

## ADAM C. WATTS

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Associate Research Professor, Fire Science and Unmanned Systems  
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### **EXPERIENCE:**

Associate Research Professor, Division of Atmospheric Sciences, Desert Research Institute 2016-present  
Division Lead, UAS for Ecological and Atmospheric Applications, 2015-present  
Deputy Director, Climate, Ecosystems, and Fire Applications (CEFA) Program, 2014-present  
Adjunct Faculty, Ecology, Evolution, and Conservation Biology, Univ. of NV, Reno, 2014-present  
Research interests: fire ecology; unmanned aircraft systems (UAS); ecological restoration;  
landscape ecology; industry partnerships liaison and technology commercialization

Assistant Research Professor, Division of Atmospheric Sciences, Desert Research Institute 2013-2016

Postdoctoral Research Ecologist, Fire Science Lab, University of Florida 2012–2013  
-Appointed to Lecturer position for Spring 2013 to teach Fire Ecology course

Student Services Contractor, U.S. Geological Survey 2010–2012

Alumni Graduate Fellow, University of Florida 2008–2012

Scientist/UAS Program Coordinator, USGS FL Cooperative Fish & Wildlife Research Unit 2006–2008

Peace Corps Agroforestry Volunteer, US State Department, Guinea 2004–2006

Wildlife Biologist, USGS Florida Cooperative Fish and Wildlife Research Unit 2002–2003

Research Assistant, UF Department of Wildlife Ecology & Conservation 2001–2002

### **EDUCATION:**

Doctor of Philosophy, Interdisciplinary Ecology, University of Florida 2012  
-Dissertation title: Wildfire ecology of Big Cypress National Preserve: process and disturbance in a wetland landscape (Chair: Leda Kobziar)  
-Concentration in Forest Resources and Conservation

Master of Science, Interdisciplinary Ecology, University of Florida 2002  
-Thesis: Ecological restoration in Florida dry prairie: Comparing strategies in a long-term study at Myakka River State Park, Florida (Chair: George Tanner)

Bachelor of Science, Biology/Ecology (co-major), Emory University 1999  
-Senior research thesis: The growth-defense balance hypothesis: Implications for ecological management and control of novel herbivores in New Zealand native forests

Semester Study Program, University of Waikato (New Zealand) 1998

### **PEER-REVIEWED PUBLICATIONS:**

26. Bhattarai, C., V. Samburova, D. Sengupta, M. Iaukea-Lum, A. C. Watts, H. Moosmüller, A. Khlystov  
2018. Physical and chemical characterization of aerosol in fresh and aged emissions from open combustion of biomass fuels. *Aerosol Science and Technology*, *In press*.

25. Sengupta, D, V. Samburova, C. Bhattarai, E. Kirillova, L. Mazzoleni, M. Iaukea-Lum, A. C. Watts, H. Moosmüller, A. Khlystov 2018. Light absorption by polar and non-polar aerosol compounds from laboratory biomass combustion. *Atmospheric Chemistry and Physics*, <https://doi.org/10.5194/acp-2018-161>.
24. Yatavelli, R. L. N., Chen, L.-W. A., Knue, J. D., Samburova, V., Gyawali, M., Watts, A. C., Chakrabarty, R. K., Moosmuller, H., Hodzic, A., Wang, X., Zielinska, B. K., Chow, J. C., and J. G. Watson 2017. Emissions and partitioning of intermediate-volatility and semi-volatile polar organic compounds (I/SV-POCs) during laboratory combustion of boreal and sub-tropical peat. *Aerosol Science and Engineering* 1: 25-32.
23. Watts, A. C., H. Moosmüller, V. Samburova, A. Y. Khlystov, M. Gyawali, D. Sengupta, C. Bhattarai, R. L. N. Yatavelli, R. K. Chakrabarty, I. J. Arnold, B. Zielinska, J. D. Knue, J. Chow, J. G. Watson, X. Wang, L.-W. A. Chen, A. Tsibart, and G. Engling. 2016. Detailed analyses of emissions from peat combustion across biomes. *Proceedings of the 15th International Peat Congress, Sarawak, Malaysia, 15-19 August 2016*.
22. Samburova, V., J. Connolly, M. Gyawali, R. L.N. Yatavelli. A. C. Watts, R. K. Chakrabarty, B. Zielinska, H. Moosmüller, A. Khlystov. 2016. Polycyclic Aromatic Hydrocarbons in Biomass-Burning Emissions and Their Contribution to Light Absorption and Aerosol Toxicity. *Science of the Total Environment* 568: 391-401.
21. Chakrabarty, R. K., M. Gyawali, L. N. R. Yatavelli, A. Pandey, A. C. Watts, J. Knue, L-W. A. Chen, R. R. Pattison, A. T. Tsibart, V. Samburova, and H. Moosmüller. 2016. Brown carbon aerosols from burning of boreal peatlands: microphysical properties, emission factors, and implications for direct radiative forcing. *Atmospheric Chemistry and Physics* 5: 3033-3040.
20. Smith, A. M. S., C. A. Kolden, T. B. Paveglio, M. A. Cochrane, M. A. Moritz, A. D. Kliskey, L. Alessa, A. T. Hudak, C. M. Hoffman, J. A. Lutz, D. M. J. S. Bowman, L. P. Queen, S. J. Goetz, P. E. Higuera, L. Boschetti, M. Flannigan, K. M. Yedinak, A. C. Watts, E. K. Strand, J. W. van Wagtenonk, and B. J. Stocks. 2016. The Science of Firescapes: Achieving Fire Resilient Communities. *BioScience* 66, 130-142.
19. Watts, A. C., C. A. Schmidt, D. A. Kaplan, and D. L. McLaughlin. 2015. Hydrologic implications of smoldering fires in wetland landscapes. *Freshwater Science* 34:1394-1405.
18. Chakrabarty, R. K., M. Gyawali, L. N. R. Yatavelli, A. Pandey, A. C. Watts, J. Knue, L-W. A. Chen, R. R. Pattison, A. T. Tsibart, V. Samburova, and H. Moosmüller. 2015. Dominance of brown carbon in aerosol emissions from burning of boreal peatlands. *Atmospheric Chemistry and Physics Discussions* 15: 28793-28813.
17. Watts, A. C. and L. N. Kobziar. 2015. Hydrology and fire regulate edge influence on microclimate in wetland forest patches. *Freshwater Science* 34: 1383-1393.
16. Kobziar, L. N., D. Godwin, L. Taylor, and A. C. Watts. 2015. Perspectives on trends, effectiveness, and impediments to prescribed burning in the Southern US. *Forests* 6: 561-580.
15. Turetsky, M., B. W. Benscoter, S. Page, G. Rein, G. van der Werf, and A. C. Watts. 2015. Global vulnerability of peatlands to fire and carbon loss. *Nature Geoscience* 8: 11-14.
14. Tsibart, A. S., A. Gennadiev, T. Koshovskii, and A. C. Watts. 2014. Polycyclic aromatic hydrocarbons in post-pyrolytic soils of drained peatlands in West Meshchera (Moscow Region, Russia). *Solid Earth* 5:1-4.

13. Watts, A. C., D. L. Watts, M. J. Cohen, J. B. Heffernan, D. L. McLaughlin, J. B. Martin, D. A. Kaplan, T. Z. Osborne, and L. N. Kobziar 2014. Evidence of biogeomorphic patterning in a low-relief karst landscape. *Earth Surface Processes and Landforms*. 39: 2027-2037.
12. Watts, A. C. and L. N. Kobziar. 2013. Smoldering combustion and ground fires: ecological effects and multi-scale significance. *Fire Ecology* 9: 124-132.
11. Watts, A. C. 2013. Organic soil combustion in cypress swamps: moisture effects and landscape implications for carbon release. *Forest Ecology and Management* 294C: 178-187.
10. Watts, A. C., V. G. Ambrosia, and E. A. Hinkley. 2012. Unmanned aircraft in remote sensing and scientific research: classification and considerations for use. *Remote Sensing* 4: 1671-1692.
9. Watts, A. C., L. N. Kobziar, and J. R. Snyder. 2012. Fire reinforces structure of pondcypress (*Taxodium distichum* var. *imbricarium*) domes in a wetland landscape. *Wetlands* 32: 439-448.
8. Watts, A. C., L. N. Kobziar, and H. F Percival. 2011. Unmanned aircraft systems for wildland fire monitoring and research. K.M. Robertson, R.E. Masters and K.E.M. Galley, eds. Pages 86–90 in *Proceedings of the 24th Tall Timbers Fire Ecology Conference: The Future of Fire: Public Awareness, Health, and Safety*. Tall Timbers Research Station, Tallahassee, FL.
7. Watts, A. C., J. H. Perry, S. E. Smith, M. A. Burgess, B. E. Wilkinson, Z. Szantoi, P. Ifju, and H. F. Percival. 2010. Small unmanned aircraft systems for low-altitude aerial surveys. *Journal of Wildlife Management* 7: 1614–1619.
6. Monroe, M. C., A. C. Watts, and L. N. Kobziar. 2009. Where there's fire, there's smoke: Air Quality and Prescribed Burning in Florida. In *Electronic Data Information Source*. Institute of Food and Agricultural Sciences, Gainesville, Florida.
5. Wilkinson, B. E., B. A. Dewitt, A. C. Watts, A. H. Mohamed, and M. A. Burgess. 2009. A new approach for passpoint generation from aerial video imagery. *Photogrammetric Engineering and Remote Sensing* 75:1415-1424.
4. Perry, J., A. Mohamed, A. H. El-Rahman, W. S. Bowman, Y. O. Kaddoura, A. C. Watts 2008. Precision directly georeferenced unmanned aerial remote sensing system: performance evaluation. Pages 680-688 in *Proceedings of the Institute of Navigation National Technical Meeting*, 28–30 January 2008, San Diego, CA.
3. Watts, A. C., W. S. Bowman, A. H. El-Rahman, A. Mohamed, B. E. Wilkinson, J. Perry, Y. O. Kaddoura, and K. Lee. 2008. Unmanned aircraft systems (UASs) for ecological research and natural resource monitoring. *Ecological Restoration* 26:13-14.
2. Hilderbrand, R. H., A. C. Watts, and A. M. Randle. 2005. The myths of restoration ecology. *Ecology and Society* 10:19.
1. Watts, A. C. and G. W. Tanner. 2003. Fire and roller chopping have varying effects on dry prairie plant species (Florida). *Restoration Ecology* 21: 205-207.

**RESEARCH REPORTS, EXTENSION, AND OTHER PUBLICATIONS:**

17. Watts, A. C. 2017. Biological Footprints in the geological record. *Research Features* 113: 24-27.
16. Soja, A., D Schimel, L. Giglio, T. Loboda, N. French, J. Dibb, T. Moore, J. McCarty, A. da Silva, Jr., S. Conard, J. Douglas, R. Kahn, R. Sohlberg, A. Pankratz, R. Swap, C. Ichoku, D. Hamilton, V. Ambrosia, C. Rodriguez-Franco, B. Stocks, Z. Holden, M. Carroll, K. Weber, T. Harbour, J. Schnase, E. Hinkley, M. Miller, M. Rollins, S. Goodrick, A. Watts, S. Goetz, B. Peterson, R. Ziebart, B. Barnard, J. Coen, J. Cissel, T. Brown, C. Wiedinmyer, C. Justice, J. Vogelmann, J. Brass, J. Randerson, B. Quayle, B. Schichtel, S. Hook, S. Phillips, and D. Roy. 2015. Prudent observations

necessary to address wildland fire science and applications grand challenges: critical feedbacks with the climate system. White paper submitted to the National Academies of Science, Engineering, and Medicine's Earth Science and Application Decadal Survey. 4 p.

15. Watts, A. C. 2015. Successive wildfire influence on structure and properties of forested wetlands in southern Florida. Final Report for NSF Project 1342094.
14. Brown, T., C. Clements, N. Larkin, K. Anderson, B. Butler, S. Goodrick, C. Ichoku, B. Lamb, R. Mell, R. Ottmar, S. Schranz, G. Tonnesen, S. Urbanski, and A. Watts. 2014. Validating the next generation of wildland fire and smoke models for operational and research use – a national plan. Final Report, Joint Fire Science Program, Project 13-S-01-01. 73 p.
13. Watts, A. C. 2013. Will climate change alter wildfire behavior and effects in seasonally-dry wetlands? Final Report, Joint Fire Science Program, Project 11-3-1-22. 16 p.
12. Watts, A. C. 2013. Smoldering combustion in organic soils. National Park Service Fire Program RxFx Newsletter, Spring 2013 issue.
11. Kobziar, L. N., E. Carvalho, and A. C. Watts. Flatwoods species responses to restoration treatment and season at Myakka River State Park – A CFEOR Signature Project. CFEOR [Conserved Forest Ecosystems Outreach and Research Cooperative] Updates Newsletter, February 2013 issue.
10. Watts, A. C. and L. N. Kobziar. 2012. Smoldering combustion in organic soils: peat and muck fires in the southeastern US. Research Synthesis 2012-9, Southern Fire Exchange.
9. Watts, A. C. and L. N. Kobziar. 2012. Cypress mortality following wildfires: information and recommendations for fire and natural resource managers. Fact Sheet 2012-4, Southern Fire Exchange Information Briefs.
8. Watts, A. C. and L. N. Kobziar. 2012. University of Florida graduate research reveals challenges to managing fire in dry wetlands. Conserved Forest Ecosystems Outreach and Research Cooperative (CFEOR) Newsletter.
7. Watts, A. C. 2012. The Wildfire Ecology of Wetland Landscapes. Article, National Park Service Fire Program RxFx Newsletter, Spring 2012 issue.
6. Watts, A. C., J. R. Snyder, and L. N. and Kobziar. 2011. Mortality of pondcypress (*Taxodium distichum* var. *imbricarium*) in cypress domes following the 2009 Deep Fire: influence of fire severity, tree injury, and cypress dome size. Final Report, Southeastern Ecological Science Center, USGS. 21 p.
5. Watts, A. C. 2008. Unmanned Aircraft Systems operator's manual, Nova/Polaris UAS Program. Gainesville, FL: Florida Cooperative Fish and Wildlife Research Unit.
4. Brush, J. and A. C. Watts. 2008. An assessment of autonomous unmanned aircraft systems (UAS) for avian surveys. Final Report, Wildlife Research Section, Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission.
3. Frederick, P. C, A. C. Watts, and H. F. Percival. 2008. An assessment of unmanned aircraft systems for surveys of wading birds in the Everglades. Final Report, South Florida Water Management District.
2. Watts, A. C. 2008. A Real Man's Place: Attitudes and environment at a Southern deer camp. T. A. Watts, ed. White Masculinity in the Recent South. Baton Rouge: Louisiana State University Press.
1. Watts, A. C., G. W. Tanner, and R. Dye 2006. Restoration of dry prairie using fire and roller chopping. R. Noss, ed. Pages 225–230 in Land of fire and water: Proceedings of the Florida Dry Prairie Conference.

## **SPONSORED PROJECTS:**

- 2015-2018: Unmanned aircraft for precipitation enhancement: Promoting drought resilience and advancing Nevada's UAS industry. Nevada Governor's Office of Economic Development. \$750,000. PI.
- 2015-2018: Fire and Smoke Model Evaluation Experiment (FASMEE) Phase 1 (Design and Planning) Leadership. Joint Fire Science Program. \$491,380. Co-PI.
- 2015-2017: Collaborative Research: Nitrogen partitioning and evolution of particulate organic nitrogen in peat fire emissions. National Science Foundation. \$409,570 Co-PI. (\$294,922 award to DRI.)
- 2015-2018: Measuring absorption spectra of carbonaceous combustion aerosols to enable their identification and quantification by shortwave remote sensing. NASA. \$500,000. Co-PI.
- 2015-2018: Prometheus unmanned: bringing wildfire and industry together in Nevada. Nevada Governor's Office of Economic Development, Knowledge Fund. \$492,000. PI.
- 2014-2017: Unmanned aircraft systems for fire operations and research. Reimbursable Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and Board of Regents of the Nevada System of Higher Education, Desert Research Institute. \$75,000. PI.
- 2014-2017: Patterned Landscapes and the Ecological Drill: biotic control on hydrology and surface morphology in a low-relief carbonate system. National Science Foundation. \$900,000. Co-PI.
- 2013-2014: Linking fire ecology and particulate microphysics to explore climatic implications of peat fire emissions. DRI-DAS internal proposal. \$36,861. PI.
- 2013-2014: Successive wildfire influence on structure and properties of forested wetlands in southern Florida. National Science Foundation. \$74,979. PI.
- 2012: Interactions of microclimate and fire effects in wetland forest patches: implications for current fire management and future climate scenarios. National Park Service, \$19,500. Co-PI.
- 2011-2013: Red-cockaded woodpecker cavity tree monitoring: immediate and delayed mortality due to fire. National Park Service, \$78,000. Co-PI.
- 2011-2013: Delayed mortality and fire-climate interactions in cypress swamps, Big Cypress National Preserve. National Park Service, \$25,415. Co-PI.
- 2011-2012: Will climate change alter wildfire behavior and effects in seasonally-dry wetlands? Joint Fire Science Program/Association for Fire Ecology, \$22,277. Co-PI.
- 2011-2012: Flatwoods species responses to restoration treatment and season: Long-term success of fire and roller-chopping in fire-suppressed areas. Florida Conserved Forest Ecosystems Outreach and Research Cooperative (CFEOR). \$19,974. Co-PI.
- 2011: Climate response and fire history of slash pine on Blackbeard Island and Wassaw National Wildlife Refuges, Savannah Coastal Refuges Complex. US Fish & Wildlife Service, \$25,000. Collaborator.
- 2010-2012: Impact of Deep Fire on hardwood hammocks in Big Cypress National Preserve, Florida. U.S. Geological Survey, \$40,762. Student Services Contract.
- 2010-2011: Delayed mortality among pond cypress (*Taxodium distichum* var. *imbricarium*): do hydrology and edaphic factors explain response? National Park Service, \$24,169. Co-PI.
- 2009: Mortality of pondcypress (*Taxodium distichum* var. *imbricarium*) following the Deep Fire, Big Cypress National Preserve. U.S. Geological Survey, \$10,120. Student Services Contract.

2008–2010: Use and enhancement of an autonomous UAS System, US Geological Survey RWO 249. U.S. Army Corps of Engineers, \$441,509. Proposal author/Senior personnel.

2008: Assessment of unmanned aircraft systems for Everglades wading bird surveys. South Florida Water Management District. \$35,000. Co-PI.

2008: ERDC Participation in 2008 USACE UAS Program, US Geological Survey RWO 248. U.S. Army Corps of Engineers. \$66,038. Proposal author/Senior personnel.

### **TEACHING AND ADVISING:**

Postdoc Advisor for Kellen Nelson, 2017-current.

Committee member for Zachary Carter (MS student at University of Nevada, Reno), 2015-2016.

External advising faculty for capstone course project on UAS applications, University of British Columbia-Okanagan, Kelowna, Canada, Fall 2015

Fire Ecology (undergraduate and graduate course with lab component), Spring 2013: Co-Instructor (UF)

Florida Certified Prescribed Burning Certification Course: Contributing Instructor at UF and Florida Center for Wildfire and Forest Resources Management Training, Spring 2013

Contemporary Issues in Forest Resources and Conservation (FOR4020), Fall 2010: Co-Instructor (UF)

Introduction to Forest Resources and Conservation (FOR3200), Summer 2010: Teaching Assistant (UF)

Forest Ecology (FOR3153C), Fall 2001: Teaching Assistant and Lab Instructor (UF)

Invited lecture or instructor:

- Wildland Restoration Ecology (University of Idaho, Spring 2016)

- Fire Ecology (University of Florida, Spring 2014)

- Ecosystem Responses to Climate Change (UC-Berkeley, Spring 2014)

- Fire Ecology (Mississippi State University, Spring 2014)

- Contemporary Issues in Forest Resources and Conservation (UF, Fall 2012)

- Introduction to Forest Resources and Conservation (UF, Summer 2012)

- Integrated Natural Resource Management (UF, Spring 2012)

### **AWARDS:**

2016: Rising Researcher Award, Nevada Board of Regents

2015: Nature Geosciences Editors' Pick for "Global vulnerability of peatlands to fire and carbon loss"

2013: CBC Fellow, Northwest Climate Science Center

2012: Edward Komarek Graduate Student Excellence Award, Association for Fire Ecology

2011: Graduate Research Innovation Award, U.S. Joint Fire Science Program

2010: John I. Davidson Award for Practical Papers, American Society for Photogrammetric Engineering and Remote Sensing

2009: Best Student Paper award, 24<sup>th</sup> Fire Ecology Conference, Tall Timbers Research Station and Land Conservancy, 15 January 2009

2008–2012: University of Florida Graduate Alumni Fellowship

## **PRESENTATIONS AND WORKSHOPS:**

103. Sengupta, D., L. Gao, N. Beres, C. Bhattarai, E. Wilcox, V. Samburova, A. Watts, A. Khlystov, and H. Moosmüller. Estimation of Snow Albedo Reduction by Light Absorbing Impurities Using a Monte Carlo Radiative Transfer Model. Presentation, Joint Meeting of 17th Electromagnetic and Light Scattering Conference (ELS-XVII) and 11th Conference on Laser-Light and Interactions with Particles (LIP2018), 4-9 March 2018, College Station, TX.
102. Watts, A. C., F. McDonough, A. Broch, J. Fleitz, M. Richards, and A. Gertler. Unmanned aircraft for precipitation enhancement. Invited Presentation, International Conference on Aerospace and Aeronautical Engineering. 26-27 February 2018, Abu Dhabi, UAE.
101. N. French R. Ottmar, T. J. Brown, N. Larkin, S. Prichard, and A. C. Watts. Fire and smoke model evaluation experiment (FASMEE): Coordination of a study to improve smoke modeling for fire operations within the United States. Poster, American Geophysical Union Fall Meeting, 11-14 December 2017, New Orleans, LA.
100. Boehmler, J. M., C. Stevens, W. P. Arnott, A.C. Watts, J. All, and C. G. Schmidt. Development of a novel multispectral instrument for handheld and UAS measurements of surface albedo; first applications for glaciers in the Peruvian Andes and for Nevada's Black Rock Desert. Presentation, American Geophysical Union Fall Meeting, 11-14 December 2017, New Orleans, LA.
99. Nelson, K. N., A. K. Urza, J. Dell, A. C. Watts. Effects of prescribed fire on fuel loadings in contrasting Sierra Nevada meadow and forest sites. Poster, International Fire Congress, 27 November-2 December 2017, Orlando, FL.
98. Iaukea-Lum, M., C. Bhattarai, D. Sengupta, P. G. Piedra, J. Connolly, V. Samburova, A. Y. Khlystov, A. C. Watts, H. Moosmüller. Three-Wavelength Optical Characterization of Fresh and Photochemically-Aged Aerosols from Siberian Peat Burning. 36th Annual Conference of the American Association for Aerosol Research, October 16, 2017-October 20, 2017, Raleigh, NC.
97. C. Bhattarai, V. Samburova D. Sengupta, M. Iaukea-Lum, A. C. Watts, H. Moosmüller, A. Y. Khlystov. Physical and Chemical Characterization of Fresh and Aged Emissions from Open Combustion of Biomass Fuels. 36th Annual Conference of the American Association for Aerosol Research, October 16, 2017-October 20, 2017, Raleigh, NC.
96. Sengupta, D., V. Samburova, C. Bhattarai, M. Iaukea-Lum, A. C. Watts, H. Moosmüller, A. Y. Khlystov. Light absorption of polar and non-polar aerosol components from laboratory biomass combustion. 36th Annual Conference of the American Association for Aerosol Research, October 16, 2017-October 20, 2017, Raleigh, NC.
95. Watts, A. C. Ecological Footprints: How processes and feedbacks create patterns in landscapes. Invited public lecture for Terry Lee Wells Discovery Museum's Science Distilled Public Lecture Series, 16 August 2017, Reno, NV.
94. C. Bhattarai, D. Sengupta, V. Samburova, A. C. Watts, H. Moosmüller, A. Y. Khlystov. Physical and Chemical Characterization of Fresh and Aged Emissions from Open Combustion of Biomass. Graduate Student Poster Competition, 3 May 2017, Reno, NV.
93. Sengupta, D., V. Samburova, C. Bhattarai, M. Iaukea-Lum, A. C. Watts, H. Moosmüller, A. Y. Khlystov. Light absorption of polar and non-polar aerosol components from laboratory biomass combustion. Desert Research Institute Graduate Student Poster Competition, 3 May 2017, Reno, NV.

92. Watts, A. C. Considerations for UAS use in environmental research. Invited lecture, Ecology, Evolution, and Conservation Biology Colloquium Series, University of Nevada, Reno, 6 April 2017.
91. Watts, A. C. Re-launching UAS capabilities at DRI. Invited Science Talk, 23 February 2017, Desert Research Institute, Reno, NV.
90. Gyawali, M., R. L. N. Yatavelli, A. C. Watts, V. Samburova, R. K. Chakrabarty, L.-W. A. Chen, I. J. Arnold, X. Wang, A. Y. Khlystov, H. Moosmüller. Optical Properties of Aerosols Emitted from Laboratory Peat Combustion. Fourth Santa Fe Climate Conference, 5-10 February 2017, Santa Fe, NM.
89. Watts, A. C. and F. Seijo. International collaboration to strengthen the global community of fire ecologists. Invited Closing Presentation, International Conference on Prescribed Fires, Barcelona, Spain, 31 January-2 February 2017.
88. Y. Liu, A. Kochanski, K. Baker, R. Mell, R. Linn, R. Paugam, J. Mandel, A. Fournier, M. A. Jenkins, S. Goodrick, G. Achtemeier, A. Hudak, M. Dickson, B. Potter, C. Clements, S. Urbanski, R. Ottmar, N. Larkin, T. Brown, N. French, S. Prichard, A. Watts, D. McNamara. Fire and smoke model evaluation experiment (FASMEE): modeling gaps and data needs. In: Proceedings for the 2nd International Smoke Symposium, 14-17 November 2016, Long Beach, CA.
87. Cohen, M. J., A. C. Watts, D. L. McLaughlin, C. Quintero, N. D. Ward, A. Pain, X. Dong, C. Chamberlain, J. Diamond, M. Flint, X. Zhang, J. B. Martin, T. S. Bianchi, and J. B. Heffernan. Perspectives on the spatial pattern and basin development of the karst wetlands of Big Cypress National Preserve. Big Cypress Research Symposium, 10 November 2016, Big Cypress National Preserve, Ochopee, FL.
86. Cohen, M. J., D. L. McLaughlin, C. Quintero, N. D. Ward, A. Pain, X. Dong, C. Chamberlain, J. Diamond, M. Flint, X. Zhang, J. B. Martin, T. S. Bianchi, J. B. Heffernan, and A. C. Watts. Hydrogeology and geochemistry of karst cypress domes in Big Cypress National Preserve. Big Cypress Research Symposium, 10 November 2016, Big Cypress National Preserve, Ochopee, FL.
85. Watts, A. C. Fire: Friend or foe? Invited lecture for Science Distilled public lecture event. Terry Wells Discovery Museum, 12 October 2016, Reno, NV.
84. Gyawali, M., R. L. N. Yatavelli, A. C. Watts, V. Samburova, R. K. Chakrabarty, L.-W. A. Chen, I. J. Arnold, X. Wang, A. Y. Khlystov, and H. Moosmüller. Optical Properties of Aerosols Emitted from Laboratory Peat Combustion. Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance, Air & Waste Management Association, September 26-30, 2016, Jackson Hole, WY.
83. Watts, A. C., H. Moosmüller, V. Samburova, A. Y. Khlystov, M. Gyawali, D. Sengupta, C. Bhattarai, R. L. N. Yatavelli, R. K. Chakrabarty, I. J. Arnold, B. Zielinska, J. D. Knue, J. Chow, J. G. Watson, X. Wang, L.-W. A. Chen, A. Tsibart, and G. Engling. Detailed analyses of emissions from peat combustion across biomes. Invited presentation, International Peat Congress, Sarawak, Malaysia, 15-19 August 2016.
82. Watts, A. C., T., Ball, T., M. Richards, and J. Fleitz, J. Operation Energy Resilient Enlighten Project: Phase III briefing and project site prospection to NV Energy, 2 June 2016, Reno, NV.
81. Watts, A. C., M. Dickinson, T. Brown, R. D. Ottmar, N. K. Larkin, N. French, S. J. Pritchard. FASMEE (Fire and Smoke Model Evaluation Experiment) and UAS. Invited presentation, NASA/U.S. Forest Service Tactical Fire Remote Sensing Advisory Committee Spring Meeting, 25 May 2016, Mountain View, CA.



80. Ball, T. J., M. Richards, J. Fleitz, and A. C. Watts. Operation Energy Resilient Enlighten Project: Phase II briefing to NV Energy, 20 May 2016, Reno, NV.
79. Fleitz, J., M. Richards, and A. C. Watts. Operation Energy Resilient Enlighten Project: Phase I briefing to NV Energy, 10 May 2016, Las Vegas, NV.
78. Watts, A. C. Fire and flying robots: unmanned aircraft and fire science. Invited lecture, Terry Wells Discovery Museum, 23 April 2016, Reno, NV.
77. Watts, A. C. Ecosystems and global change. Invited lecture, University of Idaho, 23 March 2016, Moscow, Idaho.
76. Samburova, V., M. Gyawali, R.L.N. Yatavelli, R.K. Chakrabarty, A.C. Watts, J.D. Knue, A.E. Cunningham, J. Connolly, H. Moosmuller, B. Zielinska, and A.Y. Khlystov. Estimation of light absorption by biomass burning aerosols using detailed chemical composition data. PacifiChem, 16-20 December 2015, Honolulu, HI.
75. Cohen, M. J., C. Quintero, N. D. Ward, E. Raines, A. Brown, J. B. Martin, T. S. Bianchi, D. L. Mclaughlin, T. Osborne, J. B. Heffernan, and A. C. Watts. An Ecological Drill: biogeomorphic pattern evolution in a low-relief carbonate landscape. Poster, American Geophysical Union Fall Meeting, 14-18 December 2015, San Francisco, CA.
74. Watts, A. C. and R. W. Gray. Wildland fire applications for unmanned aircraft: evaluation and commercialization. Poster, American Geophysical Union Fall Meeting, 14-18 December 2015, San Francisco, CA.
73. Watts, A. C. and R. W. Gray. Evaluating and operationalizing unmanned aircraft for wildland fire use. Poster, 6<sup>th</sup> International Fire Ecology and Management Congress, 16-20 November 2015, San Antonio, TX.
72. Watts, A. C. Desert Research Institute: Thematic areas and potential for collaboration. University of British Columbia-Okanagan, 3 November 2015, Kelowna, Canada.
71. Khlystov, A.Y., V. Samburova, M. Gyawali, R.L.N. Yatavelli, R.K. Chakrabarty, A.C. Watts, J.D. Knue, A. Cunningham, J. Connolly, H. Moosmüller, B.K. Zielinska. Detailed analysis of brown carbon constituents in biomass burning emissions. Presentation, American Association for Aerosol Research, 12-16 October 2015, Minneapolis, MN.
70. Molzan, J. L., N. D. Beres, A. C. Watts, V. Samburova, and H. Moosmüller. Optical Properties of aerosols from smoldering laboratory combustion of wildland fuels. Poster, Tahoe Science Conference, 21-23 September 2015, Reno, Nevada.
69. Gyawali, M., R.L.N. Yatavelli, A.C. Watts, V. Samburova, R.K. Chakrabarty, J.D. Knue, L.-W.A. Chen, I.J. Arnold, X. Wang, A.Y. Khlystov, J.C. Chow, B.K. Zielinska, J.G. Watson, and H. Moosmüller. Optical properties of aerosol emissions from laboratory peat combustion. Presentation, American Association for Aerosol Research, 12-16 October 2015, Minneapolis, MN.
68. Gyawali, M., R.L.N. Yatavelli, A.C. Watts, V. Samburova, R.K. Chakrabarty, J.D. Knue, L.-W.A. Chen, I.J. Arnold, X. Wang, A.Y. Khlystov, J.C. Chow, B.K. Zielinska, J.G. Watson, and H. Moosmüller. Optical properties of aerosol emissions from laboratory peat combustion. 11th International Conference on Carbonaceous Particles in the Atmosphere, 10-13 August 2015, Berkeley, CA.
67. Samburova, V., M. Gyawali, R.L.N. Yatavelli, R.K. Chakrabarty, A.C. Watts, J.D. Knue, A.E. Cunningham, J. Connolly, A.Y. Khlystov, H. Moosmuller, and B. Zielinska. Analysis of polycyclic aromatic hydrocarbons in gaseous- and particle- phase emissions from peat fuel combustion under

controlled conditions. 108<sup>th</sup> Annual Air and Waste Management Association Conference, 22-26 June 2015, Raleigh, NC.

66. Gyawali, M., R. L. N. Yatavelli, A. C. Watts, V. Samburova, R. K. Chakrabarty, J. D. Knue, L.-W. A. Chen, I. J. Arnold, X. Wang, A. Y. Khlystov, J. C. Chow, B. K. Zielinska, J. G. Watson, and H. Moosmüller. Optical properties of emissions from laboratory peat combustion. 15<sup>th</sup> Electromagnetic and Light Scattering (ELS) Conference, 21-26 June 2015, Leipzig, Germany.
65. Ball, T., M. Richards, and A. C. Watts. Introduction to UAS for wildland fire applications. Sierra Front Interagency Dispatch Center, 10 June 2015, Minden, NV.
64. Watts, A. C. Fire science, fire ecology, and interdisciplinary UAS research at DRI. Invited presentation, Nevada Board of Regents Meeting, 5 March 2015, Las Vegas, NV.
63. Ambrosia, V. G., R. P. Dahlgren, A. C. Watts, K. W. Reynolds, and T. Ball. UAS developments supporting wildfire observations. Poster, American Geophysical Union Fall Meeting, 15-19 December 2014, San Francisco, CA.
62. Watts, A. C., M. R. Turetsky, B. Benscoter, S. E. Page, G. Rein, and G. van der Werf. Global perspectives on peat fires. Presentation, American Geophysical Union Fall Meeting, 15-19 December 2014, San Francisco, CA.
61. Schmidt, C. A., A. C. Watts, D. L. Mclaughlin, and D. A. Kaplan. Ground fire effects on hydrology and habitat: implications for fire management in areas with organic soil. Poster, American Geophysical Union Fall Meeting, 15-19 December 2014, San Francisco, CA.
60. Heffernan, J. B., A. B. Murray, M. J. Cohen, J. B. Martin, D. L. Mclaughlin, T. S. Bianchi, and A. C. Watts. A model of depressional wetland formation in low-relief karst landscapes. Presentation, American Geophysical Union Fall Meeting, 15-19 December 2014, San Francisco, CA.
59. Gyawali, M. S., R. K. Chakrabarty, R. L. N. Yatavelli, L.-W. A. Chen, J. Knue, V. Samburova, A. C. Watts, H. Moosmüller, W. P. Arnott, X. Wang, B. Zielinska, J. C. Chow, J. G. Watson, and A. Tsibart. Strong wavelength dependence of aerosol light absorption from peat combustion. Poster, American Geophysical Union Fall Meeting, 15-19 December 2014, San Francisco, CA.
58. Knue, J., R. L. N. Yatavelli, L.-W. A. Chen, V. Samburova, M. S. Gyawali, A. C. Watts, R. K. Chakrabarty, H. Moosmüller, X. Wang, B. Zielinska, J. C. Chow, J. G. Watson, and A. Tsibart. A comparison of mass-based emission factors from laboratory combustion of boreal and sub-tropical peat. Poster, American Geophysical Union Fall Meeting, 15-19 December 2014, San Francisco, CA.
57. Watts, A. C. Unmanned aircraft for aerial surveys: classification and considerations for use. Invited presentation, The Wildlife Society Conference, 27 October 2014, Pittsburgh, PA.
56. Yatavelli, L. N., L.-W. A. Chen, J. Knue, V. Samburova, M. Gyawali, A. Watts, R. K. Chakrabarty, H. Moosmüller, X. Wang, B. Zielinska, J. Chow, J. Watson, and A. Tsibart. Mass and energy-based emission factors and gas-particle partitioning of intermediate-volatility and semi-volatile organic compounds from laboratory combustion of boreal and sub-tropical peat. Presentation, American Association for Aerosol Research, 20-24 October 2014, Orlando, FL.
55. Watts, A. C., R. K. Chakrabarty, V. Samburova, and H. Moosmüller. Climatic implications of peat fire emissions. Poster, American Association for Aerosol Research, 20-24 October 2014, Orlando, FL.
54. Watts, A. C. and G. McGuire. Fire season 2014 recap and preliminary winter outlook. Invited presentation, Nevada Emergency Managers Workshop, 15 October 2014, Las Vegas, NV.

53. Fenstermaker, L., K. McGwire, E. Wilcox, J. Tilley, A. Watts, J. Baker, and J. Huntington. UAS environmental research. Nevada Governor's Conference on Small Business, 19 September 2014, Las Vegas, NV.
52. Watts, A. C. Unmanned aircraft: considerations for forest management, commercial and research use. Invited presentation, UNR Cooperative Extension Green Industry Professionals, 10 September 2014, Reno, NV.
51. Kaplan, D. A., C. A. Schmidt, D. L. McLaughlin, and A. C. Watts. Implications of organic soil combustion for fire management in wetlands. Presentation, Conference on ecological and ecosystem restoration, 28 July-2 August 2014, New Orleans, LA.
50. Kobziar, L. N., A. C. Watts, D. R. Godwin, and M. Johnson. Immediate effects of California's Rim Fire on tree injuries and in-stand severity in fuels-treated plantations. Presentation, Large Wildland Fires: Social, political, and ecological effects, 19-23 May 2014, Missoula, MT.
49. Watts, A. C., C. A. Schmidt, D. A. Kaplan, and D. L. McLaughlin. Hydrologic implications of ground fires in low-relief landscapes. Presentation, Large Wildland Fires: Social, political, and ecological effects, 19-23 May 2014, Missoula, MT.
48. Watts, A.C. Opportunities in Nevada for UAS testing. Invited presentation, NASA-US Forest Service Tactical Fire Remote Sensing Advisory Committee, 29 April 2014, NASA-Ames Research Center, Mountain View, CA.
47. Watts, A.C. Fire and climate, and climate change. Invited lecture, 10 April 2014, University of California, Berkeley, CA.
46. Watts, A.C. Fire science research with unmanned aircraft systems: near-term opportunities. Invited presentation, 9 April 2014, NASA-Ames Research Center, Mountain View, CA.
45. Watts, A.C. Fire and climate change. Invited lecture, 27 March 2014, University of Florida, Gainesville, FL.
44. Watts, A.C. Wildfire ecology of cypress swamps. Invited lecture, 21 January 2014, Mississippi State University, Starkville, MS.
43. Watts, A.C. Ecological tradeoffs of fire in cypress wetlands? MSU Student Association for Fire Ecology guest lecture, 21 January 2014, Mississippi State University, Starkville, MS.
42. Watts, A.C. Alternative Stable States in fire ecology. Invited lecture, 21 January 2014, Mississippi State University, Starkville, MS.
41. Watts, A. C. Ecological aspects of the Rim Fire. 20 November 2013, Invited presentation, University of Nevada, Reno, NV.
40. Watts, A. C. The "ecological drill": landscape patterns suggest mechanisms for cypress dome formation and spacing. Invited Presentation, Big Cypress Research Symposium, 7 November 2013, Big Cypress National Preserve, Ochopee, FL.
39. Watts, A. C. Landscape patches as altered-climate scenario proxies? A hypothesis. Invited Presentation, Great Basin Climate Forum, 16 October 2013, Bishop, CA.
38. Watts, A. C. Wildland fire and UAS: operational and research opportunities. Titans of industry meeting on UAS, Nevada Governor's Office of Economic Development, 25-27 June 2013, Las Vegas, NV.

37. Watts, A. C. Wetland fires and smoldering combustion in organic soils: recent findings and future research directions. Invited seminar, North Florida Prescribed Fire Council, 13 March 2013, Lake City, FL.
36. Watts, A. C. Fire ecology in the southeastern United States: overview of issues and recent research in Florida. Invited seminar, U.S. Forest Service Missoula Fire Sciences Laboratory, 28 February 2013, Missoula, MT.
35. Watts, A. C. and L. N. Kobziar. Determinants of smoldering in cypress landscapes: landscape factors and implications for carbon release. Invited presentation, 4th Fire Behavior and Fuels Conference, International Association of Wildland Fire, 18-22 February 2013, Raleigh, NC.
34. Kobziar, L. N., A. C. Watts, and L. Taylor. Does prescribed fire reduce wildfire in the southern US? A region-wide survey of public and private land manager perspectives. 4th Fire Behavior and Fuels Conference, International Association of Wildland Fire, 18-22 February 2013, Raleigh, NC.
33. Watts, A. C. Wildfire and landscape ecology research in a wetland mosaic. Invited seminar, Desert Research Institute, 11 February 2013, Reno, NV.
32. Watts, A. C. Role of fire in the human and natural ecology of Southeastern ecosystems. Department of Environmental Studies Seminar Series, 30 January 2013, Emory University, Atlanta, GA.
31. Kobziar, L. N., A. C. Watts, and E. Carvalho. The legacy of 23 years of mechanical fuels treatments and prescribed fire on vegetation in Florida. Presentation, 5<sup>th</sup> International Fire Ecology and Management Congress, 3-7 December 2012, Portland, OR.
30. Watts, A. C., and R. A. Huffaker. Can underlying structure in fire occurrence data predict future wildfires? Presentation, 5<sup>th</sup> International Fire Ecology and Management Congress, 3-7 December 2012, Portland, OR.
29. Cohen, M. J., J. B. Martin, D. L. McLaughlin, T. Z. Osborne, A. B. Murray, A. C. Watts, D. L. Watts, and J. B. Heffernan. An ecological mechanism to create regular patterns of surface dissolution of a low-relief carbonate landscape. Poster, American Geophysical Union Fall Meeting, 3-7 December 2012, San Francisco, CA.
28. Watts, A. C., D. L. Watts, D. A. Kaplan, D. L. McLaughlin, J. Heffernan, J. B. Martin, A. B. Murray, T. Z. Osborne, M. J. Cohen, and L. N. Kobziar. Landform elevation suggests ecohydrologic footprints in subsurface geomorphology. Poster, American Geophysical Union Fall Meeting, 3-7 December 2012, San Francisco, CA.
27. Watts, A. C. Wildfire effects on forest structure and soils in Big Cypress National Preserve, Florida. Invited webinar, Southern Fire Exchange, 5 October 2012 (online).
26. Watts, A. C. Wildfire ecology of a wetland landscape. Invited seminar, School of Natural Resources and Environment Fall Seminar Series, 11 September 2012, University of Florida, Gainesville, FL.
25. Watts, A. C. Ecological footprints in the geomorphic record: reciprocal feedbacks versus diatremic processes. Presentation, 97th Annual Meeting of the Ecological Society of America, 5-10 August 2012, Portland, OR.
24. Watts, A. C. Smoldering combustion in subtropical wetland ecosystems. Invited presentation, International Workshop on Smoldering Fires in the Earth System, 27 July 2012, University of Edinburgh, UK (Organized by Imperial College, London).
23. Watts, A. C., L. N. Kobziar, and T. A. Martin. Scale-Dependent Microclimate Effects of Wetland Wildfire. Invited presentation, 9th INTECOL International Wetlands Conference, 3-8 June 2012, Orlando, FL.

22. Watts, A. C. L. N. Kobziar, T. Z. Osborne, and J. R. Snyder. Smoldering Cypress Swamp Soils: Moisture Effects and Implications for Forest Structure. Invited presentation, 9th INTECOL International Wetlands Conference, 3-8 June 2012, Orlando, FL.
21. Watts, A. C. Wildfire ecology in a wetland landscape: structural, functional, and geomorphic considerations. Seminar, National Wetlands Research Center, 19 December 2011, Lafayette, LA.
20. Watts, A. C., L. N. Kobziar, J. R. Snyder, and T. A. Martin. Feedbacks to structure and microclimate from large drought fires in wetland landscapes. Presentation, Exploring the Mega-fire Reality: Forest Ecology and Management conference, 14-17 November 2011, Tallahassee, FL.
19. Watts, A. C. Nonlinear chaotic dynamics in fire occurrence. Poster, Exploring the Mega-fire Reality: Forest Ecology and Management conference, 14-17 November 2011, Tallahassee, FL.
18. Watts, A. C. and H. F. Percival. University of Florida 2011 Activities. NASA/U.S. Forest Service Tactical Fire Remote Sensing Advisory Committee, 25 May 2011, Sacramento, CA.
17. Watts, A. C. Fire in cypress swamps. Invited seminar, H. T. Odum Center for Wetlands, 9 February 2011, Gainesville, FL.
16. Watts, A. C., J. R. Snyder, and L. N. Kobziar. Delayed cypress mortality following the Deep Fire. Invited Presentation, Big Cypress Research Symposium, 10 November 2010, Ochopee, FL.
15. Watts, A. C. University of Florida unmanned aircraft systems program. Presentation, NASA/U.S. Forest Service Tactical Fire Remote Sensing Advisory Committee, 4 November 2010, Boise, ID.
14. Watts, A. C., C. Cox, D. L. Watts, I. Kisekka, L. M. Colley, T. Z. Osborne, and Matthew J. Cohen. Landform elevation as evidence of regular surface patterning in Big Cypress National Preserve, Florida. Poster, Greater Everglades Ecosystem Restoration (GEER) Planning, Policy, and Science Meeting, 12-16 July 2010, Naples, FL.
13. Watts, A. C. Management implications of delayed Deep Fire mortality among cypress: a workshop for fire managers. 15 October 2010, Big Cypress National Preserve, FL.
12. Watts, A. C. Fire in wetland landscapes: climate, soil, and hydrologic interactions. Invited Seminar, Florida Fish and Wildlife Conservation Commission, 21 May 2010, Gainesville, FL.
11. Watts, A. C., L. N. Kobziar, and J. R. Snyder. Severity and post-fire mortality in cypress domes following the Deep Fire, Big Cypress National Preserve, Florida. Presentation, International Fire Congress, 30 November-3 December 2009, Savannah, GA.
10. Frederick, P. C., A. C. Watts, M. Burgess. Prospects of the use of unmanned aircraft systems for assessing the size of wading bird populations in the Everglades. Invited Presentation, South Florida Water Management District, 5 September 2008, West Palm Beach, FL.
9. Bowman, W. S., A. C. Watts, J. H. Perry, M. Morton, P. G. Ifju. UAS as monitoring tools for assessing the Nation's levees and monitoring invasive plant populations. Invited workshop and demonstration, US Army Corps of Engineers Research and Development Center, 19 March 2008, Vicksburg, MS.
8. Watts, A. C. Scientific applications of unmanned aircraft systems: biological research and natural resource monitoring. Invited panel speaker, National symposium on civilian applications of unmanned aircraft systems, 1-3 October 2007, Boulder, CO.
7. Bowman W. S., H. F. Percival, A. C. Watts. Unmanned aircraft capability demonstration. Invited demonstration for US Army Corps of Engineers, 26 July 2007, Jacksonville, FL.

6. Watts, A. C. Production and Evaluation of an Autonomous UAV System for Natural Resources Management. Presentation to US Army Corps of Engineers Research and Development Center and US Department of Homeland Security Science Directorate, 17 July 2007, Gainesville, FL.
5. Watts, A. C., H. F. Percival, L. G. Pearlstine, P. G. Ifju, B. A. Dewitt, S. E. Smith, A. Mohamed, and W. S. Bowman. Unmanned aircraft systems for natural resource monitoring and ecological research. Presentation, Association for Unmanned Vehicle Systems International, 6-9 August 2007, Washington, DC.
4. Watts, A. C., H. F. Percival, L. G. Pearlstine, P. G. Ifju, B. A. Dewitt, S. E. Smith, A. Mohamed, K. Lee, and W. S. Bowman. Unmanned aerial vehicles for natural resource management and wildlife surveillance. Invited Presentation, US Army Corps of Engineers Jacksonville District Headquarters, 28 November 2006, Jacksonville, FL.
3. Pearlstine, L. G., A. C. Watts, and K. Lee. Unmanned aerial vehicles for natural resource management and surveillance. Invited demonstration, Restoration Coordination and Verification (RECOVER) Leadership group, 6 September 2006, Fort Lauderdale, FL.
2. Watts, A. C., H. F. Percival, K. G. Rice, G. R. Masson, A. R. Woodward, and C. L. Abercrombie. Variation in egg viability among seven American alligator populations in Florida. Poster, Florida Cooperative Fish & Wildlife Unit Coordinating Committee Meeting, 23 July 2003, Gainesville, FL.
1. Watts, A. C. and G. W. Tanner. Monitoring long-term dry prairie restoration efforts: a progress report from Myakka River State Park, Florida. Presentation, Joint Meetings of the Ecological Society of America and Society for Ecological Restoration, 4-9 August 2002, Tucson, AZ.

#### **SERVICE AND LEADERSHIP:**

##### Institutional Service

2018-current: DRI Representative to Tahoe Science Advisory Council

2017-current: Faculty Senate, Desert Research Institute

-Ad hoc Committee on Sabbaticals, 2017

-Ad hoc Committee on Professional Ethics and Scientific Integrity, 2017

2017: Search Committee, DRI Executive Vice President for Research

2015: Search Committee, Executive Assistant to the DRI President

2013: Representative of DRI at Lake Tahoe Summit hosted by U.S. Senator Harry Reid. 19 August 2013, Truckee, CA.

##### Leadership and Management Training:

“Making the transition to management.” American Management Academy, 12-13 October 2017, Chicago, IL. 1.2 CEU

“AMA ‘5-Day MBA’ Workshop. American Management Academy, 7-11 August 2017, Boston, MA. 3 CEU

“Career Planning: aligning your development to your organization’s needs. American Management Academy, 17 February 2017, San Francisco, CA. 0.6 CEU

##### Professional Organizations:

2012-current: Board of Directors, Association for Fire Ecology

-Liaison to International Association for Wildland Fire, 2018-present

-Financial Secretary, 2014-2016; Treasurer, 2016-2017

-Finance Committee chair, 2013-2017

-Awards Committee, 2014-current

2010–2011: National Co-Chair, Student Association for Fire Ecology

Evaluation of Competitive Funding Proposals:

2015: Department of Energy, Terrestrial Ecological Sciences Program  
2014: National Science Foundation  
2013, 2015: National Geographic Society; Alaska Coastal Marine Institute  
2012, 2013: Joint Fire Science Program  
2012, 2013, 2014: Association for Fire Ecology (Graduate Research Innovation Grants)  
2009, 2010, 2011: Tahoe Science Program/Southern Nevada Public Lands Grants  
2008: State Wildlife Grants program, Florida Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission

Evaluation of Manuscripts:

Canadian Journal of Remote Sensing	Ibis
Fire Ecology	PlosOne
African Studies Quarterly (editorial committee, 2006–2008)	Journal for Field Ornithology North American Journal of Fisheries Mgt.
African Journal of Environmental Science and Technology	
Soil Science Society of America Journal	Journal of Unmanned Vehicle Systems
International Journal of Wildland Fire	British Journal of Science and Technology
Chemosphere	Computers and Geosciences
Nature Climate Change	Rangeland Ecology and Management
International Journal of Aerospace System Science and Engineering	
Biogeochemistry	

Community Service and Other Scientific Activities:

2014: Technical Committee, American Society for Photogrammetry and Remote Sensing “UAS Mapping” meeting, 21-22 October 2014, Reno, NV  
2013: Member, Nevada Sagebrush Ecosystem Science Work Group, Reno/Carson City, NV  
2012-2013: Volunteer Firefighter, West Putnam Volunteer Fire Department, Hawthorne, FL  
2013: Co-organizer, Special Session: “Behavior and Ecological Consequences of Smoldering Fires.” 4th Fire Behavior and Fuels Conference, International Association of Wildland Fire, 18-22 February 2013, Raleigh, NC  
2012: Judge for student poster session, 5<sup>th</sup> International Fire Ecology and Management Congress, 3-7 December 2012, Portland, OR  
2012: Session Moderator, “Observing Fire,” 5<sup>th</sup> International Fire Ecology and Management Congress, 3-7 December 2012, Portland, OR  
2012: Visiting Scholar, Bre Centre for Fire Safety and Engineering, School of Engineering, University of Edinburgh  
2012: Co-organizer, Special Session: “Fire: Shaping Wetlands from Nutrients to Wildlife.” 9th INTECOL International Wetlands Conference, 3-8 June 2012, Orlando, FL  
2010-current: NASA/US Forest Service Tactical Fire Remote Sensing Advisory Committee  
2010: Participant, “Application of Adaptive Management to Address Climate Change Related Challenges” workshop, Collaborative Adaptive Management Network  
2010: Reviewer, Fire Management Plan, Big Cypress National Preserve, Florida  
2008-2009: President, Student Association for Fire Ecology, University of Florida Chapter

2005-2006: Volunteer Diversity Committee, U.S. Peace Corps, Guinea

2004-2006: Peer Support Network, U.S. Peace Corps, Guinea

**CERTIFICATIONS:**

Unmanned Aircraft Pilot in Command Certification, Nevada Institute for Autonomous Systems, 2017-current.

Small Unmanned Aircraft System Pilot, Federal Aviation Administration, 2016-current.

Certified Wildland Fire Ecologist, Association for Fire Ecology, 2015-current

Certified Wildland Fire Practitioner, Association for Fire Ecology, 2012-current

SCUBA: Advanced Open Water, Rescue Diver, Nitrox (NAUI); UF Science Diver Training, 2012

Federal Wildland Type II Firefighter (FFT2) 2008-2014 (includes IAT (B-3), 2010)