchell, **G. Starr**, and J. McGee (2011). Carbon-Water Interactions of Longleaf Pine Ecosystems. *Geophysical Research Abstracts* Vol. 13, EGU2011-702-1. European Geosciences Union General Assembly.

Book Chapters (refereed)

- Troxler, T. G., **G. Starr**, J. N. Boyer, J. D. Fuentes, and R. Jaffe (2019). Carbon Cycles in the Everglades Socio-Ecological System at a Multitude of Scales. The Dynamics of Social-Ecological Transformation in the South Florida Landscape. (eds. Childers, D., E. Gaiser, and L. Ogden). Oxford Press, UK.
- Oberbauer, S. F. and **G. Starr** (2002). The role of anthocyanins in photosynthesis of arctic evergreens during spring snowmelt (pp. 129-145). In: *Advances in Botanical Research, Why Leaves Turn Red: Anthocyanins in Vegetative Organs. Volume 37* (eds. Gould K. and Lee D.W.). Academic Press. San Diego, CA.

Published Data Archives

- Starr, G.** and S. F. Oberbauer (2025), AmeriFlux BASE US-EvM Everglades Saltwater intrusion marsh, Ver. 1-5, AmeriFlux AMP, (Dataset). <https://doi.org/10.17190/AMF/2229155>
- Starr, G.** (2021), AmeriFlux BASE US-LL1 Longleaf Pine - Baker (Mesic site), Ver. 1-5, AmeriFlux AMP, (Dataset). <https://doi.org/10.17190/AMF/1773395>
- Starr, G.** (2021), AmeriFlux BASE US-LL2 Longleaf Pine - Dubignion (Intermediate site), Ver. 1-5, AmeriFlux AMP, (Dataset). <https://doi.org/10.17190/AMF/1773396>
- Starr, G.** (2021), AmeriFlux BASE US-LL3 Longleaf Pine - Red Dirt (Xeric site), Ver. 1-5, AmeriFlux AMP, (Dataset). <https://doi.org/10.17190/AMF/1773397>
- Natali, S., J.D. Watts, S. Potter, B.M. Rogers, S. Ludwig, A. Selbmann, P. Sullivan, B. Abbott, K. Arndt, A.A. Bloom, G. Celis, T. Christensen, C. Christiansen, R. Commane, E. Cooper, P.M. Crill, C.I. Czimczik, S. Davydov, J. Du, J. Egan, B. Elberling, S.E. Euskirchen, T. Friborg, H. Genet, J. Goodrich, P. Grogan, M. Helbig, E. Jafarov, J. Jastrow, A. Kalhori, Y. Kim, J.S. Kimball, L. Kutzbach, M. Lara, K. Larsen, B. Lee, Z. Liu, M.M. Loranty, M. Lund, M. Lupascu, N. Madani, A. Malhotra, R. Matamala, J. McFarland, A. McGuire, A. Michelsen, C. Minions, W. Oechel, D. Olefeldt, F. Parmentier, N. Pirk, B. Poulter, W. Quinton, F. Rezanezhad, D. Risk, T. Sachs, K. Schaefer, N. Schmidt, E. Schuur, P. Semenchuk, G. Shaver, O. Sonnentag, **G. Starr**, C. Treat, M. Waldrop, Y. Wang, J. Welker, C. Wille, X. Xu, Z. Zhang, Q. Zhuang, and D. Zona (2019). Synthesis of Winter in Situ Soil CO₂ Flux in pan-Arctic and Boreal Regions, 1989-2017. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1692>
- Oberbauer, S. F. and **G. Starr** (2016). "AmeriFlux US-Elm Everglades (long Hydroperiod Marsh)". United States. [doi:10.17190/AMF/1246118](https://doi.org/10.17190/AMF/1246118). <http://www.osti.gov/scitech/servlets/purl/1246118>.
- Oberbauer, S. F., and **G. Starr** (2016). "AmeriFlux US-Esm Everglades (short Hydroperiod Marsh)". United States. [doi:10.17190/AMF/1246119](https://doi.org/10.17190/AMF/1246119). <http://www.osti.gov/dataexplorer/servlets/purl/1246119>.

Technical Reports:

- Bigelow, S.W., A.W. Whelan, J.B. Cannon, **G. Starr**, C. Staudhammer, G.R. Kenney, S.T. Brantley (2022). Planted longleaf pine stands in the face of a tropical cyclone. *In* Willis, JL, AB Self, CM Siegert, eds. 2022. Proceedings of the 21st Biennial Southern Silvicultural Research Conference. Gen. Tech Rep. SRS-268. Asheville, NC: US Department of Agriculture Forest Service, Southern Research Station. doi: 10.2737/SRS-GTR-268
- Griffiths, N. A., C. R. Jackson, J. I. Blake, J. Jeffers, B. M. Rau, **G. Starr**, K. Vaché (2019). Environmental effects of short-rotation loblolly pine production for bioenergy and evaluation of current forest best management practices. A technical input report (pp. 1-72) United States Department of Energy, BETO.
- Mitchell, R.J., K. L. Clark, M. D. Hurteau, B. J. Palik, M. E. Rocca, M. C. Wimberly, J. B. Bradford, P. M. Brown, J. J. Charney, B. Clinton, P. Z. Fulé, P. C. Goebel, R. S. H. Kennedy, Y. Liu, L. H. MacDonald, J. J. O'Brien, H. Renninger, R. Scheller, N. Skowronski, **G. Starr**, and A. H. Taylor (2013). Fire-Climate Interactions: A technical input report (pp. 1-174). National Climate Assessment. Washington D.C.

Scientific Presentations (Last 5 years; full list can be provided on request)

(* Represents graduate students and ^Φ postdoc authorship from my research group)

Keynote and Plenary lectures

- Jackson, C.R., D. Aubrey, S.E. Younger, **G. Starr**, K. Vache, M. Meles, N.A. Griffiths. 2022. Plot to Watershed-scale Effects of Forest Management on Water Budgets, Streamflows, and Nitrate Transport, SE U.S. Plenary Talk. DOE Environmental System Science PI Meeting, April 24-26.
- Starr, G.** 2016. Methane emissions across the Arctic: Questions, uncertainties, and the development of an observatory network across the region. Science across observatory networks workshop. European Commission. May 9-10. Zandvoort, Netherlands.

Invited Presentations

- Starr, G.**, R. Ruzol, S. Younger, C.L. Staudhammer, R. Jackson, D. P. Aubrey. 2022. Characterization of Water Use in a Cellulosic Biofuels Plantation: Are we trading water for carbon? Alabama Water Institute: Water Works Series. University of Alabama October 28. Tuscaloosa, AL.
- Staudhammer, C.L., J.K. Hiers, J.J. O'Brien, H.L. Gholz, T.A. Martin, **G. Starr**. 2021. Modeling fine dead fuel moisture in a saw palmetto (*Serenoa repens*) dominated understory: statistical adventures in cross-correlations. 9th International Fire Ecology and Management Congress, November 30-December 3, 2021. Virtual.
- Starr, G.**, C.L. Staudhammer, M. Binford, P. Stoy, H. W. Loescher. 2020. Land-Atmosphere Interactions in the Southeastern United States: Challenges and Opportunities for Research. Department of Energy ARM/ARS Faculty and PI Meeting. June 22-26. Virtual Meeting.
- Malone, S., S.F. Oberbauer, P.C. Olivas, J. Zhao, **G. Starr**, C.L. Staudhammer. 2019. Extreme events alter C dynamics across the Florida Everglades. Florida International University, Biology Seminar, November 18, Miami, FL.
- Starr, G.** 2019. A middle out approach to understanding ecosystem processes. National Science Foundation. October 25. Arlington, VA.
- Starr, G.**, C.L. Staudhammer, J. Zhao, S. Malone, S. Oberbauer. 2019. Response of Everglades freshwater marshes to hurricane Irma. NSF Ecosystem Responses to Hurricanes Synthesis Workshop. April 28-May 1, Corpus Christie, TX.
- Starr, G.**, C.L. Staudhammer, G. Kenney, S. Brantley, S. Bigelow. 2019. Response of Longleaf Pine Ecosystems to Hurricane Michael. NSF Ecosystem Responses to Hurricanes Synthesis Workshop. April 28-May 1, Corpus Christie, TX.

Starr, G., C. L. Staudhammer, S. Wiesner, A. Whelan. The Biogeochemical Cycles of a Subtropical Savanna Ecosystem. 2018. French National Institution of Agricultural Research (INRA), June 22. Lusignan, France.

Starr, G., C. L. Staudhammer, S. Wiesner, A. Whelan. Understanding the Biogeochemical Cycles of a Subtropical Savanna Ecosystem. 2018. AgroParisTech, April 27. Grignon, France.

Town Hall Organizer

Varner, R. K., H. W. Loescher, L. Bruhwiler, G. G. Burba, R. Commane, A. Contosta, P. M. Crill, M. Genazzio, J. P. Goodrich, S. L. Malone, **G. Starr**. 2020. Focusing Research Needs for a Distributed Methane Measurement Infrastructure for the United States. AGU. December 1-17. Virtual.

Other Presentations (Last five years)

Doughty, C., Q. Ying, E. Delaria, E. Ward, G. M. Wolfe, T. F. Hanisco, S. L. Malone, D. Reed, T. Troxler, E. Castaneda, W. B. Shoemaker, **G. Starr**, D. Yannick, S. F. Oberbauer, C. H. Amaral, A. Campbell, T. Fatoyinbo, A. Lindquist and B. Poulter. 2024. The BlueFlux Campaign: Daily blue carbon flux upscaling from tower and airborne sources reveals 20-year history of CO₂ and CH₄ ecosystem fluxes in the Everglades. American Geophysical Union Fall Meeting, December 09-13, Washington, D.C.

Panda, S. S., A. Atnurkar, D. Amatya, N. Vergopalan, A. C. Oishi, G. Sun, T. L. O'Halloran, and **G. Starr**. 2024. Artificial Intelligence Supported Remote Forest Evapotranspiration Estimation Algorithm Development with ECOSTRESS and SMAP Remotely Sensed Information. American Geophysical Union Fall Meeting, December 09-13, Washington, D.C.

Aguilos, M. M., G. Sun, N. Liu, Y. Zhang, **G. Starr**, A. C. Oishi, T. L. O'Halloran, J. Forsythe, J. Wang, M. Zhu, D. M. Amatya, B. Baniya, S. McNulty, A. Noormets and J. S. King. 2024. Synthesis of Ecosystem Evapotranspiration Across a Network of Flux Towers in the Southeast U.S. Geophysical Union Fall Meeting, December 09-13, Washington, D.C.

*Yannick, D., S. F. Oberbauer, C. L. Staudhammer, **G. Starr**. 2024. Carbon and Energy Fluxes of a Transitional Ecosystem in the Southeast Saline Everglades. Florida Coastal Everglades Long-term Ecological Research All Scientists Meeting, April 29, Miami, FL.

^u, *Trimm, S., D. Yannick, M. Cherry, C. Staudhammer, **G. Starr**. 2024. Leaf Area Index Analysis of *Pinus taeda* through Hemispherical Photography. University of Alabama – Undergraduate Research and Creative Activity Conference, Tuscaloosa, AL. March 26.

^u, *Steinmetz, C., D. Yannick, **G. Starr**, C. Staudhammer. 2024. Impact of Hurricane Ian on Net Ecosystem Exchange in Shark River Slough, Florida Everglades. University of Alabama – Undergraduate Research and Creative Activity Conference, Tuscaloosa, AL. March 26.

*Yannick, D., **G. Starr**, S. F. Oberbauer, C. L. Staudhammer, J. Cherry. 2023. Marsh to Mangrove – Carbon Dynamics of Coastal Wetlands in a Transitional State. Society of Wetland Scientists Annual Meeting, June 27. Spokane, WA.

*Yannick, D., **G. Starr**, S. F. Oberbauer, C. L. Staudhammer, J. Cherry. 2023. A Biometeorological Approach to Understanding Carbon Dynamics of Coastal Wetlands in Transition from Marsh to Mangrove. Alabama Water Institute Conference, April 6, Tuscaloosa, AL.

^u, *Jones, A., D. Yannick, C. Staudhammer, **G. Starr**. 2023. Comparing soil respiration from two pine forests in the Southeastern United States. Undergraduate Research & Creative Activity Conference (URCA), University of Alabama, April 11, 2023, Tuscaloosa, AL.

*Karimi, H., M. Binford, W. Kleindl, G. Starr. 2023. Modeling macroscale patterns of forest productivity in United States forests using geographically weighted regression. American Association of Geographers Annual Meeting, March 23-27, Denver, CO.

^ΦZhao, J., S. L. Malone, S. F. Oberbauer, C. L. Staudhammer, **G. Starr**. 2022. Investigating the Inundation Effect on Carbon Balance of an Everglades Freshwater Wetland: A Combination of

- Field Observations and Mesocosm Experiments. American Geophysical Union Fall Meeting, December 11-17, Chicago, IL.
- *Yannick, D., C. Staudhammer, S. F. Oberbauer, **G. Starr**. 2022. Carbon and Energy Dynamics in the Southeast Saline Everglades. University of Alabama Biofest Symposium, September 24, Tuscaloosa, AL.
- *Karimi, H, **G. Starr**, C. Staudhammer. 2022. Modeling spatial patterns of productivity in the US Southeast and Pacific Northwest regions. University of Alabama Biofest Symposium, September 24, Tuscaloosa, AL.
- *Arellano, K, C. Staudhammer, **G. Starr**. 2022. Comparing the Water and Light Use Of An Intensively Managed Loblolly Pine (*Pinus taeda* L.) Bioenergy Plantation To Conventional Loblolly Pine Plantations. University of Alabama Biofest Symposium, September 24, Tuscaloosa, AL.
- Wright-Osment, N., **G. Starr**, B. Mortazavi, S. Oberbauer, C.L. Staudhammer. 2022. Evaluating carbon allocation in Arctic plants photosynthesizing in the subnivean environment. 107th ESA Annual Meeting, August 14-19, Montreal, Canada.
- *Yu, Z., **G. Starr**, C.L. Staudhammer, S. Malone, S.F. Oberbauer. 2021. A Comparison of Methane Fluxes in Short- Versus Long-hydroperiod Freshwater Marsh in the Florida Everglades. American Geophysical Union Fall Meeting, December 13-17, New Orleans, LA.
- Starr, G.**, R. Ruzol, D. Aubrey, C.L. Staudhammer, S. Younger, H. Loescher, C. Jackson. 2021. Water use from an intensively managed loblolly pine plantation: implications of silviculturally-enhanced tree growth on stand evapotranspiration. American Geophysical Union Fall Meeting, December 13-17, New Orleans, LA.
- *Lambert, C., **G. Starr**, C.L. Staudhammer, S. Landry, M. Andreu, P. Ferguson. 2021. Comparing methods of addressing uncertainty in urban forestry damage assessments following Hurricane Irma using random forest and k-nearest neighbors. 106th ESA Annual Meeting, August 2-6, Virtual.
- Yu, Z. C. L. Staudhammer, **G. Starr**, S. Malone, S. F. Oberbauer. 2021. Identifying environmental drivers of methane fluxes in freshwater wetlands of the Florida Everglades. Ecological Society of America. August 2-6. Virtual.
- Yu, Z. C. L. Staudhammer, **G. Starr**, S. Malone, S. F. Oberbauer. 2021. Determining the Biotic and Abiotic Drivers of Methane Emissions for Freshwater Marshes of the Florida Everglades. Greater Everglades Ecosystem Restoration Science Conference (GEER). April 19-22, 26-29. Virtual.
- Ruzol, R., C.L. Staudhammer, D. Aubrey, H. Loescher, **G. Starr**. 2021. Genetically improved Loblolly Pine: current understanding of carbon-water tradeoffs and future trajectories for bioenergy crops. North American Carbon Program 7th Open Science Meeting. March, Virtual.
- ^ΦMalone, S. L., S. F. Oberbauer, J. Zhao, **G. Starr**, C. L. Staudhammer. 2020. Carbon Uptake Efficiency Across Wetland Ecosystems in the Florida Everglades. AGU. December 1-17. Virtual.
- Staudhammer, C. L., C. Lambert, **G. Starr**. 2020 Relationships Between Tree Diversity, Development, Socioeconomics and Eco-Climatic Characteristics in Urban Forests. Society of American Foresters National Convention, October 29-31. Virtual.
- *Gong, Y., G. Starr, S. Wiesner, C. L. Staudhammer. 2020. Characterization of subtropical coniferous forest and their response to prescribed fire using a photosynthesis-based phenology model. Ecological Society of America. August 3-6. Virtual.
- *Yu, Z., C. L. Staudhammer, S. Malone, S. F. Oberbauer, G. Starr, 2020. Drivers of methane emissions in freshwater marshes of the Florida Everglades. Ecological Society of America. August 3-6. Virtual.
- *Bigelow, S., A. Whelan, S. Brantley, G. Kenney, C. L. Staudhammer, **G. Starr**, J. B. Cannon. 2020. Planted longleaf pine stand in the face of a tropical cyclone: Allee effects. Ecological Society of America. August 3-6. Virtual.
- *Kenney, G., C. L. Staudhammer, S. Brantley, S. W. Bigelow, S. Wiesner, **G. Starr**. 2020. Understanding the structure and function of longleaf pine savanna affected by Hurricane Michael. Ecological Society of America. August 3-6. Virtual.

- *Lambert, C., **G. Starr**, S. Landry, M. Andreu, A. Koeser, C.L. Staudhammer. 2020. Resilient and resistant urban forests: the role of landscape configuration and socio-economic legacy in understanding tree response to hurricanes. HurriCon, February 27-28, Greenville, NC.
- *Kenney, G., C.L. Staudhammer, S. Brantley, S. Bigelow, S. Wiesner, **G. Starr**. 2020. Understanding changes in the structure and function of longleaf pine ecosystems following Hurricane Michael. HurriCon, February 27-28, Greenville, NC.

Research Grants and Contracts

Pending Funding

- Werth, D., T. Danielson, L. Dechaine, **G. Starr** 2025 - 2027. (UA: \$159,374). The Present and Future of the Southeastern United States Forest as a Carbon Repository. NASA-Carbon Cycling Sciences
- Starr, G.**, C. Staudhammer, D. Gann, S. Oberbauer 2025-2028 (UA: \$376,163). Collaborative Research: Saltwater flooding leads to a transitional state from coastal marsh to a mangrove forest in South Florida—NSF-Ecosystems Cluster.
- Kumar, M. and **G. Starr**. 2025-2028 (UA: \$999,987). Improving Energy and Water Partitioning in the Southeastern U.S. by Leveraging Machine Learning and the E3SM Land Model. DOE - Earth and Environmental Systems Science Research in the Southeast U.S.

Current Funding

- Starr, G.** 2024 - 2025 (\$91,108). Developing a Novel Forest Ecosystem to Mitigate CO₂ Emissions; Year 3. USFS-Savannah River National Lab. **(Funds are currently frozen)**
- Starr, G.** 2023 - 2025 (\$92,475). Developing a Novel Forest Ecosystem to Mitigate CO₂ Emissions; Year 2. USFS-Savannah River National Lab.
- Staudhammer, C.L., C. Atkinson, A. Shogren, **G. Starr**, K. Heinrich. 2024 -2027 (UA portion: \$2,976,918.00). RaMP: Woods to Water (W2W) for Training the Next Generation of Ecologists and Natural Resource Managers. NSF - RaMP Program
- Starr, G.**, 2021-2025 (\$194,111). Understanding the carbon, water, and energy exchange of a mature short wood rotation biofuels feedstock through harvest. USFS-Savannah River National Lab.

Prior Funding

- Sun, G., D. Amatya, J. Boggs, S. Brantley, R. Bracho, P. Caldwell, J. King, T. Martin, S. McNulty, C. Miniati, G. Moore, A. Noormets, T. O'Halloran, A. Oishi, Y. Ouyang, L. Samuelson, **G. Starr**, Q. Thomas, J. Wang, R. Will, Y. Yang, C. Zou. 2020-2022. (\$194,843). Quantifying Water Use by Southern Forests at Multiple Scales. USFS-Southern Station.
- Starr, G.**, C.L. Staudhammer, S. Bigelow, S. Brantley. 2019-2023 (\$228,762, **UA portion \$94,104**). RAPID: Understanding the resilience of longleaf pine savannas following Hurricane Michael. National Science Foundation (NSF) Ecosystem Sciences Cluster 1910811.
- Starr, G.**, C. L. Staudhammer, S. L. Malone, S. F. Oberbauer. 2017-2021 (**\$58,521**). Supplemental: Understanding the effects of increased freshwater inputs and saltwater intrusion on the current and future greenhouse carbon balance of Everglade wetlands. National Science Foundation (NSF) Atmospheric Chemistry Program.
- Starr, G.**, C. L. Staudhammer, S. L. Malone, S. F. Oberbauer. 2016-2021 (\$834,043, **UA portion \$433,442**). Collaborative Research: Understanding the effects of increased freshwater inputs and

- saltwater intrusion on the current and future greenhouse carbon balance of Everglade wetlands. National Science Foundation (NSF) Atmospheric Chemistry Program.
- Starr, G., C. L. Staudhammer, S. L. Malone, S. F. Oberbauer, 2017-2020 (\$197,375, UA portion \$71,612).** RAPID: Tipping the Greenhouse C Balance: Hurricane Irma's Role in Increasing the Global Warming Potential in Everglades Ecosystems. National Science Foundation (NSF) Atmospheric Chemistry Program.
- Starr, G., 2017-2020 (\$245,050).** Understanding Canopy Closure and Its Role in the Biogeochemical Cycles of a Woody Bioenergy Crop: Comparative Assessment of Water and Carbon Exchange in Native Longleaf Pine Forest. USFS-Savannah River National Lab.
- Griffiths, N., R. Jackson, K. Vache, **G. Starr, J. McDonnell, 2014-2020 (\$6,310,588, UA portion \$560,965).** Continuation: Understanding the environmental drivers of water use efficiency from a Woody Bioenergy Crop using Eddy Covariance Techniques. USDA Forest Service cooperative agreement.
- Starr, G., 2017-2018 (\$17,000).** Continuation of Eddy Covariance Studies at the Joseph Jones Ecological Research station. Joseph W. Jones Research Center.
- Loudermilk, E.L., J.J. O'Brien, M.A. Callahan, S.L. Goodrick, **G. Starr, L. Boring, C. Ford, 2014-2016 (\$500,000, UA portion \$25,614).** Long-Term Ecosystem Inventories: Assessing Availability and Scalability of C and N Data for Ecosystem Models to Inform Scope of Future Proposals. Department of Defense, SERDP.
- Staudhammer, C.L., **G. Starr, P. Duffy, M. Binford, R. Mitchell, L. Boring, A. Desai, M. Dietze, P. Stoy, J. Franklin, 2013-2017 (\$1,065,827, UA portion \$336,536).** Collaborative Research: Building forest management into Earth system modeling: Scaling from stand to continent. National Science Foundation (NSF) Emerging Frontiers, Macrosystems Biology.
- Starr G., S. F. Oberbauer, 2013-2016 (\$463,523, UA portion \$201,929).** Collaborative Research: Dynamics of ecosystem carbon dioxide and methane fluxes from the Florida Everglades: effects of hydrology and vegetation on the net radiative forcing. National Science Foundation (NSF) Atmospheric Chemistry Program.
- Starr, G., 2014 – 2015 (\$12,212).** Continuation of Eddy Covariance measurements at the Jones Ecological Center, years 6 and 7. Jones Center Research Foundation.
- Starr, G., 2013 - 2015 (\$404,960).** Developing soil moisture release and CO₂ diffusivity curves for NEON Core sites. NEON Inc. Boulder, CO.
- Starr G., B. Mortazavi, S. F. Oberbauer, 2008-2012 (\$1,151,000: UA portion \$714,419).** Collaborative Research: Cold-season gas exchange of arctic plants - resolving winter carbon and water balances of Alaskan arctic tundra. Arctic Natural Sciences, NSF.
- Starr G., 2011-2012 (\$8,186) Year 5: Continuation of Eddy Covariance Measurements at the Jones Ecological Research Center. Jones Center Research Foundation.**
- Starr G., B. Mortazavi, P. Sobecky, R. Findlay. 2010-2012 (\$118,730).** Collaborative Research: Anthropogenic influences on hydrologic conditions of the Florida Everglades: Microbial Interactions driving methane releases. University of Alabama Research Stimulation Grant.
- Cherry, J. **G. Starr, B. Mortazavi, 2011-2012. (\$95,382).** Impacts of the Deepwater Horizon oil/dispersant pollution on ecosystem functioning: Assessing C and N dynamics in salt marshes along an exposure gradient. BP oil spill fund.
- Starr G., 2011-2012 (\$20,007) Effects of the interaction of soil moisture availability and prescribed fire on the exchange of carbon dioxide, energy and water. Jones Center Research Foundation.**
- Oberbauer, S. F., **G. Starr, J.L. Schedlbauer, 2010-2011. (\$125,885: UA portion \$19,633).** Renewal: Response of carbon dioxide, water, and energy exchange of peat and marl wetlands in the Florida Everglades to changes in hydroperiod. National Institute for Climatic Change Research (NICCR), DOE.
- Starr G., 2012-2012 (\$8,339) Year 5: Eddy Covariance Measurements at the Jones Ecological Research Center. Jones Center Research Foundation.**

- Starr G.**, 2010-2011 (\$8,240) Eddy Covariance Measurements at the Jones Ecological Research Center. Jones Center Research Foundation.
- Oberbauer, S. F., E. E. Gaiser, **G. Starr**, 2007-2010. (\$484,803: **UA portion \$79,130**). Response of carbon dioxide, water, and energy exchange of peat and marl wetlands in the Florida Everglades to changes in hydroperiod. National Institute for Climatic Change Research (NICCR), DOE.
- Starr G.**, 2009-2010 (\$11,240) Continuation of Eddy Covariance Measurements at the Jones Ecological Research Center: A Preliminary Study. Jones Center Research Foundation.
- Martin T., **G. Starr**, W. Cropper, 2006-2009 (\$374,999). Reducing carbon cycle uncertainties in pine forests in the southeastern U.S. Coastal Plain. National Institute for Climatic Change Research (NICCR), DOE.
- Starr G.**, 2008-2009 (\$19,979). Establishment of Eddy Covariance Measurements at the Jones Ecological Research Center: A Preliminary Study. Jones Center Research Foundation.
- Starr, G.**, T.A. Martin, 2005-2007 (\$58,200). Improving the NFDRS by understanding understory dynamics of fuel loading and fuel moisture in Southeastern U.S. coastal plain forests in association with remote sensing and mapping techniques. U.S. Forest Service, Joint Fire Science Program.
- Martin T. A., H. L. Gholz, **G. Starr**, W. Cropper, K. L. Clark, 2003–2006 (\$570,000). Dynamics of carbon, water and energy fluxes for pine ecosystems in Florida: Recovery from perturbations and variation across the landscape. National Institutes for Global Environmental Change (NIGEC), Department of Energy.
- Starr, G.**, T.A. Martin., 2003-2005 (\$55,756). Improving the NFDRS by understanding understory dynamics of fuel loading and fuel moisture in Southeastern U.S. coastal plain forests. U.S. Forest Service, Joint Fire Science Program.
- Gholz, H. L., T. A. Martin, K. L. Clark, **G. Starr**, 2000-2004 (\$560,000). Long-term dynamics of carbon, water and energy fluxes for managed and natural pine ecosystems in Florida. National Institutes for Global Environmental Change (NIGEC), Department of Energy.

To date, total grant \$ as investigator or co-investigator: **\$17,558,062.00**

Awards

- 2022 Alabama Water Institute Distinguished Faculty Fellow
- 2020 Editors' Choice for Outstanding Research Paper December 2020, "Variations in metabolic energy efficiency and entropy production during temperature extremes across a longleaf pine savanna." *Agricultural and Forest Meteorology*. doi.org/10.1016/j.agrformet.2020.108252
- 2017 Fulbright Research Fellow – France.
- 2017 University of Alabama President's Faculty Research Award for Scholarly Excellence.
- 2017 Highlights of 2016, Editors' choice for 30 most influential papers for the publication, "Biomass offsets little or none of permafrost carbon release from soils, streams, and wildfire: an expert assessment. *Environmental News Letters*. erl.iop.org/highlights-2016
- 2013 EOS research spotlight. American Geophysical Union. *Highlighting important new research in the American Geophysical Union*. For the publication: Jimenez, K. et al (2012). Carbon dioxide exchange rates from short- and long-hydroperiod Everglades freshwater marsh. *Journal of Geophysical Research-Biogeosciences*. doi:10.1029/2012JG002117. Eos, Vol. 94, No. 5, 29 January.
- 2012 Norbert Gerbier-MUMM Award for carbon-climate links. World Meteorological Organization. For the publication: Yi et al. (2010). Climate control of terrestrial carbon exchange across biomes and continents. *Environmental Research Letters*, doi:10.1088/1748-9326/5/034007.
- NEON Inc. and American Geophysical Union (AGU). Young Scientist Capitol Hill Communications Training Fellowship. February 16-17, 2011. Washington, D.C.

University of Alabama, College of Arts and Sciences, Dean Top Ten Contract and Grant Award Recipients for 2007-08.

Mentoring

Post-Doctoral Scholars

Rajit Patankar – April 2011 - April 2012 (Current, Staff Scientist, NEON Inc.).

Helene Genet – March 2009 - December 2010 (Current, Assistant Research Professor, University of Alaska, Fairbanks).

Post-Doctoral Scholars Co-Advised

Sean Charles – Nov 2018 - Jan 2020 (Post-Doctoral Scientist, Coastal Studies Institute, NC).

Junbin Zhao – Oct 2016 - Nov 2018 (Current, Research Scientist, Norwegian Institute of Bioeconomy Research, Ecosystem Sciences).

Justin Cumming - Oct 2013 - Nov 2015 (Current, Santa Cruz, CA, District 3 Supervisor)

Paulo Olivas - October 2011 - September 2013 (Current, Assistant Professor, Florida International University)

Justin Becknell – July 2013 - June 2015. (Current, Associate Professor Colby College).

Debra Davis – September 2010 - July 2012. (Current, Associate Professor, Wingate University).

Jessica Schedlbauer – August 2007 - July 2010 (Current, Professor West Chester University).

Graduate Students Advised

(Student Chair)

D. Yannick (expected completion date: Spring 2027) - Ph.D. Dissertation, TBD

M. Cherry (expected completion date: Summer 2025) – M.S. Thesis, Evapotranspiration partitioning in a remnant *Pinus palustris* forest

D. Yannick (Degree: **Completed 12/2023**) – M.S. Thesis, "Carbon Dynamics of Coastal Wetlands Transitioning to an Alternative State."

N. Wright-Osment (Degree: **Completed 08/2022**) – M.S. Thesis, "Pervasive subnivean photosynthesis in vascular and non-vascular tundra plants facilitates recovery of energetic of metabolites."

Z. Yu (Degree: **Completed 12/2021**) – (Co-Chair) M.S. Thesis, "Determining the Environmental Drivers of Methane Emissions for Freshwater Marshes of the Florida Everglades"

R. Ruzol (Degree: M.S., **Completed 08/2021**) – M.S. Thesis, "Water use from a young loblolly pine bioenergy plantation: effects of intensive management on stand evapotranspiration."

G. Kenney (Degree: M.S., **Completed 05/2021**) – M.S. Thesis, "Effects of Hurricane Michael on the Structure, Function, and Recovery of a Longleaf Pine Savanna in Southwestern Georgia."

S. Wiesner (Degree: Ph.D., **Completed 08/2018**) – Ph.D. Dissertation, "Maximum Entropy and its Role in the Carbon and Energy Cycling of Subtropical Longleaf Pine Savannas."

S. George (Degree: M.S., **Completed 08/2017**) – M.S. Thesis, "Understanding the carbon, water, and energy exchange of a cellulosic biofuels feedstock of loblolly pine."

S. Malone (Degree: Ph.D., **Completed 08/2014**) – (Co-Chair) Ph.D. Student. Dissertation, "Hydrology drives Everglades ecosystem function: implications for ecosystem vulnerability to drought, energy balance, climate teleconnections and climate change."

J. Jarnigan (Degree: M.S., **Completed: 02/2013**) – M.S. Thesis, "Carbon Dynamics in Saltwater Marsh Ecosystems along a Productivity Gradient."

J. Wright (Degree: Ph.D., **Completed: 9/2012**) – (Co-Chair) – Ph.D. University of Edinburgh. Dissertation, "Fire and forest ecosystems in the south-eastern United States."

- A. Whelan (Degree: M.S., **Completed: 04/2012**) – M.S. Thesis, “Interaction of soil moisture availability and prescribed fire on the exchange of carbon dioxide, energy and water in longleaf pine forests.”
- K. Jimenez, (Degree: M.S., **Completed: 08/2010**) – M.S. Thesis, “A comparison of CO₂ Exchange Rates for Long- and Short-hydroperiod Everglades Marshes.”

(Committee member)

- C. Grant (expected completion date: Summer 2025) - U.A. Biological Sciences. Thesis, "TBD"
- E. Blackwell (expected completion date: Spring 2026) - U.A. Anthropology. Dissertation, "Human Health perception associated with climate change in the Mississippi Delta."
- F. Pushpendra (Ph.D. **Completed: Fall 2023**) - U.A. Civil Engineering. Dissertations: "Obtaining Accurate Estimates of Soil Moisture, Evapotranspiration, and Evapotranspiration partitions using Physical Modeling and Big Data Analytics."
- C. Lambert (Degree: M.S. **Completed 12/21**). U.A. Biological Sciences. “In consideration of uncertainty: accounting for imperfect detection in urban forest storm damage models”.
- R. Emery (Degree: M.S., **Completed 12/2020**). U.A. Geography. “Fuel dynamics of a longleaf pine woodland under a prescribed fire rotation: field-truthing laboratory burns”
- N. Temple (Degree: M.S., **Completed 06/2016**) U.A. Biological Sciences. “Resource allocation following hurricane sedimentation: Above- and below-ground plant responses along a sediment addition gradient.”
- S. Kunwor (Degree: M.S., **Completed 04/2016**) U.A. Biological Sciences. “Preserving the variance of long-term eddy-covariance measurements using parameter prediction in gap filling”.
- A. Blood (Degree: M.S., **Completed 04/2016**) U.A. Biological Sciences. “Resolving uncertainties in allometric relationships for urban trees of the southeastern United States: Local and general equations for 97 common species”.
- B. Wilson (Degree: M.S., **Complete 06/2013**) – U.A. Biological Sciences. “Coupled methane and carbon dioxide fluxes along a salinity gradient in Alabama coastal marshes.”
- R. Pine (Degree: M.S., **Completed 05/2011**) - Department of Geography, University of Alabama. “Patterns of Riparian and in-stream large Woody debris across contrasting stand ages in a South Appalachian Forest.”
- M. L. Buchanan (Degree: M.S., **Completed 05/2011**) - Department of Geography, University of Alabama. “A range-wide analysis and compensatory model of intra-tree radial growth release discrepancies for *Quercus alba*.”
- A. Brazwell (Degree: M.S., **Completed 09/2010**) – U.A. Biological Sciences, “The Interactive Effects of Hurricanes and Fire on Plant Productivity, Accretion and Elevation of a Saltwater Marsh at Grand Bay NERR, Mississippi.”

Undergraduate Students

Independent Research

- R. Pereyra (June 2024 - present) - TBD
- C. Steinmetz (October 2023 - July 2024) - Impact of Hurricane Ian on Net Ecosystem Exchange in Shark River Slough, Florida Everglades
- S. Trimm (May 2023 - May 2024) - "Understanding canopy phenological changes between southern conifer forests of different ages."
- A. Jones (November 2021 - December 2023) – "Understanding differences in soil respiration from forests with varying management strategies."
- M. Cherry (January 2022 - December 2022) – "Variation in the carbon, water, and energy dynamics of reclaimed agricultural lands in the Florida Panhandle."

- N. Wright-Osment (January 2018 – August 2020) – “Understanding the drivers of soil respiration in a rapidly developing biofuels feedstock plantation”.
- A. Hanson (January 2019 – May 2019) – “Understanding the Role of Hurricane Irma on the Carbon Dynamics of Everglades Freshwater Marshes.”
- L. Rivas (May 2017 – August 2018) – “Litterfall inputs to soil carbon stocks in southern pine ecosystems”.
- L. Murphey (May 2017 – August 2017) – “Understanding canopy closure in a loblolly pine stand used for biofuels feedstocks.”
- C. Javaheri (May 2016 – May 2017) – “Understanding changes in understory phenology associated with drought in longleaf pine ecosystems.”
- M. Oliver (January 2015 – May 2015) – “Understanding changes in understory NDVI in association with prescribed fire and climate for 3 longleaf pine ecosystems.”
- M. Thoman (August 2014 – December 2014) – “Cancer Inhibitors at the Mayo Clinic”
- R. Brennan (January 2013 – May 2014) – “A comparison of plant physiological activity from two arctic tundra ecosystems.”
- A. Venkatesam (January 2013 – December 2013) – “The role of extreme weather events on CO₂ fluxes from the Florida Everglades.”
- K. Rice (January 2012 – August 2013) – “The role of crude oil exposure on plant survival along the Gulf Coast of Alabama.”
- A. J. Rosenblum (January 2011 - December 2011) – “The metabolic function of arctic vascular plants.”
- J. Leonard (January 2011 – August 2011) – “Arctic Ecosystems in a Changing Environment: A review of the current literature.”
- M. Gleason (August 2010 – May 2011) – “Effects of simulated drought on Everglades Methane Emissions.”
- M. Brantley (January 2009 – May 2009) – “Climate Change and Arctic Ecosystems.”
- J. M. Richardson (August 2008 – May 2009) – “Effects of Altered Hydrology on Carbon Dynamics of Everglades National Park.”
- K. M. Pounds (August 2008 – May 2009) – “Human influences on Everglades Ecosystems.”

Work Studies/Research Experiences for Undergraduates

- K. Rice (January 2012 – present). Response of carbon dioxide, water, and energy exchange of peat and marl wetlands in the Florida Everglades to changes in hydroperiod.
- J. Grote (January 2011 – August 2012). Cold-season gas exchange of arctic plants - resolving winter carbon and water balances of Alaskan arctic tundra.
- A. J. Rosenblum (September 2010 – August 2012). Cold-season gas exchange of arctic plants - resolving winter carbon and water balances of Alaskan arctic tundra.
- C. Cook (April 2011 – September 2011). Cold-season gas exchange of arctic plants - resolving winter carbon and water balances of Alaskan arctic tundra.
- J. Leonard (August 2010 – August 2011). Response of carbon dioxide, water, and energy exchange of peat and marl wetlands in the Florida Everglades to changes in hydroperiod.
- S. Martin (July 2011 – December 2011). Impacts of the Deepwater Horizon oil/dispersant pollution on ecosystem functioning: Assessing C and N dynamics in salt marshes along an exposure gradient.
- L. Purvis (July 2011 – December 2011). Impacts of the Deepwater Horizon oil/dispersant pollution on ecosystem functioning: Assessing C and N dynamics in salt marshes along an exposure gradient.
- N. Sanders (April 2011 – December 2011). Impacts of the Deepwater Horizon oil/dispersant pollution on ecosystem functioning: Assessing C and N dynamics in salt marshes along an exposure gradient.
- B. Van Nostrand (April 2011 – December 2011). Impacts of the Deepwater Horizon oil/dispersant pollution on ecosystem functioning: Assessing C and N dynamics in salt marshes along an exposure gradient.

M. Ehni (September 2009 – December 2010). Cold-season gas exchange of arctic plants - resolving winter carbon and water balances of Alaskan arctic tundra.

E. Ortiz (January 2009 - May 2010). Response of carbon dioxide, water, and energy exchange of peat and marl wetlands in the Florida Everglades to changes in hydroperiod.

B. Wilson (May 2009 – December 2009). Project, “Continuation of Eddy Covariance Measurements at the Jones Ecological Research Center: A Preliminary Study.”

K. Pounds (April 2008 – August 2008). Establishing the Starr lab at the University of Alabama, University Funding.

Graduate and Post-Doctoral Advisors

Steven F. Oberbauer, Florida International University (M.S. & Ph.D. advisor)

Henry L. Gholz, University of Florida (Post-doctoral advisor)

Teaching experience

Full course

08/21-present	Instructor, UA, BSC-695 Disturbance Ecology
08/15 - present	Instructor, UA, BSC-603 Introduction to Graduate Studies
08/10 - present	Instructor, UA, BSC-480/580 Plant Ecology
01/09 - present	Instructor, UA, BSC-695 Readings in the History of Ecosystems Ecology
08/08 - present	Instructor, UA, BSC-675 Global Change Biology
08/08 - present	Instructor, UA, BSC-398 Undergraduate Research
08/15 – 12/20	Instructor, UA, BSC-695 Scientific Writing and Data Presentation
08/12 – 12/20	Instructor, UA, BSC-116 Biology II for Majors (~400 students)
01/16 – 01/17	Instructor, UA, BSC-360 Plant Biology
01/10 – 05/12	Instructor, UA, BSC-108 Introduction to Biological Sciences (200 students)
01/08 – 05/09	Instructor, UA, BSC-108 Bio-Studio: An Introduction to Biology
08/01 - 12/07	Instructor, UF, Tree physiology

Short courses

06/18 – 06/18	Instructor, Scientific Writing and Data Presentation Workshop, INRA, Grignon, France
06/15 – 06/15	Instructor, ICOS/NEON Carbon Workshop, Observatoire de Haute-Provence, France

Guest lectures

08/14 – 12/14	Guest lecturer, UA, BSC-118 Honors Biology I
08/03 - 12/07	Guest lecturer, UF, Methods in Sampling
08/02 - 12/07	Guest lecturer, UF, Forest Hydrology
08/01 - 12/07	Guest lecturer, UF, Forest Ecology
10/99 - 12/99	Lab Instructor, FIU, Gas exchange and Chlorophyll Fluorescence short course
01/96 - 05/00	Guest Lecturer, FIU, Plant Physiology
01/97 - 05/00	Lecturer, FIU, General Biology

Collaboration (last 48 months)

Ben Abbott (BYU), Brian Amiro (University of Manitoba), William Anderson (Florida International University), Doug Aubrey (University of Georgia), Dennis Baldocchi (University of California Berkeley), Jordan Barr (USDA Park Service), Justin Becknell (Brown University), Micheal Binford (University of Florida), Andy Black (University of British Columbia), Lindsay

Boring (Joseph Jones Ecological Research Center), Rosvel Bracho (University of Florida), Steven Brantley (Joseph Jones Ecological Research Center), George Burba (Li-Cor Biosciences), Donie Bret-Harte (University of Alaska Fairbanks), Abad Chabbi (INRA, France), Julia Cherry (University of Alabama), James Fourqurean (Florida International University), Jose Fuentez (Penn St.), Evelyn Gaiser (Florida International University), Natalie Griffiths (Oak Ridge National Lab), Joe O'brien (U.S. Forest Service), Alex Huryn (University of Alabama), Henry Loescher (NEON Inc.), Rhett Jackson (University of Georgia), Louise Loudermilk (USFS), Monique Y. Leclerc (University of Georgia), Behzad Mortizavi (University of Alabama), Steven F. Oberbauer (Florida International University), Scott Ollinger (NEON Inc.), Matt Parker (Savannah River National Lab) David Hollinger (University of New Hampshire), Tim Martin (University of Florida), M.C. Mack (University of Northern Arizona), Jeff Welker (University of Alaska), Wendell Cropper (University of Florida), Behzad Mortazavi (University of Alabama), Katrina Ramonell (University of Alabama), Ryan Sponseller (University of Umea), Matt Williams (University of Edinburgh),), Justin Hart (University of Alabama), Christina Staudhammer (University of Alabama), Jerry Franklin (University of Washington), Ted Schuur (University of Northern Arizona), Paul Stoy (Montana State University), Ankur Desai (University of Wisconsin), Erik Hobbie (University of New Hampshire), Jerry Franklin (University of Washington), Mike Ryan (USFS, Colorado State University). Michael Dietze (Boston University), Kellie Vache (Oregon State University), Brain Viner (Savannah River National Lab), Ruth Varner (University of New Hampshire), Patrick Crill (University of Stockholm).