

## Abigail L. S. Swann

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CONTACT INFORMATION	Atmospheric Sciences Department and Biology Department University of Washington Box 351640 Seattle, WA 98195-1640 USA	<i>E-mail:</i> aswann@u.washington.edu www.atmos.washington.edu/~aswann
RESEARCH INTERESTS	Ecoclimate. Biosphere-climate feedbacks. Climate and ecosystem modeling. Carbon cycle.	
EDUCATION	<i>Ph.D.</i> , Earth and Planetary Science, University of California, Berkeley Thesis title: <i>Ecoclimate: Variations, Interactions, and Teleconnections</i> Thesis Advisor: Inez Y. Fung	2010
	<i>M.A.</i> , Earth and Environmental Sciences, Columbia University	2005
	<i>B.A.</i> , Earth and Planetary Science, University of California, Berkeley	2003
PROFESSIONAL EXPERIENCE	<b>University of Washington</b> , Seattle, WA USA <i>Assistant Professor in the Department of Atmospheric Sciences and the Department of Biology</i> September 2012 – ongoing	
	<b>Harvard University</b> , Cambridge, MA USA <i>Giorgio Ruffolo Post-doctoral Fellow in Sustainability Science at the Kennedy School of Government, Visiting Scientist in the Department of Organismic and Evolutionary Biology</i> September 2010 – August 2012	
GRANTS	NSF Climate and Large Scale Dynamics & Ecosystems AGS-1321745: <i>Ecoclimate Teleconnections: effects of a shifting ITCZ.</i> <b>PI A.L.S Swann</b> \$372,287 2013 - 2016	
	NSF Macrosystems EF-1340649: <i>Collaborative Research: Ecoclimate teleconnections between Amazonia and temperate North America: cross-region feedbacks among tree mortality, land use change, and the atmosphere.</i> <b>UW PI A.L.S Swann</b> , (Project PI D. Breshears, Co-PI S. Saleska, PI S. Stark). \$227,718 (to UW) 2014 - 2017	
	NSF EF-1550641: <i>COLLABORATIVE RESEARCH: EAGER-NEON: Prototyping Assessment of Ecoclimate Teleconnections Affecting NEON Domains.</i> <b>UW PI A.L.S Swann</b> , (Project PI D. Breshears, Co-PIs S. Saleska, D. Moore, PI S. Stark). \$113,719 (to UW) 2015 - 2017	
	NSF Climate and Large Scale Dynamics & Ecosystems AGS-1553715: <i>CAREER: Ecosystem-driven accelerations and oscillations in the coupled Earth system.</i> <b>PI A.L.S Swann</b> \$654,040 2016 - 2021	

HONORS AND AWARDS	NSF CAREER Faculty Early Career Development Award	2016-2020
	DISCCRS VI Scholar	2011
	Giorgio Ruffolo Post-doctoral Fellow in Sustainability Science at the Harvard Kennedy School	2010-2012
	NASA Earth Systems Science Fellow	2007
	IGERT Fellow in Applied Mathematics and Earth Sciences at Columbia University	2003-2005
	Graduated with Honors, University of California	2003
	All-America Sportsman of the year, Inter-Collegiate Sailing Association	2003
	PEER REVIEWED PUBLICATIONS	<b>Swann, A.L.S.</b> and Koven, C.D., 2017. A direct estimate of the seasonal cycle of evapotranspiration over the Amazon Basin. <i>Journal of Hydrometeorology</i> , 18(8):2173-2185. doi:10.1175/JHM-D-17-0004.1.
	<b>Quetin, G.R.*</b> , <b>Swann, A.L.S.</b> , 2017. Empirically derived sensitivity of vegetation to climate across the globe. <i>Journal of Climate</i> , 30(15):5835-5849. doi:10.1175/JCLI-D-16-0829.1.	
	Stavros, N.E., Schimel, D., Pavlick, R., Serbin, S., <b>Swann, A.L.S.</b> , Duncanson, L, Fisher, J.B., Fassnacht, F., Ustin, S., Dubayah, R., Schweiger, A., Wennberg, P., 2017. International Space Station observations offer an opportunity to understand plant function. <i>Nature Ecology and Evolution</i> . 1:0194, 06. doi:10.1038/s41559-017-0194.	
	Villegas, J. C., Law, D. J., Stark, S. C., Minor, D. M., Breshears, D. D., Saleska, S. R. <b>Swann, A. L. S.</b> , <b>Garcia, E. S.</b> , Bella, E. M., Morton, J. M., Cobb, N. S., Barron-Gafford, G. A., Litvak, M. E., and Kolb, T. E., 2017. Prototype campaign assessment of disturbance-induced tree loss effects on surface properties for atmospheric modeling. <i>Ecosphere</i> , 8(3):2150. doi:10.1002/ecs2.1698.	
	<b>Garcia, E.S.</b> , <b>Swann, A.L.S.</b> , Villegas, J.C., Breshears, D.D., Law, D.J., Saleska, S.R., Stark, S.C., 2016. Ecoclimate teleconnections from forest loss in disparate regions: Identifying differential responses, mechanisms, and synergies in affected areas. <i>PLOS ONE</i> . 11(11):1-12. doi:10.1371/journal.pone.0165042.	
	<b>Swann, A.L.S.</b> , Hoffman, F., Koven, C.D., Randerson, J.R., 2016. Plant responses to increasing CO <sub>2</sub> reduce estimates of climate impacts on drought severity. <i>Proceedings of the National Academy of Science</i> , doi:10.1073/pnas.1604581113.	
	<b>Laguë, M.M.*</b> , <b>Swann, A.L.S.</b> , 2016. Progressive midlatitude afforestation: Impacts on clouds, global energy transport, and precipitation. <i>Journal of Climate</i> , 29(15):55615573, doi:10.1175/JCLI-D-15-0748.1.	
	Stark, S.C., Breshears, D.D., <b>Garcia, E.</b> , Law D.J., Minor, D., Saleska, S.R., <b>Swann, A.L.S.</b> , Villegas, J.C., Arago, L.E.O.C., Bella, E.M., Borma, L.S., Cobb, N.S., Litvak, M.E., Magnuson, W., Morton, J.M., Redmond, M.D., 2015. Toward accounting for ecoclimate teleconnections: intra- and inter-continental consequences of altered energy balance after vegetation change. <i>Landscape Ecology</i> , 31 (1), 181-194, doi:10.1007/s10980-015-0282-5.	

**A. L. S. Swann**, M. Longo\*, R. G. Knox\*, E. Lee, and P. R. Moorcroft, 2015. Future deforestation in the Amazon and consequences for South American climate. *Agricultural and Forest Meteorology*, 214215:1224, 12, doi: 10.1016/j.agrformet.2015.07.006.

Knox, R.G.\*, Longo, M.L.\*, **Swann, A.L.S.**, Zhang, K. and Levine, N.M., Moorcroft, P.R., Bras, R.L., 2015. Hydrometeorological Effects of Historical Land-Conversion in an Ecosystem-Atmosphere Model of Northern South America, *Hydrology and Earth System Sciences* 19(1):241273, doi:10.5194/hess-19-241-2015.

**Swann, A.L.S.**, Fung, I.Y., Liu, Y. \*, Chiang, J.C.H., 2014. Remote vegetation feedbacks and the mid-Holocene Green Sahara, *Journal of Climate* 27(13) 48574870, doi: 10.1175/JCLI-D-13-00690.1

**Swann, A. L.**, Fung, I. Y., Chiang, J. C. H., 2012. Mid-latitude afforestation shifts general circulation and tropical precipitation, *Proceedings of the National Academy of Science*, doi:10.1073/pnas.1116706108.

Lee, J. -E., and **Swann, A. L.**, 2010. "Evaluation of using the "amount effect" to interpret speleothem data: Asian monsoon study, *IOP Conference Series: Earth and Environmental Science*, 9, 012023, doi:10.1088/1755-1315/9/9/012023.

**Swann, A. L.**, Fung, I. Y., Levis, S., Bonan, G., Doney, S. 2010. Arctic vegetation changes induce high-latitude warming through the greenhouse effect, *Proceedings of the National Academy of Science*, doi:10.1073/pnas.0913846107.

Lee, J., Pierrehumbert, R., **Swann, A.**, Lintner, B. R., 2009. Sensitivity of stable water isotopic values to convective parameterization schemes, *Geophysical Research Letters*, 36, L23801, doi:10.1029/2009GL040880.

**Swann, A. L.**, Sobel, A. H., Yuter, S. E., Kiladis, G. N., 2006. Observed radar reflectivity in convectively coupled Kelvin and mixed Rossby-gravity waves, *Geophysical Research Letters*, 33, L10804, doi:10.1029/2006GL025979.

\* Graduate Student Author

PEER REVIEWED  
PUBLICATIONS  
(CONT.)  
PUBLICATIONS IN  
REVIEW

**Kovenock, M.\***, **Swann, A.L.S.**, Leaf trait acclimation amplifies simulated climate warming in response to elevated carbon dioxide. (*in review at Proceedings of the National Academy of Science*).

Kooperman, G.J., Chen, Y., Hoffman, F.M., Koven, C.D., Lindsay, K., Pritchard, M.S., **Swann, A.L.S.**, and Randerson, J.T. Forest response to rising CO<sub>2</sub> drives zonally asymmetric rainfall change over tropical continents. (*in review at Nature Climate Change*).

Lemordant, L.\* , Cook, B., Scheff, J., **Swann, A.L.S.**, Gentine, P. Vegetation physiology equally controls continental dryness response to climate change. (*in review at Nature Climate Change*).

OTHER  
PUBLICATIONS

Fung, I. and **Swann, A.**, 2011. Climatic consequences of afforestation. *In AIP Conf. Proc*, volume 1401, pages 211-219.

\* Graduate Student Author, **Bold type**: member of Swann research group

STUDENTS AND  
POSTDOCS  
SUPERVISED

**Graduate Students: Chair of Supervisory Committee**

*Gregory Quetin*, expected PhD 2017 Atmospheric Sciences  
 Dissertation topic: Sensitivity of vegetation to climate on interannual timescales  
 Awards:  
 • Program on Climate Change Fellowship, 2012-2013

*Marlies Kovenock*, expected PhD 2018 Biology  
 Dissertation topic: Climate response to plant trait acclimation  
 Awards:  
 • Wingfield/Ramenofksy Award for Environmental Biology,  
 Biology Department, 2016  
 • Sargent Award, Biology Department, 2016  
 • Program on Climate Change Fellowship, 2014-2015

*Marysa Laguë*, expected PhD 2019 Atmospheric Sciences  
 Dissertation topic: Atmospheric sensitivity to land surface properties  
 Awards:  
 • Selected as one of the Husky 100, 2017  
 • NSERC (Canadian) Postgraduate Scholarship-Doctoral Program, 2016-2019  
 • NSERC (Canadian) Graduate Fellowship, 2013-2014

*Jennifer Hsiao*, expected PhD 2020 Biology  
 Dissertation topic: The role of humidity in primary production under a changing  
 climate

**Postdocs Supervised**

*Elizabeth Garcia* 2014-2017  
 Topic: Climate impacts of forest die-off.  
 Current Position: Watershed Manager at Seattle Public Utilities.  
 Invited Presentations:  
 • American Geophysical Union Fall Meeting, San Francisco, CA, 2015  
 • Ecological Society of America Annual Meeting, Portland, OR, 2017

SERVICE:  
DEPARTMENTAL

Member of Biology Department Graduate  
 and Postdoc Program Committee 2017-ongoing  
 Co-chair of Biology Department Seminar Committee 2015-2017  
 Member of Atmospheric Sciences Committee on Graduate Studies 2015  
 Member of Biology Department Seminar Committee 2014-2015

SERVICE: COLLEGE & UNIVERSITY	Member of Search Committee for Program on Climate Change Director	2017
	Member of Ad-Hoc committee on Family Friendly Policies, College of the Environment	2015-ongoing
	Member of Science Communication Advisory Group, College of the Environment	2015-ongoing
	Member of College of the Environment <i>Future of Ice</i> Search Committee for 2 interdisciplinary faculty positions	2014
	Biology Advancement Dinner	2015
	<i>Participant</i> UW Faculty Field Tour, extending UW's reach beyond Seattle	2013
	<i>Reviewer</i> Royalty Research Fund Proposals, UW	2012, 2013
SERVICE: PROFESSIONAL	<b>Scientific Community:</b>	
	<i>Co-chair</i> Biogeochemistry Working Group, Community Earth System Model, National Center for Atmospheric Research	2017-present
	<b>Societies:</b>	
	American Geophysical Union	2003-present
	American Meteorological Society	2005, 2016-present
	Ecological Society of America	2014-present
	Earth Science Women's Network	2003-present
	<b>Conference Organization:</b>	
	<i>Organizer</i> , Program on Climate Change Summer Institute	2015
	I organized a three day symposium on terrestrial ecosystems, land surface processes, and climate which brought in five speakers from across the country together speakers and panelists from four departments at UW .	
	<i>Convener</i> , Session at American Geophysical Union Fall meeting 2013, 2014, 2015, 2016	
	<i>Trainer &amp; Organizer</i> , ED+ Training Workshop	2013
	<b>Grant Review:</b>	
	<i>Ad-hoc review</i> National Science Foundation	2011, 2012, 2013, 2014, 2015, 2017
	<i>Panelist</i> , National Science Foundation	2015
	<b>Journal Review</b>	
	Nature Communications	2017
	Proceedings of the National Academy of Science	2011, 2015, 2016, 2017
	Science	2017
Journal of Climate	2012, 2017	
Agriculture and Forest Meteorology	2017	
Nature	2016	
Nature Scientific Reports	2016	
Nature Climate Change	2012, 2014, 2016	

Geophysical Research Letters	2013, 2015, 2016
Journal of Advances in Modeling Earth Systems	2016
Journal of Geophysical Research - Biogeosciences	2011, 2012, 2013, 2015, 2016
Environmental Research Letters	2015
Geoscientific Model Development	2015
Hydrology	2015
Climate Dynamics	2011, 2015
Global Change Biology	2013, 2014
Climate of the Past	2014
Annales Geophysicae	2014

INVITED  
PRESENTATIONS

**2017**

*Invited Talk* Department of Earth and Environmental Sciences, Stanford University, Palo Alto, CA

*Invited Talk* Department of Earth and Planetary Sciences, University of New Mexico, Albuquerque, NM

*Invited Talk* Santa Fe Climate Conference, Santa Fe, NM

**2016**

*Declined Invited Speaking Invitation* Keynote talk at the AGU Chapman Conference on “Emerging Issues in Tropical Ecohydrology”, Cuenca, Ecuador

*Declined Invited Speaking Invitation* American Quaternary Association Biennial Meeting, Santa Fe, NM

**2015**

*Invited Talks (2)* American Geophysical Union Fall Meeting, San Francisco, CA

*Invited Talk* Department of Earth and Planetary Science, Harvard University, Cambridge, MA

*Invited Talk* Carnegie Institution for Science, Department of of Global Ecology, Stanford University, Palo Alto, CA

*Invited Talk* Monsoons and ITCZ workshop, Columbia University, New York, NY

*Invited Talk* Department of Atmospheric and Environmental Sciences, SUNY Albany, Albany, NY

*Invited Talk* Ecological Society of America Annual Meeting, Baltimore, MD

*Invited Talk* Macrosystems Biology Annual Meeting, National Science Foundation, Arlington, VA

*Invited Talk* Evergreen State College, Olympia, WA

*Invited Participant* Organization for Tropical Studies Emerging Frontiers in Tropical Science Working Group on Vegetation-precipitation coupling in the Tropics, La Selva, Costa Rica

**2014**

*Invited Talks (2)* American Geophysical Union Fall Meeting, San Francisco, CA

*Invited Talk* Earth System Science Department Seminar, University of California, Irvine, CA

*Invited Talk* Atmospheric Science Department Seminar, Colorado State University, Fort Collins, CO

**2013**

*Invited Talk* Western Roundtable Series at the Center for Sustainability and the Global Environment, University of Wisconsin, Madison WI

*Invited Talk* Biology Department Seminar, University of Washington, Seattle, WA

*Invited Talk* Department of Ecology and Evolutionary Biology Department Seminar, University of Arizona, Tuscon, AZ

CONTRIBUTED  
PRESENTATIONS  
TO SCHOLARLY  
AUDIENCES

- 2017**  
*Talk* Community Earth System Model Annual Workshop, Boulder, CO
- 2014**  
*Talk* Community Land Model Working Group Meeting, Boulder, CO
- 2013**  
*Talk* ED+ Working Group Meeting, Berkeley, CA  
*Talk* American Geophysical Union Fall Meeting, San Francisco, CA  
*Talk* Community Land Model Working Group Meeting, Boulder, CO

GUEST LECTURES  
IN COURSES

- 2017**  
FLUXCOURSE (organized by University of Arizona, in Nederland, CO)
- 2015**  
Carbon Seminar, School of Environmental and Forest Sciences  
Program on Climate Change Special Seminar Series  
Exploring Atmospheric Science (*ATMS 220*)  
FLUXCOURSE (organized by University of Arizona, in Nederland, CO)  
Climate Modeling (*ATMS/OCEAN/ESS 559*)  
Topics in Advanced Ecology (*BIOL/SEFS/FISH 567*)
- 2014**  
Exploring Atmospheric Science (*ATMS 220*)
- 2013**  
Bioclimatology (*AOS 520* at University of Wisconsin, Madison)  
Exploring Atmospheric Science (*ATMS 220*)  
Topics in Advanced Ecology (*BIOL/SEFS/FISH 567*)

OUTREACH &  
PRESENTATIONS  
TO THE PUBLIC

- Public Lectures**
- Bellettini Home, Bellevue, WA 2017
- Rotary Club of South Lake Union, Seattle, WA 2017
- Outreach**
- Kindergarten goes to College, visit with Bryant Elementary  
Kindergarten class 2015, 2017
- Organized sessions for the Girls in Science program  
for middle school girls at the Burke Museum 2015, 2016, 2017
- Panelist for Public Engagement Workshop for Graduate and  
Professional Students at UW 2016
- SAMlink seminar for undecided undergraduates 2015
- Paws on Science day at the Pacific Science Center 2014
- Math Day at UW 2014
- Think Evolution Summer Institute (for high school teachers) 2013
- Communicating Climate Science Education Working Group,  
Lawrence Hall of Science, Berkeley, CA 2012

**Press Releases**

University of Washington (*Swann et al. 2014, Swann et al. 2016, Garcia et al. 2016*)

National Science Foundation (*Garcia et al. 2016*)

**Selected Press Coverage of Research**

Scientific American 60 second Podcast (*Garcia et al. 2016*)

Vocative (*Garcia et al. 2016*)

Huffington Post (*Garcia et al. 2016*)

The Oregonian (*Garcia et al. 2016*)

Mongabay (*Garcia et al. 2016*)

El Mundo (2nd largest newspaper in Spain) (*Swann et al. 2016*)

KOMO Radio News (*Swann et al. 2016*)

**Selected Media Appearances**

KUOW Public Radio	April 2017
Mongabay	November 2016
USA Today	October 2016
Climate Central	August 2016
Inside Climate News	June 2016
New York Times	October 2015

CONFERENCES,  
SYMPOSIA, AND  
WORKSHOPS  
ATTENDED

- Community Earth System Model Workshop, June 19-22, 2017, Boulder, CO USA.
- Santa Fe Climate Conference, February 2-7, 2017, Santa Fe, NM USA.
- American Geophysical Union Fall Meeting, December 14-18, 2015, San Francisco, CA USA.
- Keck Institute for Space Studies Workshop: Exploring New Multi-Instrument Approaches to Observing Terrestrial Ecosystems and the Carbon Cycle from Space, Oct. 5-9, 2015, Pasadena, CA USA.
- Monsoons and the Intertropical Convergence Zone, Sept. 15-18, 2015, New York, NY USA.
- Organization for Tropical Studies, Emerging Frontiers in Tropical Science Working Group on Vegetation-precipitation coupling in the Tropics, March 4-7, 2015, La Selva Biological Station, Costa Rica.
- Communicating Climate Science Workshop, Feb 23-24, 2015, Berkeley, CA USA.
- American Geophysical Union Fall Meeting, December 15-19, 2014, San Francisco, CA USA.
- Megafauna and Ecosystem Function Meeting, March 18-20, 2014, Oxford, UK.
- National Center for Atmospheric Research Land Model Working Group Meeting, Feb 24-26, 2014, Boulder, CO USA.
- ED+ Working Group Meeting, December 16-18, 2013, Berkeley, CA USA.
- American Geophysical Union Fall Meeting, December 9-13, 2013, San Francisco, CA USA.
- Keck Institute for Space Studies Workshop: Airships: A New Horizon for Science, April 30-May 3, 2013, Pasadena, CA USA.
- National Center for Atmospheric Research Land Model Working Group Meeting, Feb 28-March 2, 2013, Boulder, CO USA.
- Communicating Climate Change Educational Working Group, December 7-8, 2012, Berkeley, CA USA.
- American Geophysical Union Fall Meeting, December 4-6, 2012, San Francisco, CA USA.
- NOAA Summer Institute, July 8-12, 2012, Steamboat Springs, CO USA.
- National Center for Atmospheric Research Land Model Working Group Meeting, Feb 21-22, 2012, Boulder, CO USA.