Xiangtao Xu

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E317 Corson Hall
215 Tower Road,
Ithaca, NY, 14853

Education

Ph.D.	Princeton University	Department of Geosciences *Adviser: Dr. David Medvigy*	2012-2017
B.S.	Peking University	Geographical Sciences Minor in Computer Science	2008-2012

Professional appointments

Assistant Professor	Cornell University Dept. of Ecology and Evolutionary Biology	2019-Present
Postdoc Researcher	Harvard University Dept. of Organismic and Evolutionary Biology *Supervisor: Dr. Paul Moorcroft* University of Notre Dame (co-appointed) Dept. of Biological Sciences	2017-2019

Research projects and funding (role & funds listed by time)

$2.4M awarded to Xu Lab in total

US National Science Foundation *CAREER:* Ecology of woody biomass gain and loss in temperate forest: disentangling size dependence, diversity, and environmental plasticity	**PI, $1.1M**	pending
National Aeronautics and Space Administration Digital Twin for Central Africa Biodiversity	**Co-I, $304k**	pending
US Department of Agriculture (McIntire-Stennis + Smith-Lever) Tree biomass allometry and forest carbon accounting with terrestrial laser scanning	**PI, $114k**	2024-2027
Park Foundation lidar-based woody carbon estimation for small-scale farm agroforestry	**PI, $56k**	2024-2025
US Department of Agriculture (McIntire-Stennis) the Cornell Digital Forestry Initiative (CoDiFI)	**PI, $90k**	2024
US Department of Agriculture NYS Connects: Climate Smart Farms and Forests (total budget $60M)	**Co-I, $693k**	2023-2028
US Department of Agriculture (Hatch) slash wall & LiDAR	**Co-I, $20k**	2023-2026
Cornell Institute of Digital Agriculture 3D modeling of orchard trees (total budget $150k)	**PI, $75k**	2022-2024
New York State Department of Environmental Conservation and Department of Agriculture and Markets CAFRI: Climate & Applied Forestry Institute (total budget $1M)	**Co-I, $80k**	2022-2023

US Department of Energy Office of Science MACROCOSM: Monitor And Constrain tROpical eCOsystem Sensitivity to Moisture	**PI, $900k**	2022-2025
US National Science Foundation Collaborative: Impacts of severe drought on tropical forest post-disturbance recovery (total budget $1.4M)	**Co-PI, $235k**	2022-2026
US Department of Agriculture (McIntire-Stennis + Smith-Lever) sustainable forest production with terrestrial LiDAR	**PI, $176k**	2021-2024

PEER-REVIEWED PUBLICATIONS (GOOGLE SCHOLAR)

Total Citation 3595, H-index 28, i10-index 34 (Aug 2024)
Bold denotes lab members, [P] denotes post-doc in the lab, [G] denotes grad students supervised, [V] denotes visiting students/scholar, and [U] denotes undergraduate co-authors. * denotes corresponding authors from the lab.

In Review/Revision

47. **Ma Y.[G]***, Moorcroft P., Wright S.J., Rogers A., Lamour J., Davidson K.J., Serbin S.P., Detto M., **Xu, X.***, Light-driven plasticity in leaf traits is a key determinant of tropical forest demographics, structure, and long-term regrowth, *Proceedings of the National Academy of Sciences*
46. Larson E, Dadap N, Konings A, Longo M, **Xu X**, Saatchi S, Moorcroft P, Southeast Asian peatland drainage is releasing carbon amounts equivalent to 2.2% of global fossil-fuel emissions, *Environmental Research Letters*
45. **Pacheco P[P]***, Heilpern, S.A., DiLeo, C., Almeida, R.M., Sethi, S.A., Miranda, M., Ray, N., Barros, N.O., Cavali, J., Costa, C., Doria, C.R., Fan, J., Fiorella, K.J., Forsberg, B.R., Gomes, M., Greenstreet, L., Holgerson, M., McGrath, D., McIntyre, P.B., Moraes-Valenti, P.,Oliveira, I., Ometto, J.P.H.B., Roland, F., Trindade, A.,Ummus, M.E., Valenti, W.C., **Xu, X.**, Gomes, C.P., Flecker, A.S., Toward sustainable aquaculture in the Amazon. *Nature Sustainability*
44. **Liu D[V]**, **Zhu X[V]**, Holgerson M, Bansal S, **Xu X***, Inventorying ponds through novel size-adaptive object mapping using Sentinel-1/2 time series. *Remote Sensing of Environment*
43. Chen, X, … (29 authors including **Xu X**), *in revision*, Widespread decadal changes in leaf demography over American tropical rainforests. *Nature Communications*

2024

42. **Cranmer, N[G]***, **Han T[P]**, Chedzoy B, Smallidge PJ, Beier C, Johnson L, **Xu X**, Estimating Merchantable and Non-merchantable Wood Volume in Slash Walls using Terrestrial and Airborne LiDAR (accepted) *Forest Ecology and Management*
41. Gianotti, D.S., McColl, K., **Xu, X.**, Feldman, A., Entekhabi, D. Two Sub-Annual Time-Scales and Coupling Modes for Terrestrial Water and Carbon Cycles (*in press*) *Global Change Biology*
40. Qiu, T., Wang, T., **Han, T.[P]**, Kuehn, K., Cheng, L., Meng, C., Xu, **X., Xu**, K., & Yu, J. (2024). AppleQSM: Geometry-Based 3D Characterization of Apple Tree

Architecture in Orchards. *Plant Phenomics*, *6*, 0179.

39. Yan, Z., Detto, M., Guo, Z., Smith, N. G., Wang, H., Albert, L. P., **Xu, X.**, Lin, Z., Liu, S., Zhao, Y., Chen, S., Bonebrake, T. C., & Wu, J. (2024). Global photosynthetic capacity jointly determined by enzyme kinetics and eco-evo-environmental drivers. *Fundamental Research*.
38. **Xu, X.***, van der Sleen, P., Groenendijk, P., Vlam, M., Medvigy, D., Moorcroft, P., **Petticord, D.[G]**, **Ma, Y.[G]**, & Zuidema, P. A. (2024). Constraining long-term model predictions for woody growth using tropical tree rings. *Global Change Biology*, *30*(1), e17075.

2023

37. **Wu, D.[P]***, Grodsky, S. M., Xu, W., Liu, N., Almeida, R. M., Zhou, L., Miller, L. M., Roy, S. B., Xia, G., Agrawal, A. A., Houlton, B. Z., Flecker, A. S., & **Xu, X.*** (2023). Observed impacts of large wind farms on grassland carbon cycling. In *Science Bulletin* (Vol. 68, Issue 23, pp. 2889–2892). Elsevier B.V.
36. Yang, X., Li, R., Jablonski, A., Stovall, A., Kim, J., Yi, K., **Ma, Y.[G]**, Beverly, D., Phillips, R., Novick, K., **Xu, X.[G]**, & Lerdau, M. (2023). Leaf angle as a leaf and canopy trait: Rejuvenating its role in ecology with new technology. *Ecology Letters*, *26*(6), 1005–1020.
35. Wang, H., Prentice, I. C., Wright, I. J., Warton, D. I., Qiao, S., **Xu, X.**, Zhou, J., Kikuzawa, K., & Stenseth, N. Chr. (2023). Leaf economics fundamentals explained by optimality principles. *Science Advances*, *9*(3), eadd5667.
34. Holm, J. A., Medvigy, D. M., Smith, B., Dukes, J. S., Beier, C., Mishurov, M., **Xu, X.**, Lichstein, J. W., Allen, C. D., Larsen, K. S., Luo, Y., Ficken, C., Pockman, W. T., Anderegg, W. R. L., & Rammig, A. (2023). Exploring the impacts of unprecedented climate extremes on forest ecosystems: hypotheses to guide modeling and experimental studies. *Biogeosciences*, *20*(11), 2117–2142.

2022

33. **Wu, D.[P]***, Vargas G., G., Powers, J. S., McDowell, N. G., Becknell, J. M., Pérez-Aviles, D., Medvigy, D., Liu, Y., Katul, G. G., Calvo-Alvarado, J. C., Calvo-Obando, A., Sanchez-Azofeifa, A., & **Xu, X.*** (2022). Reduced ecosystem resilience quantifies fine-scale heterogeneity in tropical forest mortality responses to drought. *Global Change Biology*, *28*(6), 2081–2094.

2021

32. **Xu, X.*,** & Trugman, A. T. (2021). Trait-Based Modeling of Terrestrial Ecosystems: Advances and Challenges Under Global Change. *Current Climate Change Reports*, *7*(1), 1–13.
31. Meunier, F., Verbeeck, H., Cowdery, B., Schnitzer, S. A., Smith-Martin, C. M., Powers, J. S., **Xu, X.**, Slot, M., De Deurwaerder, H. P. T., Detto, M., Bonal, D., Longo, M., Santiago, L. S., & Dietze, M. (2021). Unraveling the relative role of light and water competition between lianas and trees in tropical forests: A vegetation model analysis. *Journal of Ecology*, *109*(1), 519–540.
30. **Wu, D.[P]***, **Xu, X.**, & Zhang, H. (2021). Plant input does not exert stronger control on topsoil carbon persistence than climate in alpine grasslands. *Ecology Letters*, *24*(11), 2526–2528.

29. Yang, X., **Xu, X.**, Stovall, A., Chen, M., & Lee, J. E. (2021). Recovery: Fast and Slow—Vegetation Response During the 2012–2016 California Drought. *Journal of Geophysical Research: Biogeosciences*, *126*(4), e2020JG005976.
28. **Xu, X.***, Konings, A. G., Longo, M., Feldman, A., Xu, L., Saatchi, S., Wu, D., Wu, J., & Moorcroft, P. (2021). Leaf surface water, not plant water stress, drives diurnal variation in tropical forest canopy water content. *New Phytologist*, *231*(1), 122–136 - Commentary by Gerlein-Safdi
27. Wu, S., Wang, J., Yan, Z., Song, G., Chen, Y., Ma, Q., Deng, M., Wu, Y., Zhao, Y., Guo, Z., Yuan, Z., Dai, G., **Xu, X.**, Yang, X., Su, Y., Liu, L., & Wu, J. (2021). Monitoring tree-crown scale autumn leaf phenology in a temperate forest with an integration of PlanetScope and drone remote sensing observations. *ISPRS Journal of Photogrammetry and Remote Sensing*, *171*, 36–48.
26. Konings, A.G., Saatchi, S.S., Frankenberg, C., Keller, M., Leshyk, V., Anderegg, W.R.L., Humphrey, V., Matheny, A.M., Trugman, A., Sack, L., Agee, E., Barnes, M.L., Binks, O., Cawse-Nicholson, K., Christoffersen, B.O., Entekhabi, D., Gentine, P., Holtzman, N.M., Katul, G.G., Liu, Y., Longo, M., Martinez-Vilalta, J., McDowell, N., Meir, P., Mencuccini, M., Mrad, A., Novick, K.A., Oliveira, R.S., Siqueira, P., Steele-Dunne, S.C., Thompson, D.R., Wang, Y., Wehr, R., Wood, J.D., **Xu, X.** & Zuidema, P.A. (2021). Detecting forest response to droughts with global observations of vegetation water content. *Global Change Biology*, *27*(23), 6005–6024.

2020

25. **Wu, D.[P],** Piao, S., Zhu, D., Wang, X., Ciais, P., Bastos, A., **Xu, X.**, & Xu, W. (2020). Accelerated terrestrial ecosystem carbon turnover and its drivers. *Global Change Biology*, *26*(9), 5052–5062.
24. Smith-Martin, C. M., **Xu, X.**, Medvigy, D., Schnitzer, S. A., & Powers, J. S. (2020). Allometric scaling laws linking biomass and rooting depth vary across ontogeny and functional groups in tropical dry forest lianas and trees. *New Phytologist*, *226*(3), 714–726. - Commentary by Lugli
23. Detto, M., & **Xu, X.** (2020). Optimal leaf life strategies determine Vc,max dynamic during ontogeny. *New Phytologist*, *228*(1), 361–375.
22. Powers, J. S., Vargas G., G., Brodribb, T. J., Schwartz, N. B., Pérez-Aviles, D., Smith-Martin, C. M., Becknell, J. M., Aureli, F., Blanco, R., Calderón-Morales, E., Calvo-Alvarado, J. C., Calvo-Obando, A. J., Chavarría, M. M., Carvajal-Vanegas, D., Jiménez-Rodríguez, C. D., Murillo Chacon, E., Schaffner, C. M., Werden, L. K., **Xu, X.**, & Medvigy, D. (2020). A catastrophic tropical drought kills hydraulically vulnerable tree species. *Global Change Biology*, *26*(5), 3122–3133.

2019

21. Levy-Varon, J. H., Batterman, S. A., Medvigy, D., **Xu, X.**, Hall, J. S., van Breugel, M., & Hedin, L. O. (2019). Tropical carbon sink accelerated by symbiotic dinitrogen fixation. *Nature Communications*, *10*(1), 5637
20. Medvigy, D., Wang, G., Zhu, Q., Riley, W. J., Trierweiler, A. M., Waring, B. G., **Xu, X.**, & Powers, J. S. (2019). Observed variation in soil properties can drive large variation in modelled forest functioning and composition during tropical forest

secondary succession. *New Phytologist*, *223*(4), 1820–1833.

2018

19. Guan, K., Good, S. P., Caylor, K. K., Medvigy, D., Pan, M., Wood, E. F., Sato, H., Biasutti, M., Chen, M., Ahlström, A., & **Xu, X.** (2018). Simulated sensitivity of African terrestrial ecosystem photosynthesis to rainfall frequency, intensity, and rainy season length. *Environmental Research Letters*, *13*(2), 025013.
18. Wang, X., Wu, J., Chen, M., **Xu, X.**, Wang, Z., Wang, B., Wang, C., Piao, S., Lin, W., Miao, G., Deng, M., Qiao, C., Wang, J., Xu, S., & Liu, L. (2018). Field evidences for the positive effects of aerosols on tree growth. *Global Change Biology*, *24*(10), 4983–4992.
17. McDowell, N., Allen, C.D., Anderson-Teixeira, K., Brando, P., Brienen, R., Chambers, J., Christoffersen, B., Davies, S., Doughty, C., Duque, A., Espirito-Santo, F., Fisher, R., Fontes, C.G., Galbraith, D., Goodsman, D., Grossiord, C., Hartmann, H., Holm, J., Johnson, D.J., Kassim, A.R., Keller, M., Koven, C., Kueppers, L., Kumagai, T., Malhi, Y., McMahon, S.M., Mencuccini, M., Meir, P., Moorcroft, P., Muller-Landau, H.C., Phillips, O.L., Powell, T., Sierra, C.A., Sperry, J., Warren, J., Xu, C. & **Xu, X.** (2018). Drivers and mechanisms of tree mortality in moist tropical forests. *New Phytologist*, *219*(3), 851–869.
16. **Xu, X.***, Medvigy, D., Trugman, A. T., Guan, K., Good, S. P., & Rodriguez-Iturbe, I. (2018). Tree cover shows strong sensitivity to precipitation variability across the global tropics. Global Ecology and Biogeography, 27(4), 450–460.
15. Fisher, R.A., Koven, C.D., Anderegg, W.R.L., Christoffersen, B.O., Dietze, M.C., Farrior, C.E., Holm, J.A., Hurtt, G.C., Knox, R.G., Lawrence, P.J., Lichstein, J.W., Longo, M., Matheny, A.M., Medvigy, D., Muller-Landau, H.C., Powell, T.L., Serbin, S.P., Sato, H., Shuman, J.K., Smith, B., Trugman, A.T., Viskari, T., Verbeeck, H., Weng, E., Xu, C., **Xu, X.**, Zhang, T. & Moorcroft, P.R. (2018). Vegetation demographics in Earth System Models: A review of progress and priorities. *Global Change Biology*, *24*(1), 35–54.

2017

14. Allen, K., Dupuy, J. M., Gei, M. G., Hulshof, C., Medvigy, D., Pizano, C., Salgado-Negret, B., Smith, C. M., Trierweiler, A., Van Bloem, S. J., Waring, B. G., **Xu, X.**, & Powers, J. S. (2017). Will seasonally dry tropical forests be sensitive or resistant to future changes in rainfall regimes? *Environmental Research Letters*, *12*(2), 023001.
13. **Xu, X.***, Medvigy, D., Joseph Wright, S., Kitajima, K., Wu, J., Albert, L. P., Martins, G. A., Saleska, S. R., & Pacala, S. W. (2017). Variations of leaf longevity in tropical moist forests predicted by a trait-driven carbon optimality model. *Ecology Letters*, *20*(9), 1097–1106.
12. Wu, J., Guan, K., Hayek, M., Restrepo-Coupe, N., Wiedemann, K. T., Xu, X., Wehr, R., Christoffersen, B. O., Miao, G., da Silva, R., de Araujo, A. C., Oliviera, R. C., Camargo, P. B., Monson, R. K., Huete, A. R., & Saleska, S. R. (2017). Partitioning controls on Amazon forest photosynthesis between environmental and biotic factors at hourly to interannual timescales. *Global Change Biology*, *23*(3), 1240–1257.
11. Wu, J., Serbin, S. P., **Xu, X.**, Albert, L. P., Chen, M., Meng, R., Saleska, S. R., & Rogers, A. (2017). The phenology of leaf quality and its within-canopy variation

is essential for accurate modeling of photosynthesis in tropical evergreen forests. *Global Change Biology*, *23*(11), 4814–4827.

10. Li, Y., Guan, K., Gentine, P., Konings, A. G., Meinzer, F. C., Kimball, J. S., **Xu, X.**, Anderegg, W. R. L., McDowell, N. G., Martinez-Vilalta, J., Long, D. G., & Good, S. P. (2017). Estimating Global Ecosystem Isohydry/Anisohydry Using Active and Passive Microwave Satellite Data. Journal of Geophysical Research: Biogeosciences, 122(12), 3306–3321.

2016

9. Oh, Y., Stackhouse, B., Lau, M. C. Y., **Xu, X.**, Trugman, A. T., Moch, J., Onstott, T. C., Jørgensen, C. J., D'Imperio, L., Elberling, B., Emmerton, C. A., St. Louis, V. L., & Medvigy, D. (2016). A scalable model for methane consumption in arctic mineral soils. Geophysical Research Letters, 43(10), 5143–5150.
8. **Xu, X.***, Medvigy, D., Powers, J. S., Becknell, J. M., & Guan, K. (2016). Diversity in plant hydraulic traits explains seasonal and inter-annual variations of vegetation dynamics in seasonally dry tropical forests. *The New Phytologist*, *212*(1), 80–95. **-** Commentary by Medlyn et al.
7. Trugman, A. T., Fenton, N. J., Bergeron, Y., **Xu, X.**, Welp, L. R., & Medvigy, D. (2016). Climate, soil organic layer, and nitrogen jointly drive forest development after fire in the North American boreal zone. *Journal of Advances in Modeling Earth Systems*, *8*(3), 1180–1209.

Before 2016

6. Wang, X., Piao, S., **Xu, X.**, Ciais, P., Macbean, N., Myneni, R. B., & Li, L. (2015). Has the advancing onset of spring vegetation green-up slowed down or changed abruptly over the last three decades? *Global Ecology and Biogeography*, *24*(6), 621–631.
5. **Xu, X.***, Medvigy, D., & Rodriguez-Iturbe, I. (2015). Relation between rainfall intensity and savanna tree abundance explained by water use strategies. *Proceedings of the National Academy of Sciences of the United States of America*, *112*(42), 12992–12996.
4. Guan, K., Wood, E. F., Medvigy, D., Kimball, J., Pan, M., Caylor, K. K., Sheffield, J., **Xu, X.**, & Jones, M. O. (2014). Terrestrial hydrological controls on land surface phenology of African savannas and woodlands. *Journal of Geophysical Research G: Biogeosciences*, *119*(8), 1652–1669.
3. Yang, Y., Zhao, M., **Xu, X.**, Sun, Z., Yin, G., & Piao, S. (2014). Diurnal and seasonal change in stem respiration of Larix principis-rupprechtii trees, northern China. *PLoS ONE*, *9*(2), 1–7.
2. Mohammat, A., Wang, **X., Xu**, X., Peng, L., Yang, Y., Zhang, X., Myneni, R. B., & Piao, S. (2013). Drought and spring cooling induced recent decrease in vegetation growth in Inner Asia. *Agricultural and Forest Meteorology*, *178–179*, 21–30.
1. **Xu, X**., Piao, S., Wang, X., Chen, A., Ciais, P., & Myneni, R. B. (2012). Spatio-temporal patterns of the area experiencing negative vegetation growth anomalies in China over the last three decades. *Environmental Research Letters*, *7*(3), 035701.

Teaching

BIOEE 3550/6550 Data visualization and analysis in ecology and environmental science (formerly BIOEE 4940) *2 credits lecture + 1 credit lab* *10-30 enrollment*	2024 Spring, Sole Instructor 2023 Spring, Sole Instructor 2022 Spring, Sole Instructor 2021 Spring, Sole Instructor
BIOEE 1610 Introductory Biology: Ecology and Environment *3 credit, optional 1 credit Writing in the Majors program* *250-300 enrollment*	2022 Fall, Lead Instructor 2021 Fall, Section Lead 2020 Fall, Section Lead
BIOEE 6680 Principles of Biogeochemistry *4 credit* *~10 enrollment*	2022 Spring, Section Lead
PLSCS 4290/5290 Remote Sensing Applications for Ecosystems *3 credit* *10-20 enrollment*	2022 Fall, one guest lecture

Invited presentations

Predicting tropical forest growth and mortality under global change: insights from tree rings and satellite remote sensing, Cary Institute of Ecosystem Studies, Milbrook, NY 2024

*Trait-based modeling of tropical forest structure and dynamics: critical dimensions of plant functional diversity. (**keynote**) 2nd East-Regional Dynamic Global Vegetation Model Conference, Marine Biology Lab, Woods Hole, MA*

Tropical forest growth and mortality under global change. Tsinghua University, Department of Geosciences 2023

Critical dimensions of plant functional diversity for predicting tropical forest structure and dynamics. Yale University, Department of Ecology and Evolutionary Biology

Monitoring and modeling tropical forest resilience to environmental change. NASA Goddard Space Flight Center, Biospheric Science Seminar

Monitoring and modeling tropical forest resilience to environmental change. University of California Santa Barbara, Climate Change Seminar

Monitoring forest growth and mortality under a changing climate: opportunities from big data across ecological scales. Cornell University, Scientific Computing And Numeric seminar series.

Critical dimensions of plant functional diversity that shape tropical forest structure 2022

and dynamics. University of Maine, School of Biology and Ecology

Integrate model and observations across scales to understand plant water stress in tropical forests. Sino-Eco online seminars

How light-driven trait plasticity drives tropical forest dynamics. Department of Energy NGEE-Tropics

Does reduced resilience in remote sensing timeseries "predict" tropical forest mortality? Forest Resilience & Rate-induced Transition Workshop, Radcliff Institute, Harvard University

Quantifying drought-driven forest mortality from reduced ecosystem resilience in tropical forests. Department of Energy NGEE-Tropics 2021

Terrestrial Biosphere Modeling: Advances and Challenges under Global Change. Invited seminar at College of Urban and Environmental Sciences, Peking University 2020

Unraveling tropical leaf phenological diversity with observations and models across scales. University of British Columbia, Biodiversity Research Centre

Media coverage and outreach

Satellite signals can measure a forest's moisture—and its ability to survive, Science News Apr. 2024 (interviewed to provide expert opinions)

Die kranke Lunge der Erde, DeutschlandRadio Dec 2024 (radio interview on AGU presentation about Amazon forest mortality)

Life Mystery Solved: What Determines the Lifespan of a Tree Leaf?, SciTechDaily Feb 2023

Using Terrestrial Lidar for Accurate Forest Carbon Inventories, Northern Woodlands Dec. 2022 (featuring lab-led forestry lidar workshop)

$60M USDA grant supports NYS climate-smart farms and forests, Cornell Chronicle Sep. 2022

Nitrogen-fixing trees help tropical forests grow faster and store more carbon, EurekAlert! Feb. 2020

More rain leads to fewer trees in the African savanna, Princeton University News Oct. 2015

Service and synergistic activities

Unit Service

- (Co-)Lead Cornell EEB seminar organization committee 2020-Present
- Cornell EEB Graduate Admission Committee 2024
- Committee member for Cornell DNRE Forest Ecosystem Sustainability faculty search 2024
- Committee member for Cornell DNRE Landscape ecology faculty search 2020
- Faculty mentor for Cornell Institute of Digital Agriculture Hackathon 2023-2024
- Ad hoc reviewer of internal grant applications for Cornell Atkinson 2020-Present

Center of Sustainability, Cornell Institute of Digital Agriculture, Cornell Mellon/Kiekhefer student grants, and undergrad honor thesis

College and University Service

- Co-lead the Research & Innovation Subcommittee of CALS 2050 Roadmap Project at Cornell — 2022
- Contribute CALS presentations/demonstrations to NY Senator(s) and UN FAO (3 times in total) — 2022-2024

Professional and Community Service

- Lead organizer for the 3rd Dynamic Vegetation Modeling and Observation Conference (DVMOC, formerly Eastern Regional Dynamic Vegetation Modeling Conference) — 2024-2025
- Aspen Global Change Institute Workshop: Future Terrestrial Water Availability: Towards an Integrated Perspective on Water, Plants, and Climate (Co-Lead) — 2024
- Forestry Lidar workshop for stakeholders at the Arnot Forest of Cornell — 2021-2024
- Organizer for the ED2 terrestrial biosphere model user and developer annual meetings — 2021-2024
- NSF DEB program panel reviewer — 2023
- NASA SMAP program panel reviewer — 2021
- Conveners for AGU Fall Meetings (lead or co-lead every year) — 2018-Present

MENTORING

Ph.D. Students:

Nicholas Cranmer	Ecology and Evolutionary Biology, 2023 - Present
Coral del Mar Valle-Rodriguez	Ecology and Evolutionary Biology, 2023 - Present **recipient of SUNY Diversity fellowship**
Cameron Coles	Ecology and Evolutionary Biology, 2022 - Present **recipient of DOE CSGF award**
Yixin Ma*	Ecology and Evolutionary Biology, 2021 - Present

** First Ph.D. student delayed for one year due to COVID*

Ph.D. Committee members:

Daniel Petticord (Sparks Lab)	Ecology and Evolutionary Biology, 2021 - Present
Stephanie Freund (Goodale Lab)	Ecology and Evolutionary Biology, 2022 - Present
Yanqiu Zhou (Houlton Lab)	Ecology and Evolutionary Biology, 2021 - 2023
Aneesh Kumar Chandel (Luo Lab)	Soil and Crop Science, 2022 - Present
Jiameng Lai (Sun Lab)	Soil and Crop Science, 2021 - Present
Seunjoon Lee (Sun Lab)	Soil and Crop Science, 2022 - Present
Sriram Parasurama (Bauerle Lab)	Horticulture, 2023 - Present

Yan-Ning Kuo (Lehner Lab)	Earth and Atmospheric Sciences, 2021 - Present
Crystal Fowler (Jung Lab)	Biological & Environmental Engineering 2023 - Present
Yi Yang (Guan Lab)	UIUC Natural Resources & Environmental Sciences 2021-2024

Postdocs:

Tao Han	Ecology and Evolutionary Biology, 2023 - Present
Felipe Pacheco	Ecology and Evolutionary Biology, 2022 - Present Co-advised with Alex Flecker
Donghai Wu	Ecology and Evolutionary Biology, 2019 - 2023 Currently staff scientist at South China Botanic Garden

Undergraduate Research:

Kate Doherty	Environment & Sustainability, 2023-2024
Ilana Greenspan	Environment & Sustainability, 2022-2024 **honor thesis mentor**
Summer Harper	Environment & Sustainability, 2022-2023
Maddie Watson	Environment & Sustainability, 2020 - 2022
Qifan Wang	Ecology and Evolutionary Biology, 2021 - 2023 **honor thesis mentor**
Sabrina Chow	Computational Biology, 2023-Present
Andrew Wang	Computational Biology, 2021-2022
Dylan van Bramer	Computing and Information Science, 2023-Present
Sara Tardif	Computing and Information Science, 2024-Present