

# Alexandra Georges Konings

Assistant Professor

Dept. of Earth System Science and, by courtesy, of Geophysics  
Center Fellow, by courtesy, Woods Institute for the Environment  
Stanford University

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## EDUCATION

<b>Massachusetts Institute of Technology</b>	2015
Ph.D. in Civil and Environmental Engineering (Hydrology)	
<b>Duke University</b>	2011
M.S. in Environmental Science	
<b>Massachusetts Institute of Technology</b>	2009
S.B. in Environmental Engineering Science	

## PROFESSIONAL APPOINTMENTS

<b>Stanford University</b>	
Assistant Professor	09/2016-Present
<b>Stanford University</b>	
Postdoctoral Fellow	
- located at Columbia University	09/2015-02/2016
- located at NASA Jet Propulsion Laboratory	03/2016-08/2016
<b>Massachusetts Institute of Technology</b>	
Graduate Research Assistant	2011 - 2015
<b>Duke University</b>	
Graduate Research Assistant	2009-2011

## PEER-REVIEWED PUBLICATIONS

Students and post-docs underlined

55. Dadap, N.C., A.M. Hoyt, A.R. Cobb, D. Oner, M. Kozinski, P. Fua, K. Rao, C.F. Harvey, and **A.G. Konings** (2021). Mapping drainage canals across Southeast Asian peatlands reveals widespread hydrologic disturbance. *AGU Advances*, in press.
54. Xu, X., **A.G. Konings**, M. Longo, A. Feldman, L. Xu, S. Saatchi, D. Wu, J. Wu, and P. Moorcroft. Leaf surface water, not plant water stress, drives diurnal variation in tropical forest canopy water content (2021). *New Phytologist*, in press.
53. Worden, J., S.S. Saatchi, M. Keller, A.A. Bloom, R. Fu, S. Worden, J. Liu, N.C. Parazoo, J.B. Fisher, H. Worden, Y. Yin, K.W. Bowman, P. Gentine, **A.G. Konings**, G. Quetin, M. Williams, J.T. Reager, A. Barkhordarian, K. Fahy, M. Shi, and D.S. Schimel (2021). Satellite Observations of the Tropical Carbon Balance and

Interaction with the Water Cycle During the 21<sup>st</sup> Century. *Reviews of Geophysics*, in press.

52. Feldman, A.F., D. Short Gianotti, **A.G. Konings**, P. Gentine, and D. Entekhabi (2021). Patterns of plant rehydration and growth following pulses of soil moisture availability. *Biogeosciences*, 18:831-847.
51. N. Holtzman, L.D.L. Anderegg, S. Kraatz, A. Mavrovic, O. Sonnentag, C. Pappas, M.H. Cosh, A. Langlois, T. Lakhankar, D. Tesser, N. Steiner, A. Colliander, A. Roy, and **A.G. Konings** (2021). L-band vegetation optical depth as an indicator of plant water potential in a temperate deciduous forest stand. *Biogeosciences*, 18:739-753.
50. Li, X., J-P. Wigneron, F. Frappart, L. Fan. P. Ciais, R. Fensholt, D. Entekhabi, **A.G. Konings**, M. Brandt, A. Al-Yaari, X. Liu, and M. Wang. Global-scale assessment and inter-comparison of recently developed/reprocessed microwave satellite vegetation optical depth products. *Remote Sensing of Environment*, 253:112208.
49. Bloom, A.A., K.W. Bowman, J. Liu, **A.G. Konings**, J.R. Worden, N.C. Parazoo, V. Meyer, J.R. Reager, H.M. Worden, Z. Jiang, G.R. Quetin, T.L. Smallman, J.-F. Exbrayat, Y. Yin, S.S. Saatchi, M. Williams, and D.S. Schimel (2020). Lagged effects dominate the inter-annual variability of the 2010-2015 tropical carbon balance. *Biogeosciences*, 17:6393-6422.
48. Wu, G., K. Guan, Y. Li, K. Novick, X. Feng, N. McDowell, **A.G. Konings**, S. Thompson, J. Kimball, M. De Kauwe, E.A. Ainsworth, and C. Jiang (2020). Interannual variability of ecosystem iso/anisohydry is regulated by environmental dryness. *New Phytologist*, 1-14.
47. Anderegg, W.R.L., A.T. Trugman, G. Badgley, **A.G. Konings**, and J. Shaw (2020). Divergent forest sensitivity to repeated extreme droughts, *Nature Climate Change*, 10: 1091-1095.
46. Colliander, A., M.H Cosh., V. Kelly, S. Kraatz, L. Bourgeau-Chavez, P. Siqueira, A. Roy, **A.G. Konings**, N Holtzman, S. Misra, D. Entekhabi, P O'Neill, and S.H. Yueh (2020). SMAP detects soil moisture under temperate forest canopies. *Geophysical Research Letters*, 47, e2020GL089697.
45. Burnett, M.W., G.R. Quetin, and **A.G. Konings** (2020). Data-driven estimates of evapotranspiration and its controls in the Congo basin. *Hydrology and Earth System Science*, 24, 4189-4211.
44. Ciais P., T. Gasser, A. Baccini, Y. Wang, R. Lauerwald, S. Peng, A. Bastons, W. Li, P.A. Raymond, J.G. Canadell, G.P. Peters, R.J. Andres, J. Chang, C. Yue, A.J. Dolman, V. Haverd, J. Hartmann, G. Laruelle, **A.G. Konings**, A.W. King, Y. Liu, S. Luyssaert, F. Maignan, P.K. Patra, A. Pregon, P. Regnier, S. Piao, J. Pongratz, B. Poulter, A. Shvidenko, R. Valentini, R. Wang, G. Broquet, Y. Yin, J. Zscheischler, B. Guenet, D.S. Goll, A.P. Ballantyne, and D. Zhu (2020). Empirical estimates of regional carbon budgets imply reduced global soil heterotrophic respiration. *National Science Review*, nwaa145.
43. Liu, Y., M. Kumar, G.G. Katul, X. Feng, and **A.G. Konings** (2020). Plant hydraulics accentuates the effect of atmospheric moisture stress on transpiration. *Nature Climate Change*, 10:691-695.
42. Rao, K., A.P. Williams, J. Fortin Flefil, and **A.G. Konings** (2020). SAR-enhanced mapping of live fuel moisture content. *Remote Sensing of Environment*, 245: 111797.

41. Gruber, A., G. De Lannoy, C. Albergel, A. Al-Yaari, L. Brocca, J.-C. Calvet, A. Colliander, M. Cosh, W. Crow, W. Dorigo, C. Draper, M. Hirshi, Y. Kerr, **A.G. Konings**, W. Lahoz, K.A. McColl, C. Montzka, J. Munoz-Sabater, J. Peng, R. Reichle, P. Richaume, C. Rüdiger, T. Scanlon, R. Van der Schalie, and W. Wagner (2020), Validation Practices for Satellite Soil Moisture Products: What are (the) errors?, *Remote Sensing of Environment*, 244:111806.
  40. Quetin G.R., A.A Bloom, K.W. Bowman, and **A.G. Konings** (2020). Carbon Flux Variability from a Relatively Simple Ecosystem Model with Assimilated Data is Consistent with Terrestrial Biosphere Model Estimates, *Journal of Advances in Modeling Earth Systems*, 12: e2019MS001889.
  39. Karthikeyan, L., M. Pan, **A.G. Konings**, M. Piles, R. Fernandez-Moran, D. Nagesh Kumar, and E.F. Wood (2019): Simultaneous retrieval of global-scale vegetation optical depth, surface roughness, and soil moisture using X-band AMSR-E observations, *Remote Sensing of Environment*, 234: 111473.
  38. Dadap, N.C., A.R. Cobb, A.M. Hoyt, C.F. Harvey, and **A.G. Konings** (2019): Satellite soil moisture observations predict fire vulnerability in Southeast Asian peatlands, *Environmental Research Letters*, 14, 094014.
  37. **Konings, A.G.**, A.A. Bloom, J. Liu, N.C. Parazoo, D.S. Schimel, and K.W. Bowman (2019): Global, satellite-driven estimates of heterotrophic respiration, *Biogeosciences*, 16 (11), 2269-2284.
  36. Rao, K., W.R.L. Anderegg, A. Sala, J. Martinez-Vilalta, and **A.G. Konings**: Satellite-based vegetation optical depth as an indicator of drought-driven tree mortality (2019), *Remote Sensing of Environment*, 227:125-136.
  35. **Konings, A.G.**, K. Rao, and S.C. Steele-Dunne (2019): Macro to micro: microwave remote sensing of plant water content for physiology and ecology, *New Phytologist*, 223:1166-1172
  34. Novick, K.N., **A.G. Konings**, and P. Gentine (2019): Beyond soil water potential: an expanded view on isohydricity including land-atmosphere interactions and phenology, *Plant, Cell, and Environment*, 1-14.
  33. Jagdhuber, T., **A.G. Konings**, K.A. McColl, S.H. Alemohammad, N. N. Das, C. Montzka, M. Link, R. Akbar, and D. Entekhabi (2019): Physics-Based Modeling of Active and Passive Microwave Covariations Over Vegetated Surfaces. *IEEE Transactions in Geoscience and Remote Sensing*, 57(2):788-801.
  32. A. Feldman, D. Short Gianotti, **A.G. Konings**, K.A. McColl, R. Akbar, D. Entekhabi (2018): Moisture pulse-reserve in the soil-plant continuum observed across biomes, *Nature Plants*, 4: 1026-1033.
  31. Anderegg W.R.L, **A.G Konings**, A.T. Trugman, K. Yu, D.R. Bowling, R. Gabbitas, D. Karp, S. Pacala, J.S. Sperry, B. Sulman, and N. Zenes (2018): Hydraulic diversity of forests regulates ecosystem resilience during drought. *Nature*, 561:538-541.
  30. Giardina, F., **A.G. Konings**, D. Kennedy, S.H. Alemohammad, R.S. Oliviera, M. Uriarte, and P. Gentine (2018): Tall Amazonian forests are less sensitive to precipitation variability, *Nature Geoscience*, 11: 405-409.
- NB: Featured with Nature Geoscience News and Views article*

29. Chaparro, D., M. Piles, M. Vall-llossera, A. Camps, **A.G. Konings**, and D. Entekhabi (2018): L-band vegetation optical depth seasonal metrics for crop yield assessment, *Remote Sensing of Environment*, 212:249-259.
28. Alemohammad, S.H., **A.G. Konings**, T. Jagdhuber, M. Moghaddam, and D. Entekhabi (2018). Characterization of vegetation and soil scattering mechanisms across different biomes using P-band SAR polarimetry. *Remote Sensing of Environment*, 208:107-117.
27. Kim, H., R. Parinussa, **A.G. Konings**, W. Wagner, M.H. Cosh, V. Laskshmi, M. Zohaib (2018). Global-scale assessment and combination of SMAP with ASCAT (active) and AMSR2 (passive) soil moisture products. *Remote Sensing of Environment*, 204: 260-275.
26. Momen, M., J. D. Wood, K. A. Novick, R. Pangle, W. T. Pockman, N. G. McDowell, and **A. G. Konings** (2017), Interacting Effects of Leaf Water Potential and Biomass on Vegetation Optical Depth, *Journal of Geophysical Research – Biogeosciences*, 122:3031-3046.  
*NB: Featured as journal and AGU EOS spotlight*
25. Li, Y., K. Guan, P. Gentine, **A.G. Konings**, F.C. Meinzer, J.S. Kimball, X. Xu, W.R.L. Anderegg, N.G. McDowell, J. Martinez-Vilalta, D.G. Long, and S.P. Good (2017). Estimating global ecosystem iso/anisohdry using active and passive microwave satellite data. *Journal of Geophysical Research – Biogeosciences*: 122:3306-3321.
24. S.H. Alemohammad, B. Fang, **A.G. Konings**, J.A. Green, J. Kolassa, C. Prigent, F. Aires, and P. Gentine (2017). Water, Energy, and Carbon with Artificial Neural Networks (WECANN): A statistically-based estimate of global surface turbulent fluxes using solar-induced fluorescence. *Biogeosciences*, 14:4101-4124.
23. **Konings, A.G.**, M. Piles, N. Das, and D. Entekhabi (2017). L-band vegetation optical depth and effective scattering albedo estimation from SMAP. *Remote Sensing of Environment*, 198:460-470.
22. Rotzer, K, C. Montzka, D. Entekhabi, **A.G. Konings**, K.A. McColl, M. Piles, H. Vereecken (2017). Relationship between vegetation microwave optical depth and cross-polarized backscatter from multi-year Aquarius observations. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 10(10): 4493-4503.
21. Green, J., **A.G. Konings**, S.H. Alemohammad, J. Berry, D. Entekhabi, J. Kolassa, J.-E. Lee, and P. Gentine (2017). Regionally strong feedbacks between the atmosphere and terrestrial biosphere. *Nature Geoscience*, 10:410-414.
20. **Konings, A.G.**, A.P. Williams, and P. Gentine (2017). Sensitivity of grassland productivity to aridity controlled by stomatal and xylem regulation. *Nature Geoscience*, 10: 2290-2299.
19. **Konings, A.G.**, Y. Yu, L. Xu, Y. Yang, D.S. Schimel, and S.S. Saatchi (2017). Active microwave observations of diurnal and seasonal variations of canopy water content across the humid African tropical forests. *Geophysical Research Letters*, 44: 2290-2299.
18. McColl, K.A., S.H. Alemohammad, R. Akbar, **A.G. Konings**, S.Yueh, and D. Entekhabi (2017). The global distribution and dynamics of surface soil moisture. *Nature Geoscience*, 10: 100-104.

17. **Konings, A.G** and, P. Gentine (2017). Global Variations in Ecosystem-Scale Isohydrlicity. *Global Change Biology*, 23(2): 891-905.
  16. McColl K.A., A. Roy, C. Derksen, **A.G. Konings**, S.H. Alemohammad, and D. Entekhabi (2016). Triple collocation for categorical target variables: application to validating soil freeze/thaw products. *Remote Sensing of Environment*, 176, 31-42.
  15. **Konings, A.G.\***, M. Piles\*, K. Rötzer, K.A. McColl, S. Chan, and D. Entekhabi (2016). Vegetation optical depth and scattering albedo retrieval using time-series of dual-polarized L-band radiometer observations. *Remote Sensing of Environment*. 172, 178-189.
- N.B.: First two authors contributed equally to this paper*
14. Bruscantini, C.A., **A.G. Konings**, P. Narvekar, K.A. McColl, D. Entekhabi, F. M. Grings, and H. Karszenbaum (2015). L-band radar soil moisture retrieval without ancillary parameters. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 8(12), 5526-5540.
  13. Alemohammad S.H., K.A. McColl, **A.G. Konings**, and D. Entekhabi (2015). Characterizing precipitation product errors across the United States using triple collocation. *Hydrology and Earth System Science*, 19, 3489-3503.
  12. **Konings, A.G.**, K.A. McColl, M. Piles and D. Entekhabi (2015): How many parameters can be maximally estimated from a set of measurements? *IEEE Geoscience and Remote Sensing Letters*, 12(5), 1081-1085.
  11. McColl K.A., J. Vogelzang, **A.G. Konings**, D. Entekhabi, M. Piles and A. Stoffelen (2014): Extended triple collocation: estimating errors and correlation coefficients with respect to an unknown target. *Geophysical Research Letters*, 41, 6229–6236,
  10. **Konings A.G.**, D. Entekhabi, M. Moghaddam and S.S. Saatchi (2014): The effect of variable soil moisture profiles on P-band backscatter. *IEEE Transactions on Geoscience and Remote Sensing*, 52(10), 6315-6325.
  9. **Konings A.G.**, X. Feng, A. Molini, S. Manzoni, G. Vico and A. Porporato (2012): Thermodynamics of an idealized hydrologic cycle. *Water Resources Research*, 48, W05527.
  8. **Konings A.G.**, G.G. Katul and S.E. Thompson (2012): A phenomenological model for the flow resistance over submerged vegetation. *Water Resources Research*, 48, W02522.
  7. Katul G.G., **A.G. Konings**, and A. Porporato (2011): The mean velocity profile in a sheared and thermally stratified atmospheric boundary layer. *Physical Review Letters*, 107, 268502.
  6. **Konings, A.G**, S.C. Dekker, M. Rietkerk and G.G. Katul (2011): Drought sensitivity of patterned vegetation determined by rainfall-land surface feedbacks, *Journal of Geophysical Research-Biogeosciences*, 116, G04008.
  5. Thompson, S., G. Katul, **A. Konings** and L. Ridolfi (2011): Unsteady overland flow on flat surfaces induced by spatial permeability contrasts. *Advances in Water Resources*, 34, 1049-1058.
  4. Thompson, S.E., C.J. Harman, **A.G. Konings**, M. Sivapalan, A. Neal and P. A. Troch (2011): Comparative hydrology across AmeriFlux sites: the variable roles of climate, vegetation, and groundwater. *Water Resources Research*, 47, W00J07.

3. **Konings A.G.**, D. Entekhabi, E.G. Njoku, and S.K. Chan (2011): Effect of radiative transfer uncertainty on L-band radiometric soil moisture retrieval. *IEEE Transactions on Geoscience and Remote Sensing*, 49(7), 2686-2698.
2. **Konings, A.G.**, G.G. Katul, and A. Porporato (2010): The rainfall-no rainfall transition in a coupled land-convective atmosphere system, *Geophysical Research Letters*, 37, L14401.
1. Wójcik R., D. McLaughlin, **A.G. Konings**, and D. Entekhabi (2009): Conditioning stochastic rainfall replicates on remote sensing data. *IEEE Transactions on Geoscience and Remote Sensing*, 47(8), 2436-49.

## HONORS AND AWARDS

NSF CAREER	2020
NASA New (Early Career) Investigator Award	2018
NASA Group Achievement Award: AirMOSS Implementation Team	2016
MIT CEE Best Doctoral Thesis Award	2016
NASA Earth and Space Science Fellowship	2012-2015
NSF Graduate Research Fellowship	2009-2012
James B. Duke Fellowship	2009-2011
Chi Epsilon National Civil Engineering Honors Society	2008

## INVITED SEMINARS AND INVITED CONFERENCE PRESENTATIONS

08/2020	Ecological Society of America Annual Meeting
05/2020	European Geophysical Union Annual Meeting
05/2020	Jet Propulsion Laboratory, Center for Climate Science
12/2019	American Geophysical Union Fall Meeting
05/2019	Princeton University, Department of Civil and Environmental Engineering
04/2019	Lawrence Berkeley National Laboratory
04/2019	Carnegie Institution for Science, Dept. of Global Ecology
01/2019	American Meteorological Society Annual Meeting, Inez Fung Symposium, panelist
11/2018	University of Saskatchewan, Global Institute for Water Security
08/2018	Ecological Society of America Annual Meeting
05/2018	Harvard University, Dept. of Earth and Planetary Sciences
04/2018	University of California, Berkeley, Dept. of Geography
03/2018	University of Utah, Dept. of Biology
02/2018	University of California, Los Angeles, Dept. of Ecology and Evolution
01/2018	American Meteorological Society Annual Meeting
12/2017	American Geophysical Union Fall Meeting
09/2017	NASA Goddard Space Flight Center, Global Modelling and Assimilation Office
05/2017	Carnegie Institution for Science, Dept. of Global Ecology
12/2016	American Geophysical Union Fall Meeting
12/2016	University of California, Berkeley, Dept. of Civil and Environmental Eng.
10/2016	Boston University, Dept. of Earth and Environment

10/2016 Stanford University, Dept. of Geophysics  
07/2016 NASA Jet Propulsion Laboratory, Carbon Cycle & Ecosystems Group  
06/2016 Gordon Research Conference on Multiscale Vascular Plant Biology  
05/2015 Tsinghua University, Center for Earth System Science  
04/2015 The Ohio State University, Dept. of Civil, Environmental, and Geodetic Eng.  
03/2015 Columbia University, Dept. of Earth and Environmental Engineering  
03/2015 Stanford University, Dept. of Earth System Science  
06/2011 Utrecht University, Dept. of Environmental Sciences  
07/2010 Istituto Veneto di Scienze, Lettere, ed Arti, Summer School on  
Biogeodynamics and Earth System Sciences

## TEACHING

### Main or co-instructor

ESS 224 Remote Sensing of Hydrology (Spring 2018, Spring 2019, Spring 2020)  
ESS 223 Ecophysiology and Land Surface Processes (Fall 2017, Winter 2019, Winter 2020)

### Guest lecture

GEOPHYSICS 101/201: Frontiers of Geophysical Research at Stanford (Fall 2019)  
EARTHSYS 291: Concepts in Environmental Communication (Fall 2019)  
ENVRES 330 Research Approaches for Environmental Problem Solving (Spring 2017)  
ESS 305 Climate Change: An Earth Systems Perspective (Fall 2017-2020)  
EARTHSYS 10 Introduction to Earth Systems (Fall 2017, 2018, 2020)  
Stanford Undergraduate Research in Geoscience and Engineering Program (Summer 2018-2020)

### Teaching Assistant

MIT 1.070 Introduction to Hydrology (Fall 2013)  
Summer school on Biogeodynamics and Earth System Science (June 2010)  
MIT Chi Epsilon Matlab Tutorial (Spring 2009)

### Workshop Organization

Software Carpentry Scientific Programming Workshop at MIT CEE (2013)

## RESEARCH MENTORSHIP

### Postdoctoral Scholars

Yanlan Liu, 07/2019 - 09/2021, now postdoc at Lawrence Berkeley National Laboratory  
Gregory Quetin, 02/2018 – present  
Mostafa Momen, 02/2017-01/2018, now Assistant Prof at University of Houston

### PhD Students

Matthew Worden, 2020 - present  
Caroline Famiglietti, 2018 – present (Stanford Graduate Fellow)

Natan Holtzman, 2018 – present (NASA Future Investigator in Earth & Space Science & Technology)

Krishna Rao, 2018 – present (NASA Earth and Space Science Fellow, Stanford Data Science Fellow)

Nathan Dadap, 2016 – present (NASA Earth and Space Science Fellow)

### **MS Students**

Krishna Rao (CEE), 2017

Christopher Jansen (CEE), 2017

Jacqueline Fortin Flefil (CEE), 2018

### **Undergraduate Students**

Olivia Fournoy (Geophysics), 2019-present

Michael Burnett (Earth Systems), 2018-2019

Yesenia Ulloa (undeclared, Stanford SESUR summer student), 2018-2019

Guadalupe Alvarez (UT-El Paso, Stanford SURGE summer student), 2018

### **Geophysics Second-Project Students**

Aakash Ahamed, 2018 - present

### **Visiting Students**

Yanlan Liu (Duke University PhD student), summer 2018

### **PhD Committee Member**

Conor Doherty, Stanford Civil and Environmental Engineering, current

Andrew Feldman, MIT Civil and Environmental Engineering, current

Aakash Ahamed, Stanford Geophysics, current

Shersingh Tumbler-Davila, Stanford Earth System Science, current

Roger Michaelides, Stanford Geophysics, PhD 2020

Emily Francis, Stanford Earth System Science, PhD 2019

Jordanna Deane, Stanford Civil and Environmental Engineering, PhD 2018

### **PhD Committee Chair**

Yijie Zheng, Stanford Geophysics, PhD 2019

Ryan Smith, Stanford Geophysics, PhD 2018

Yoichi Shiga, Stanford Civil and Environmental Engineering, PhD 2018

## **ACADEMIC ADVISING**

### **Stanford Earth Systems Academic Advisor**

Lilla Petruska, 2020-present

Mireille Vargas, 2020-present

## **STANFORD UNIVERSITY SERVICE**

- Woods Institute Environmental Ventures Projects Selection Committee (2019-2020)
- 'Postdoc Academic Chats' Panelist (2018)
- Long-Range Planning Committee on Faculty Affordability (2018-2019)



- Price Chair in Hydrology and Water Resources Faculty Search Committee (2018-2019)
- Jasper Ridge Biological Preserve Faculty Advisory Committee (2017-2019)
- Earth System Science Departmental Seminar Organizer (Spring Quarter 2017)
- Earth System Science Graduate Admissions Committee (Fall 2016-Spring 2018, Fall 2019-present)
- Earth System Science Diversity Committee (2018)

## PROFESSIONAL SERVICE

### Leadership

- Co-convener, AGU Fall Meeting 2019 & 2020 sessions on “Complexity and Emergent Behavior in the Terrestrial Carbon Sink”
- Co-Chair, Keck Institute for Space Studies Workshop on “Sensing Forest Water Dynamics from Space: Towards Predicting the Earth System Response to Droughts” (October 2019 & October 2020)
- Program committee member, AGU Chapman Conference on “Understanding Carbon-Climate Feedbacks” (August 2019)
- Co-convener, IEEE Geoscience and Remote Sensing Session on “New Products and Results in Monitoring Biomass and Plant Water Stress with Microwave Radiometry” (July 2019)
- Co-convener, AGU Fall Meeting 2018 session “Emergent Behavior in the Terrestrial Carbon Cycle”
- Primary convener, AGU Fall Meeting 2018 session “Understanding the Role of Plant Hydraulics Across Scales”
- Primary convener, AGU Fall Meeting 2017 session on “Emerging technologies in hydrologic remote sensing: drones, proximal sensing using neutron probes, and more”
- Member, Remote Sensing Technical Committee, American Geophysical Union Hydrology Section, 2016-present
- Co-organizer, JPL workshop on Applications of GNSS-R to Cold Land Processes and Surface Hydrology, August 2016
- Outstanding Student Paper Award judge, American Geophysical Union 2016-present

### Reviewer and Editor

- Associate Editor, Biogeosciences (2020-present)
- Associate Editor, Frontiers in Big Data, Data-Driven Climate Sciences section (2019)
- Ad Hoc Journal Reviews: *Advances in Water Resources*, *AGU Books*, *Earth Surface Processes and Landforms*, *Earth System Science Data*, *Ecological Applications*, *Geophysical Research Letters*, *Global Change Biology*, *IEEE Geoscience and Remote Sensing Letters*, *Journal of Geophysical Research* –

*Biogeosciences, Journal of Hydrometeorology, Hydrological Processes, Hydrology and Earth System Sciences, Nature, Nature Communications, Nature Ecology and Evolution, Nature Geoscience, New Phytologist, Proceedings of the National Academy of Sciences, Remote Sensing, Remote Sensing of Environment, Science Advances, and Water Resources Research.*

- Conferences: *IEEE Geoscience and Remote Sensing Symposium*
- Proposals: NASA Terrestrial Ecology (panel), NASA Terrestrial Hydrology (panel), NOAA Modeling, Analysis, Predictions and Projections (panel), NSF Geography and Spatial Sciences (ad hoc), NSF Hydrologic Sciences (ad hoc), National Academy of Sciences (ad hoc)

## **PROFESSIONAL AFFILIATIONS**

American Association for the Advancement of Science, American Geophysical Union, Ecological Society of America, American Meteorological Society, IEEE Geoscience and Remote Sensing Society, Chi Epsilon Civil Engineering Honors Society