

## Julia Yang

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### **CURRENT:**

6/23 – Present      Postdoctoral Scholar  
University of California, Berkeley  
Department of Environmental Science, Policy & Management  
PI: 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:**

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  
*Nonlinearities between conifer needle photosynthetic and fluorescence  
yields and heat dissipation in a common garden under drought.*

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.**, 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*.
- 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 Osha (*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.

## **SCHOLARLY PRESENTATIONS:**

- 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 Fall Meeting; 2020 Dec 1-17.
- 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	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
<b>NSF</b>	<b>Graduate Research Fellowship Program (GRFP) (\$148,000)</b> Recognizes and supports outstanding graduate students pursuing full-time research-based doctoral degrees in STEM
University of Arizona	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)
University of Kansas	Watkins Berger Scholar Award (\$4,500) KU BioScholarship Award (\$20,000)

## **TECHNICAL SKILLS:**

*Forest-scale carbon and water monitoring:* Eddy covariance flux tower • Cross-site synthesis • Automated field dataloggers • Sapflow sensors • Canopy conductance modeling • Soil moisture sensors • Snow data assimilation system (SNODAS)

*Spatial analysis:* Remote sensing • Hyperspectral measurements • Solar induced fluorescence

*Field Ecophysiology:* Leaf gas exchange + PAM fluorometry • Leaf and stem water potential • Stable isotope analysis • Top of canopy sampling

*Soil Science:* Soil respiration measurements • Gas chromatography • Dissolved organic C and N colorimetric analysis • microbial biomass C and N

*Data analysis:* Programming (R, Python, Matlab) • Artificial neural network • Advanced statistical analysis

*Field:* Botanical survey & identification • Invasive species management • Garmin and Trimble GPS • Forest experimental transects • Experimental garden planting & establishment

## **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
8/11 – 5/13	Committee Member for KU Environs, an Environmental Action Group Leader Haskell Wetlands Preservation Ecojustice Campaign; Initiated and researched Univ. of KS Native Prairie Restoration project