Julia Yang

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CURRENT:

6/23 – present
Postdoctoral Scholar
University of California, Berkeley
Department of Environmental Science, Policy & Management
PI: Dr. Trevor Keenan

EDUCATION:

8/19 – 8/23
University of Utah
Ph.D. Ecology, Evolution, & Organismal Biology
Committee: David Bowling (chair), William Anderegg, Troy Magney, James Ehleringer, Barry Logan

7/19
Fluxcourse Early Career Workshop
University of Colorado Mountain Research Station at Niwot Ridge
Formal training in the foundations of land-atmosphere carbon and water flux measurement, modeling, and synthesis.

8/17 – 5/19
University of Arizona
M.A. Geography & Development
Committee: Greg Barron-Gafford, William K. Smith, Willem van Leeuwen

8/11 – 12/14
University of Kansas
B.S. Ecology & Evolutionary Biology / B.S. Environmental Studies
Graduated with Distinction & *summa cum laude*

RESEARCH:

6/23 – present
University of California, Berkeley / Postdoctoral Research / Dr. Trevor Keenan
Optimizing reforestation strategies for nature-based climate solutions (NbCS) in the neotropics using a process-based demographic vegetation model (CLM-FATES)

1/22 – 4/23
University of Utah / Dissertation Chapter / Dr. David Bowling
Interannual variation in the timing and magnitude of carbon uptake due to changing snowpack in forests across North America.

7/21 – 4/23
University of Utah / Dissertation Chapter / Dr. David Bowling
Characterizing the photosynthetic response of ponderosa pine needles to experimental drought using leaf-scale solar-induced fluorescence (SIF).

11/22 – 12/22
University of Melbourne / FLUXNET Secondment / Dr. Stefan Arndt
Impact of low-intensity controlled burns on the carbon and water flux dynamics of dry eucalypt forests in Australia.

8/19 – 12/21
University of Utah / Dissertation Chapter / Dr. David Bowling
GPP and solar induced fluorescence (SIF) respond differently to light and seasonal environmental conditions in a subalpine conifer forest.

8/17 – 5/19
University of Arizona / Master's Thesis / Dr. Greg Barron-Gafford

Linking leaf-level physiology with proximally-sensed and tower mounted photochemical reflective index (PRI) in a semi-arid mixed conifer forest

11/12 – 12/14 Kansas Biological Survey / Undergraduate Honors Research/ Dr. Sharon Billings
Microbial metabolic response to temperature and relative C and N availability in boreal organic soils

6/14 – 8/14 Univ. of Michigan Biological Station / NSF REU / Dr. Chris Gough
Soil respiration response to stand age and disturbance history in a 168-year forest chronosequence

6/13 – 8/13 Univ. of Arizona, Biosphere2 / NSF REU / Dr. Greg Barron-Gafford
Temperature effects on the physiological ecology of sub-alpine conifer forests in the Santa Catalina Critical Zone Observatory.

1/12 – 5/13 Kansas Biological Survey / Undergraduate Researcher / Dr. Kelly Kindscher
Harvest sustainability and ethnobotany of the medicinal plant osha

PUBLICATIONS:

Yang, J.C., Bowling, D.R., Smith, K.R., Kunik, L., Raczka, B., Anderegg, W.R., … & Litvak, M.E. (2024). Forest carbon uptake as influenced by snowpack and length of photosynthesis season in seasonally snow-covered forests of North America. *Agricultural and Forest Meteorology*, 353, p.110054.

Yang, J.C., Magney, T.S., Albert, L.P., Richardson, A.D., Frankenberg, C., Stutz, J., Grossman, K., Burns, S.P., B., Seyednasrollah, Blanken, P.D., Bowling, D.R. (2022). Gross primary production (GPP) and red solar induced fluorescence (SIF) respond differently to light and seasonal environmental conditions in a subalpine conifer forest. *Agricultural and Forest Meteorology,* 317, 108904.

Yang, J.C., Magney, T. S., Yan, D., Knowles, J. F., Smith, W. K., Scott, R. L., & Barron-Gafford, G. A. (2020). The photochemical reflectance index (PRI) captures the ecohydrologic sensitivity of a semi-arid mixed conifer forest. *Journal of Geophysical Research: Biogeosciences*, e2019JG005624.

Seyednasrollah, B., Bowling, D. R., Cheng, R., Logan, B. A., Magney, T. S., Frankenberg, C., **Yang, J.C.,** Young, A.M., Hufkens, K., Arain, M.A., & Black, T. A. (2020). Seasonal variation in the canopy color of temperate evergreen conifer forests. *New Phytologist*.

Smith, W. K., Dannenberg, M. P., Yan, D., Herrmann, S., Barnes, M. L, Barron-Gafford, G. A., Biederman, J. A., Ferrenberg, S., Fox, A. M., Hudson, A. R., Knowles, J. F., MacBean, N., Moore, D. J., Nagler, P. L., Reed, S. C., Rutherford, W. A., Scott, R. L., Wang, X., **Yang, J.** (2019) Remote sensing of dryland ecosystem structure and function: Progress, challenges and opportunities. *Remote Sensing of Environment*.

Liebman, E., **Yang, J.**, Nave, L. E., Nadelhoffer, K. J., & Gough, C. M. (2017). Soil respiration in upper Great Lakes old-growth forest ecosystems. *BIOS*, *88*(3), 105-115.

Kindscher, K., Martin, L. M., Long, Q., Craft, R., Loring, H., Sharaf, M. H., & **Yang, J.** (2017). Harvesting and Recolonization of Wild Populations of Oshá (Ligusticum porteri) in Southern Colorado. *Natural Areas Journal*, *37*(2), 178-187.

Kindscher, K., **Yang, J.**, Long, Q., Craft, R., & Loring, H. (2013). Harvest sustainability study of wild populations of Osha, *Ligusticum porteri*. Open-File Report No. 176. Kansas Biological Survey. Lawrence, KS., 20 pp.

ACADEMIC PRESENTATIONS:

Yang, J.C., Magney, T.S., Bingham, E., Bowling, D.R. Characterizing the photosynthetic response of ponderosa pine needles to experimental drought using leaf-scale solar-induced fluorescence (SIF). Poster presented at: American Geophysical Union National Conference; 2023 Dec 11-15;

San Francisco, CA.

Yang, J.C., Magney, T.S., Richardson A.D., Frankenburg, C., Stutz, J., Grossmann, K., Burns, S.P., Seyednasrollah, B., Blanken, P.D., Albert, L.P., Bowling, D.R. A comparison of the environmental responses of canopy SIF and GPP in a subalpine conifer forest in Colorado, USA. Poster presented at: American Geophysical Union National Conference; 2020 Dec 11-17.

Yang, J.C., Magney, T.S., Richardson A.D., Frankenburg, C., Stutz, J., Grossmann, K., Burns, S.P., Seyednasrollah, B., Blanken, P.D., Bowling, D.R. A comparison of the environmental responses of canopy SIF and GPP in a subalpine conifer forest in Colorado, USA. Poster presented at: Ecological Society of America Annual Meeting; 2020 Aug 3-6.

Yang, J. C., Magney, T. S., Yan, D., Knowles, J. F., Smith, W. K., Scott, R. L., & Barron-Gafford, G. A. (2019). The photochemical reflectance index (PRI) captures the ecohydrologic sensitivity of a semi-arid mixed conifer forest. Poster presented at: American Geophysical Union National Conference; 2019 Dec 9-13; San Francisco, CA.

Yang, J., Gough, C. Is that forest breathing?: Soil respiration across a gradient of disturbance severity and forest development. Poster session presented: Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) National Conference; 2014 Oct 16-18*;* Los Angeles, CA.

Yang, J., Barron-Gafford, G., Minor, R., Heard, M. Examining the physical drivers of photosynthetic temperature sensitivity within a sub-alpine mixed conifer forest. Poster session presented at: American Geophysical Union National Conference; 2013 Dec 8-12; San Francisco, CA.

Yang, J., Kindscher, K. Estimating populations of Osha, *Ligusticum porteri*, an important medicinal plant of the southwest U.S. Poster session presented: Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) National Conference; 2013 Oct 3-6; San Antonio, TX.

AWARDS:

FLUXNET 2022	International Secondment Program ($12,500) Awarded support for an extended visit to an international host institution to collaborate internationally in the development of new research questions (see research section above)
University of Utah 2019	Program for Inclusive Excellence in Graduate Recruiting ($10,000) College of Science funding for outstanding incoming graduate applicants from underrepresented and/or non-traditional backgrounds
NSF 2018	**Graduate Research Fellowship Program (GRFP) ($148,000)** Recognizes and supports outstanding graduate students pursuing full-time research-based doctoral degrees in STEM
University of Arizona 2017-2018	University Fellows Award ($63,000) Awarded to the top doctoral students from each college nominated by its dean University Fellows Professional Development Award ($500) Graduate & Professional Student Council Travel Grant ($1000) Women in STEM Student Council Travel Grant ($500)

DIVERSITY, OUTREACH & COMMUNITY ENGAGEMENT:

11/20 - present	Natural History Museum of Utah: climate change exhibit development team
1/22 – present	Color the Wasatch head of partnerships and donations
8/20 – 8/21	Committee member: UofU School of Biological Sciences Committee for Representation, Engagement, Equity & Social Justice

1/19 – 5/19	Committee member: UA Women in STEM Student Council (WiSSC)
11/18	UofA Certified Leader in Classroom Diversity & Inclusion
8/17 – 5/18	Mentor: Undergraduate Research Opportunities Consortium
8/13 – 12/14	Member: Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) KU/Haskell Chapter

TEACHING:

8/19-12/19 Teaching Assistant: Ecosystem Ecology
Lecture course for upper division and graduate students examines the biological, physical, and chemical factors that control storage and cycling of the major elements within terrestrial ecosystems.

8/18 – 5/19 UA Sky School Instructor
Graduate mentor providing K-12 students inquiry-based science education in the Santa Catalina mountains

8/18 – 12/18 Field Coordinator UA Community and School Garden Program
Responsible for managing 18 community and school educational gardens in underserved communities across Tucson

5/16 – 10/16 High School Teacher: English as a Foreign Language / Phetchabun, Thailand
International experience working with people from diverse backgrounds in a cross-cultural setting with limited resources.

CONSERVATION & RESTORATION:

5/15 – 11/15 Botany Field Technician (SCA Intern) / Yosemite National Park
Conducted off-trail rare and invasive botanical survey in previously burned areas; performed invasive plant management; assisted in restoration projects and vegetation monitoring

Various The Student Conservation Association (SCA) Volunteer:
Invasive Species Removal: Everglades National Park;
Ecological Restoration Conservation Crew: Columbia River Basin
Stream bank restoration and tree planting

8/11 – 5/13 Committee Member for KU Environs, an Environmental Action Group
Co-led Haskell Wetlands Preservation Ecojustice Campaign;
Planned and initiated KU Native Prairie Restoration project

TECHNICAL SKILLS:

• Programming (R, Python, Matlab) • Process-based demographic vegetation model (CLM-FATES) • Eddy covariance flux towers • Near-surface remote sensing (SIF, PRI) • Field ecophysiology measurements • Statistical data analysis • Artificial neural network • Cross-site synthesis • Botanical survey & identification • Invasive species management • Forest experimental transects & sampling design • Tree planting & establishment