Dr. Joshua B. Fisher

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Hydrosat Inc.
Chapman University
University of California, Los Angeles

SUMMARY

Dr. Joshua B. Fisher is a Climate Scientist focusing on terrestrial ecosystems, water, carbon, and nutrient cycling using a combination of supercomputer models, remote sensing, and field campaigns from the Amazon to the Arctic. Dr. Fisher completed his undergraduate and graduate degrees from UC Berkeley and his postdoctoral work from the University of Oxford. Dr. Fisher was at NASA's Jet Propulsion Laboratory (JPL) for over a decade, and was the Science Lead for the ECOSTRESS mission, focused on plant water use/stress from the International Space Station. Dr. Fisher is currently the Presidential Fellow of Ecosystem Science on the faculty at Chapman University. Dr. Fisher is also the Science Lead for Hydrosat, which is launching a constellation of thermal satellite missions. With over 200 publications, Dr. Fisher has been named one of the world's "most influential" researchers, in the top 0.1% of scientists with papers in the top 1% by citations for the past 4 years in a row.

CURRENT POSITION

• **Science Lead**, Hydrosat Inc.
• **Presidential Fellow of Ecosystem Science**, Faculty Appointment in Schmid College of Science and Technology, Chapman University
• **Project Scientist (II)**, Joint Institute for Regional Earth System Science and Engineering (JIFRESSE), University of California, Los Angeles (UCLA)

EDUCATION

• Post-Doctoral Research Associate, University of Oxford, UK (2006 – 2008)
Environmental Change Institute, School of Geography & Environment
I. Global modelling of atmosphere-vegetation-soil interactions; II. Nutrient dynamics in cloudforests and rainforests in the Peruvian Andes
Supervisor: Yadvinder S. Malhi
• Ph.D., University of California, Berkeley, USA (2001 – 2006)
Department of Environmental Science, Policy & Management
I. The land-atmosphere water flux across plant, ecosystem, global and social scales; II. GIS and spatial analysis for environmental justice and wildlife
Dissertation co-chairs: Dennis Baldocchi & Greg Biging; Committee members: Todd Dawson & Louise Fortmann
• B.S., University of California, Berkeley, USA (1997 – 2001)
College of Natural Resources: Environmental Sciences
Evapotranspiration methods compared on a Sierra Nevada forest ecosystem
Thesis advisor: Ye Qi

GRANTS/PROJECTS [*TOTAL FUNDING: $64M*]

• **NASA Earth Science Applications: Water Resources** (2022 – current)
Water Management for the State of New Mexico; 1.0M/3y
Principal Investigator
• **NASA ECOSTRESS Science Team (ECOSTRESS)** (2019 – current)
Improvements to ECOSTRESS Data for Science and Applications; 0.42M/3y
Principal Investigator
• **NASA Earth Science Applications: Equity and Environmental Justice (EEJ)** (2022 – current)
Communities for a Better Environment: Triangulating NASA Data and Participatory GIS with Local Organizing to Advance Environmental Justice in Los Angeles; 0.4M/3y

Co-Investigator
• **NASA ECOSTRESS Science Team (ECOSTRESS)** (2019 – current)
Merging ECOSTRESS with Field Data in the Highest Uncertainty Water Use Efficiency Regions in the World; 0.4M/3y
Co-Investigator
• **NASA Science Utilization of the Soil Moisture Active-Passive Mission (SUSMAP)** (2020 – current)
The role of soil moisture in water and carbon cycle interactions and modulating feedbacks to weather – an integrated modeling and satellite data approach; 0.75M/3y
Co-Investigator
• **OpenET** (2019 – current)
Enabling Data-Driven Decision Making for Coordinated Sustainable Land and Water Management: Consumptive Use Estimation Program; 146K/3y
Co-Investigator
• **USGS Powell Center** (2023 – current)
Towards an Integrated Understanding of Terrestrial Evapotranspiration; 0.75M/3y
Co-PI
• **DoD: SBIR/STTR** (2022 – current)
Next-Generation Daily High-Resolution Surface Temperature for Thermal Anomaly Detection; 1.2M/1.5y
Co-Investigator

• **NASA Earth Ventures Instruments II** (2014 – 2021)
ECOsystem Spaceborne Thermal Radiometer Experiment on Space Station (ECOSTRESS) Mission; 30M/6y + 4.5M/1y
Science Lead
• **NASA Science Utilization of the Soil Moisture Active-Passive Mission (SUSMAP)** (2016 – 2021)
SMAP Soil Moisture Data to Improve Remotely Sensed Global Estimates of Evapotranspiration; 0.6M/3y
Principal Investigator
• **NASA Climate Indicators and Data Products for Future National Climate Assessments (INCA)** (2016 – 2021)
Managing Vegetation Water Stress Under a Changing Climate; 0.8M/3y
Principal Investigator
• **US Bureau of Reclamation (Reclamation)** (2019 – 2021)
Next Generation ET Toolbox for the US Bureau of Reclamation; 0.2M/1y
Principal Investigator
• **NASA Western Water Applications Office (WWAO)** (2018 – 2021)
Operational Evapotranspiration for the State of New Mexico; 0.55M/3y
Principal Investigator
• **NASA Terrestrial Ecology (TE)** (2015 – 2021)
A Model–Data Integration Framework (MoDIF) for ABoVE Phase I Research: Simulation, Scaling and Benchmarking for Key Indicators of Arctic-Boreal Ecosystem Dynamics; 1.0M/3y + 0.52M/3y
Principal Investigator
Working Group Lead: Modeling Framework; Science Team Member
• **NASA Interdisciplinary Research in Earth Science (IDS)** (2017 – 2021)
Merging Top-Down and Bottom-Up Approaches to Partition Carbon and Water Fluxes Between the Atmosphere and Biosphere; 1.6M/3y
Co-Investigator
• **NASA Carbon Monitoring System (CMS)** (2016 – 2020)
Tools to Bridge the Gap Between Static CMS Maps, Models, and Stakeholders; 1.3M/3y
Co-Investigator

• **DOE BER Terrestrial Ecosystem Science (TES)** (2016 – 2020)
The Carbon-Nutrient Economy of the Rhizosphere: Improving Biogeochemical Prediction and Scaling Feedbacks from Ecosystem to Regional Scales; 0.6M/3y
Principal Investigator
• **JPL Strategic University Research Partnership (SURP)** (2017 – 2020)
Drought Tipping Points: Can Satellite Remote Sensing Provide Improved Early Warning Signals for Food and Water Security?; 105K/3y
Principal Investigator
• **NASA GRACE – GRACE-FO Science Team (GRACE)** (2016 – 2019)
Using GRACE to Advance Precipitation Analysis in Cold Regions; 0.6M/4y
Co-Investigator
• **NASA Carbon Cycle Science (CARBON)** (2014 – 2018)
Multi-scale Synthesis and Terrestrial Model Intercomparison Project (MsTMIP) Phase II; 1.6M/3y
Co-Investigator
• **NASA Earth Science Decadal Survey** (2010 – 2018)
Soil Moisture Active Passive (SMAP) Mission
Algorithm Development Team Member
• **NASA Terrestrial Hydrology Program (THP)** (2012 – 2016)
Bridging the Gap Between MODIS and FLUXNET: Validation of New High Spatial Resolution Satellite-based Estimates of Evapotranspiration Using FLUXNET Observations; 0.5M/3y
Co-Investigator
• **NSF Geography & Spatial Science (GSS)** (2014 – 2018)
Collaborative Research: Links Between Long-Term Soil Carbon Storage and Canopy Properties in Tropical Wet Forests; 178K/3y
Co-Investigator
• **JPL Strategic Initiative Research & Technology Development (RTD)** (2013 – 2017)
Carbon & Ecosystems; 2M/3y
Co-Investigator
• **NASA SERVIR (SERVIR)** (2012 – 2016)
East Africa Drought and Agricultural Productivity Assessment and Prediction System; 1.0M/4y
Co-Investigator
• **NASA Earth Venture Sub-orbital Mission (EVS-1)** (2010 – 2016)
Carbon in Arctic Reservoirs Vulnerability Experiment (CARVE); 27.9M/5y
Scientist
• **DOE BER Terrestrial Ecosystem Science (TES)** (2012 – 2016)
Nutrient Cycle Impacts on Forest Ecosystem Carbon Cycling: Improved Prediction of Climate Feedbacks from Coupled C-Nutrient Dynamics from Ecosystem to Regional Scales; 1M/3y
Principal Investigator
• **JPL Strategic Initiative Research & Technology Development (RTD)** (2014 – 2016)
Autonomous Small UAVs for In-situ Observation of Ecosystem Properties from Leaf to Canopy; 1.3M/3y
Co-Investigator
• **JPL Strategic University Research Partnership (SURP)** (2014 – 2015)
Integrating SMAP Soil Moisture and OCO-2 Fluorescence into UCLA's SSiB Land Surface Model to Test Tropical Dry Season Productivity Impacts; 200K/2y
Principal Investigator
• **JPL Topic Area Research & Technology Development (RTD)** (2012 – 2014)
The Regional Hydrological Extremes Assessment System (RHEAS); 250K/2.25y
Principal Investigator
• **NSF Ecosystem Science** (2012 – 2014)
A Belowground Framework for Predicting How Plant-Microbe Interactions Couple Carbon and Nutrient Economies of Forests; 400K/2y
Co-Investigator

• **NASA Carbon Monitoring System (CMS)** (2012 – 2014)
Reduction in Bottom-Up Land Surface CO_2 Flux Uncertainty in NASA's Carbon Monitoring System Flux Project Through Systematic Multi-Model Evaluation and Infrastructure Development; 0.5M/1.5y
Co-Investigator, Science Team Member
Coordinator, Capability Risk Working Group
• **NASA Earth System Data Records (ESDR) Uncertainty Analysis** (2011 – 2014)
Estimating, Validating and Conveying Measurement Differences Between Land Surface Temperature and Emissivity Products From NASA's EOS Sensors; 1.2M/3y
Co-Investigator
• **NASA Atmospheric CO_2 Observations from Space (ACOS)** (2010 – 2014)
Estimation and Attribution of Global CO_2 Surface Fluxes Using Satellite Observations of CO_2 and CO from TES, GOSAT, and MOPITT; 1.4M/3y
Co-Investigator
• **JPL Strategic Initiative Research & Technology Development** (2010 – 2014)
A Multi-disciplinary Evaluation of Earth System Models with Satellite Observations; 4.7M/3y
Co-Investigator
• **NASA Arctic Boreal Vulnerability Experiment (ABoVE)** (2013 – 2014)
Science Definition Team (SDT) Member
• **NASA Carbon Monitoring System Pilot Study** (2010 – 2012)
Surface Carbon Fluxes; 1.7M/2.5y
Co-Investigator
• **JPL Topic Area Research & Technology Development (RTD)** (2010)
Climate Model Physics
Scientist

PUBLICATIONS [*TOTAL: 196*]
• Krishnamurthy, P.K., **Fisher, J.B.**, Choularton, R.J., Kareiva, P.M., in review. Detecting food security tipping points. Submitted to: *Science Advances*.
• Braghiere, R.K., **Fisher, J.B.**, Allen, K., Brzostek, E., Shi, M., Yang, X., Ricciuto, D., Fisher, R., Sulman, B., Zhu, Q., Phillips, R., in review. Global carbon cost of plant nitrogen and phosphorus acquisition. Submitted to: *Journal of Advances in Modeling Earth Systems*.
• Braghiere, R.K., **Fisher, J.B.**, Miner, K.R., Miller, C.E., Worden, J.R., Schimel, D.S., in review. Tipping point in Arctic-Boreal ecosystems carbon sink persists in new generation Earth System Models despite reduced uncertainty. Submitted to: *Environmental Research Letters*.
• Byun, K., **Fisher, J.B.**, Son, K., Missik, J., Gao, Z., Liu, H., Chen, X., in review. ECOSTRESS discovers that distance to river controls plant water use and stress in a semi-arid riparian ecosystem. Submitted to: *Water Resources Research*.
• Wen, J., **Fisher, J.B.**, Parazoo, N.C., Hu, L., Litvak, M.E., Sun, Y., in review. Resolve the continuous diurnal cycle of high-resolution ECOSTRESS evapotranspiration and land surface temperature. Submitted to: *Water Resources Research*.
• Cawse-Nicholson, K., Hook, S.J., **Fisher, J.B.**, Schimel, D., Braverman, A., Halverson, G., in review. Diurnal evapotranspiration and stomatal closure: new results from ECOSTRESS. Submitted to: *Geophysical Research Letters*.
• Peng, S., Yu, K., **Fisher, J.B.**, Gentine, P., Li, Z., in review. The simultaneous time-lag and -accumulation effects of climatic factors on global vegetation activity. Submitted to: *Global Ecology & Biogeography*.
• Murugesan, S.B., Masara, I.K., Myint, S.W., Zhu, Y., **Fisher, J.B.**, in review. Wildfire dynamics from ECOSTRESS data and machine learning: The case of South-Eastern Australia's black summer. Submitted to: *Geophysical Research Letters*.
• Sun, W., Luo, X. Fang, Y., Shiga, Y.P., Zhang, Y., **Fisher, J.B.**, Keenan T.F., Michalak, A.M., in review. Biome-scale temperature sensitivity of ecosystem respiration revealed by atmospheric observations. Submitted to: *Nature Ecology & Evolution*.
• Shang, K., Yao, Y., Di, Z., Jia, K., Zhang, X., **Fisher, J.B.**, Chen, J., Guo, X., Yang, J., Yu, R.,

Xie, Z., Liu, L., Ning, J., Zhang, L., in review. Coupling physical constraints with machine learning for satellite-derived evapotranspiration of the Tibetan Plateau. Submitted to: *Remote Sensing of Environment*.

• Goetz, S.J., Miller, C., Griffith, P., Chatterjee, A., Boelman, N., Bourgeau-Chavez, L., Butman, D., Epstein, H., **Fisher, J.B.**, French, N., Hoy, E., Kimball, J.S., Larson, E., Loboda, T., Mack, M., Moghaddam, M., Montesano, P., Prugh, L., Rawlins, M., Rocha, A.V., Rogers, B.M., Schaefer, K., in review. An overview of NASA's Arctic Boreal Vulnerability Experiment (ABoVE): development, implementation, advances and knowledge gaps. Submitted to: *Environmental Research Letters*.

• Doughty, C.E., Keany, J., Schweiger, B.R., Goulden, M.L., da Rocha, H.R., Miller, S.D., Malhi, Y., Oliveras Menor, I., Goldsmith, G.R., **Fisher, J.B.**, in review. Tropical forests are within critical temperature thresholds. Submitted to: *Nature*.

• Farella, M.M., **Fisher, J.B.**, Jiao, W., Key, K.B., Barnes, M.L., in press. Thermal remote sensing for plant ecology from leaf to globe. *Journal of Ecology*.

• Pascolini-Campbell, M., Lee, C., Stavros, N., **Fisher, J.B.**, in press. ECOSTRESS reveals pre-fire vegetation controls on burn severity for Southern California wildfires. *Global Ecology and Biogeography*.

• Zhang, Y., Gentine, P., Luo, X., Lian, X., Liu, Y., Zhou, S., Michalak, A.M., Sun, W., **Fisher, J.B.**., Piao, S., Keenan, T.F., in press. Increasing sensitivity of dryland vegetation greenness to precipitation due to rising atmospheric CO_2. *Nature Communications*.

• Melton, F., Huntington, J., Grimm, R., Herring, J., Hall, M., Rollison, D., Erickson, T., Allen, R., Anderson, M., Blankenau, P., Bromley, M., Daudert, B., Doherty, C., Dunkerly, C., **Fisher, J.B.**, Friedrichs, M., Guzman, A., Hain, C., Halverson, G., Hansen, J., Harding, J., Johnson, L., Kang, Y., Kilic, A., Minor, B., Morton, C., Ortega-Salazar, S., Ott, T., Ozdogan, M., Revelle, P., Ruhoff, A., Schull, M., Senay, G., Volk, J., Wang, T., Yang, Y., in press. OpenET: filling the biggest data gap in water management for the Western United States. *Journal of the American Water Resources Association*.

[196] • **Fisher, J.B.**, Sikka, M., Block, G.L., Schwalm, C.R., Parazoo, N.C., Kolus, H.R., Sok, M., Wang, A., Gagne-Landmann, A., Lawal, S., Guillaume, A., Poletti, A., Schaefer, K.M., El Masri, B., Levy, P.E., Wei, Y., Dietze, M.C., Huntzinger, D.N., 2022. The Terrestrial Biosphere Model Farm. *Journal of Advances in Modeling Earth Systems* 14(2): e2021MS002676. 1-16 p.

[195] • Cooley, S.S., **Fisher, J.B.**, Goldsmith, G.R., 2022. Convergence in water use efficiency within plant functional types across contrasting climates. *Nature Plants*. 1-5 p. doi.org/10.1038/s41477-022-01131-z

[194] • Hamberg, J., **Fisher, J.B.**, Ruppert, J.L.W., Tureček, J., Rosen, D.H., James, P.M.A., 2022. Assessing and modeling diurnal temperature buffering and evapotranspiration dynamics in forest restoration using ECOSTRESS thermal imaging. *Remote Sensing of Environment* 280(113178): 1-14.

[193] • Baldocchi, D.D., Keeney, N., Rey-Sanchez, C., **Fisher, J.B.**, 2022. Atmospheric humidity deficits tell us how soil moisture deficits down-regulate ecosystem evaporation. *Advances in Water Resources* 159(104100): 1-11.

[192] • Sousa, D., Brodrick, P., Cawse-Nicholson, K., **Fisher, J.B.**, Pavlick, R., Small, C., Thompson, D.R., 2022. The spectral mixture residual: a source of low-variance information to enhance the explainability and accuracy of Surface Biology and Geology retrievals. *Journal of Geophysical Research – Biogeosciences* 127(2): e2021JG006672. 1-21 p.

[191] • Xie, Z., Yao, Y., Zhang, X., Liang, S., **Fisher, J.B.**, Chen, J., Jia, K., Shang, K., Yang, J., Yu, R., Guo, X., Liu, L., Ning, J., Zhang, L., 2022. The Global LAnd Surface Satellite (GLASS) Evapotranspiration Product Version 5.0: Algorithm development and preliminary validation. *Journal of Hydrology* 610(127990): 1-18

[190] • Yang, J., Yao, Y., Shao, C., Li, Y., **Fisher, J.B.**, Cheng, J., Chen, J., Jia, K., Zhang, X., Shang, K., Yu, R., Guo, X., Xie, J., Liu, L., Ning, J., Zhang, L., 2022. A novel TIR-derived three-source energy balance model for estimating daily latent heat flux in mainland China using an all-weather land surface temperature product. *Agricultural and Forest Meteorology* 323(109066): 1-17.

[189] • Javadian, M., Smith, W.K., Lee, K., Knowles, J.F., Scott, R.L., **Fisher, J.B.**, Moore, D.J.P., van Leeuwen, W.J.D., Behrangi, A., 2022. Canopy temperature is regulated by ecosystem structural traits and captures the ecohydrologic dynamics of a semiarid mixed confier forest site. *Journal of Geophysical Research – Biogeoscience* 127(2): 1-15.
[188] • Shi, M., Worden, J.R., Bailey, A., Noone, D., Risi, C., Fu, R., Worden, S.R., Herman, R.L., Payne, V., Pagano, T.S., Bowman, K.W., Bloom, A.A., Saatchi, S., Liu, J., **Fisher, J.B.**, 2022. Amazonian terrestrial water balance inferred from satellite-observed water vapor isotopes. *Nature Communications* 13(2686): 1-10.
[187] • **Fisher, J.B.**, Keenan, T.F., Buechner, C., Shirkey, G., Perez-Quezada, J.F., Knox, S.H., Frank, J.M., Runkle, B.R.K., Bohrer, G., 2021. Once upon a time, in AmeriFlux. *Journal of Geophysical Research – Biogeosciences* 126(1): 1-6.
[186] • Xiao, J., **Fisher, J.B.**, Hashimoto, H., Ichii, K., Parazoo, N.C., 2021. Emerging satellite observations for diurnal cycling of ecosystem processes. *Nature Plants*. https://doi.org/10.1038/s41477-021-00952-8
[185] • Sousa, D., **Fisher, J.B.**, Galvan, F.R., Pavlick, R.P., Cordelli, S., Giambelluca, T.W., Giardina, C.P., Gilbert, G.S., Imran-Narahari, F., Litton, C.M., Lutz, J.A., North, M.P., Orwig, D.A., Ostertag, R., Sack, L., Phillips. R.P., 2021. Tree canopies reflect mycorrhizal composition. *Geophysical Research Letters* 48(10): 1-9.
[184] • Pascolini-Campbell, M., **Fisher, J.B.**, Reager, J.T., 2021. GRACE-FO and ECOSTRESS synergies constrain fine-scale impacts on the water balance. *Geophysical Research Letters* 48(e2021GL093984): 1-11.
[183] • Braghiere, R.K., **Fisher, J.B.**, Fisher, R.A., Shi, M., Steidinger, B.S., Sulman, B.N., Soudzilovskaia, N.A., Yang, X., Liang, J., Peay, K.G., Crowther, T.W., Phillips, R.P., 2021. Mycorrhizal distributions impact global patterns of carbon and nutrient cycling. *Geophysical Research Letters* 48(19): 1-11. e2021GL094514.
[182] • Li, X., Xiao, J., **Fisher, J.B.**, Baldocchi, D.D., 2021. ECOSTRESS estimates gross primary production with fine spatial resolution for different times of day from the International Space Station. *Remote Sensing of Environment* 258(112360): 1-13.
[181] • Yao, Y., Liang, S., **Fisher, J.B.**, Zhang, Y., Chen, J., Jia, K., Zhang, X., Bei, X., Shang, K., Guo, X., Yang, J., 2021. A novel NIR-Red spectral domain evapotranspiration model from the Chinese GF-1 satellite: application to the Huailai agricultural region of China. *IEEE Transactions on Geoscience and Remote Sensing* 59(5): 4105-4119.
[180] • Keller, A.B., Brzostek, E.R., Craig, M.E., **Fisher, J.B.**, Phillips, R.P., 2021. Root-derived inputs are major contributors to soil carbon in temperate forests, but vary by mycorrhizal type. *Ecology Letters* 24(4): 626-635.
[179] • Sheng, M., Tang, J., Yang, D., **Fisher, J.B.**, Wang, H., Kattge, J., 2021. Long-term leaf C:N ratio change under elevated CO_2 and nitrogen deposition in China: evidence from observations and process-based modeling. *Science of the Total Environment* 800(149591): 1-12.
[178] • Shang, K., Yao, Y., Liang, S., Zhang, Y., **Fisher, J.B.**, Chen, J., Liu, S., Xu, Z., Zhang, Y., Jia, K., Zhang, X., Yang, J., Bei, X., Guo, X., Yu, R., Xie, Z., Zhang, L., 2021. DNN-MET: A deep neural networks method to integrate satellite-derived evapotranspiration products, eddy covariance observations and ancillary information. *Agricultural and Forest Meteorology* 308-309(108582): 1-20.
[177] • Cawse-Nicholson, K., Anderson, M., Yang, Y., Yang, Y., Hook, S., **Fisher, J.B.**, Halverson, G., Hulley, G., Hain, C., Baldocchi, D.D., Brunsell, N.A., Desai, A.R., Griffis, T.J., Novick, K.A., 2021. Evaluation of a CONUS-wide ECOSTRESS DisALEXI evapotranspiration product. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* 14: 10117-10133.
[176] • Worden, J., Saatchi, S., Keller, M., Bloom, A.A., Liu, J., Parazoo, N., **Fisher, J.B.**, Bowman, K., Reager, J.T., Fahy, K., Schimel, D., Fu, R., Worden, S., Yin, Y., Gentine, P., Konings, A.G., Quetin, G.R., Williams, M., Worden, H., Shi, M., Barkhordarian, A., 2021. Satellite observations of the tropical terrestrial carbon balance and interactions with the water cycle during the 21st century. *Reviews of Geophysics* 59(1): 1-38.

[175] • Melo, D.C.D., Anache, J.A.A., Wendland, E., Borges, V.P., Miralles, D., Martens, B., **Fisher, J.B.**, Nóbrega, R.L.B., Moreno, A., Cabral, O.M.R., Rodrigues, T.R., Bezerra, B., Silva, C.M.S., Meira Neto, A.A., Moura, M.S.B., Marques, T.V., Campos, S., Nogueira, J.S., Rosolem, R., Souza, R., Antonio, A.C.D., Holl, D., Galleguillos, M., Pérez-Quezada, J.F., Verhoef, A., Kutzbach, L., Lima, J.R.S., Souza, E.S., Gassman, M.I., Pérez, C.F., Tonti, N., Posse, G., Rains, D., Oliveira, P.T.S., 2021. Are remote sensing evapotranspiration models reliable across South American climates and ecosystems? *Water Resources Research* 57(11): 1-23.
[174] • Desai, A.R., Khan, A.M., Zheng, T., Paleri, S., Butterworth, B., Lee, T.R., **Fisher, J.B.**, Hulley, G., Kleynhans, T., Gerace, A., Townsend, P.A., Stoy, P.C., Metzger, S., 2021. Multi-sensor approach for high space and time resolution land surface temperature. *Earth and Space Science* 8(10): 1-18. e2021EA001842.
[173] • El Masri, B., Stinchcomb, G.E., Cetin, H., Ferguson, B., Kim, S.L., Xiao, J., **Fisher, J.B.**, 2021. Linking remotely sensed carbon and water use efficiencies with in-situ soil properties. *Remote Sensing* 13(2593): 1-22.
[172] • Sun, W., Fang, Y., Luo, X., Shiga, Y.P., Zhang, Y., Andrews, A.E., Thoning, K.W., **Fisher, J.B.**, Keenan, T.F., Michalak, A.M., 2021. Midwest US croplands determine model divergence in North American carbon fluxes. *AGU Advances* 2(2): 1-17.
[171] • Chen, X., Lee, R.M., Dwivedi, D., Son, K., Fang, Y., Zhang, X., Graham, E., Stegen, J., **Fisher, J.B.**, Scheibe, T.D., 2021. Integrating field observations and reactive transport modeling to predict watershed water quality under environmental perturbations. *Journal of Hydrology* 602(125762): 1-22
[170] • Wong, A., Jin, Y., Medellín-Azuara, J., Paw U, K.T., Kent, E.R., Clay, J.M., Gao, F., **Fisher, J.B.**, Rivera, G., Lee, C.M., Hemes, K.S., Eichelmann, E., Baldocchi, D.D., Hook, S.J., 2021. Multiscale assessment of agricultural consumptive water use in California's Central Valley. *Water Resources Research* 57(9): 1-28.
[169] • Fer, I., Gardella, A.K., Shiklomanov, A.N., Campbell, E.E., Cowdery, E.M., De Kauwe, M.G., Desai, A., Duveneck, M.J., **Fisher, J.B.**, Haynes, K.D., Hoffman, F.M., Johnston, M.R., Kooper, R., LeBauer, D.S., Mantooth, J., Parton, W., Poulter, B., Quaife, T., Raiho, A., Schaefer, K., Serbin, S.P., Wilcox, K.R., Viskari, T., Dietze, M.C., 2021. Beyond ecosystem modeling: a roadmap to community cyberinfrastructure for ecological data-model integration. *Global Change Biology* 27(1): 13-26.
[168] • Anderson, M.C., Yang, Y., Xue, J., Knipper, K.R., Yang, Y., Gao, F., Hain, C.R., Kustas, W.P., Cawse-Nicholson, K., Hulley, G., **Fisher, J.B.**, Alfieri, J.G., Meyers, T.P., Prueger, J., Baldocchi, D.D., Rey-Sanchez, C., 2021. Interoperability of ECOSTRESS and Landsat for mapping evapotranspiration time series at sub-field scales. *Remote Sensing of Environment* 252: 1-19.
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• Parazoo, N., Bowman, K., Frankenberg, C., Lee, J.-E., **Fisher, J.B.**, Worden, J., Jones, D., Berry, J., Collatz, J., Baker, I., Liu, J., Osterman, G., O'Dell, C., Sparks, A., Butz, A., Guerlet,

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• **Fisher, J.B.**, 2013. The Regional Hydrological Extremes Assessment System (RHEAS). Western States Water Council Meeting. San Diego, USA.

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• Deng, F., Jones, D.B.A., Henze, D.K., Bousserez, N., Bowman, K.W., **Fisher, J.B.**, Kort, E., Wofsy, S., Nassar, R., 2013. Joint inverse modeling of surface CO_2 fluxes using satellite and surface observations of CO_2 mixing ratio. 9th International Carbon Dioxide Conference, Beijing, China.

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• **Fisher, J.B.**, Clark, D., Smith, P., 2013. Nitrogen cycling in the Hadley Centre land surface model (JULES). CESM Land Model and Biogeochemistry Working Group Meeting, National Center for Atmospheric Research (NCAR), Boulder, Colorado, USA.

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• Mallick, K., **Fisher, J.B.**, Jarvis, A., Lee, J.-H., Niyogi, D., 2013. LST-based analytical solution of conductance and evapotranspiration: validation over all semi-arid FLUXNET sites. American Meteorological Society, Austin, Texas, USA.

• **Fisher, J.B.**, Sikka, M., Oechel, W.C., Koven, C.D., Huntzinger, D.N., Ahlström, A., Arain, A.M., Baker, I., Chen, J.M., Ciais, P., Davidson, C., Dietze, M., El-Masri, B., Hayes, D., Huntingford, C., Jain, A., Lomas, M.R., Poulter, B., Price, D., Sahoo, A.K., Schaefer, K., Tian, H., Tomelleri, E., Verbeeck, H., Viovy, N., Zeng, N., Miller, C.E., 2012. The state of land surface model uncertainty for the Alaskan Arctic. American Geophysical Union, San Francisco, California, USA.

• **Fisher, J.B.**, Sikka, M., Bowman, K.W., Liu, J., Lee, M., Collatz, G.J., Pawson, S., Gunson, M., CMS Flux Team, TRENDY Modelers, NACP Regional Synthesis Modelers, 2012. The NASA Carbon Monitoring System (CMS) Flux Pilot Project as a means to evaluate global land surface models. American Geophysical Union, San Francisco, California, USA.
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• **Fisher, J.B.**, Block, G., Guillaume, A., Stephens, G., Miller, C., Lee, J.-E., Sitch, S., Ciais, P., Wang, Y., 2011. Ensemble land surface modeling at JPL. NASA Carbon Cycle & Ecosystems Joint Science Workshop, Alexandria, Virginia, USA.
• **Fisher, J.B.**, Sitch, S., Malhi, Y., Fisher, R.A., Huntingford, C., Tan, S.-Y., 2011. Global modeling of plant N uptake and C allocation. Ecological Society of America, Austin, Texas, USA. (*Invited*)
• **Fisher, J.B.**, Badgley, G., Jiménez, C., Tu, K.P., Vinukollu, R., 2011. Uncertainty in global evapotranspiration estimates from choice of input forcing datasets. NASA/USDA Workshop on "Evapotranspiration: An Essential Observation for Climate Understanding and Efficient Water Management", Silver Spring, Maryland, USA.
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• **Fisher, J.B.**, 2011. Evapotranspiration. International Land Model Benchmarking Project Meeting, Irvine, California, USA. (*Invited*)
• Simard, M., Pinto, N., Baccini, A., **Fisher, J.B.**, 2011. Global forest height from ICESat, MODIS and environmental variables. AmeriFlux Science Meeting & 3rd NACP All-Investigators Meeting, New Orleans, Louisiana, USA.
• Frankenberg, C., Butz, A., **Fisher, J.B.**, Toon, G., Kuze, A., Yokota, T., Badgley, G., Worden, J., 2011. Global remote sensing of chlorophyll fluorescence using high-resolution O2 A-band spectra recorded by the GOSAT satellite. The 7th International Workshop on Greenhouse Gas Measurements from Space, Edinburgh, UK.
• Bowman, K., Lee, M., Henze, D., Nassar, R., Pawson, S., Menemenlis, D., **Fisher, J.**, Hill, C., Potter, C., Gregg, W., Collatz, J., Brix, H., Ott, L., Zhu, Z., Dutkiewicz, S., Follows, M., Kulawik, S., Worden, J., Osterman, G., Jones, D., Weidner, R., Gunson, M., Jucks, K., 2011. Preliminary estimates of carbon emissions constrained by GOSAT and TES from the NASA Carbon Monitoring Study Flux Pilot Project. The 7th International Workshop on Greenhouse Gas Measurements from Space, Edinburgh, UK.
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• Frankenberg, C., Butz, A., **Fisher, J.B.**, Toon, G., Kuze, A., Yokota, T., 2010. Global remote sensing of chlorophyll fluorescence using high-resolution spectra recorded by the Japanese GOSAT satellite. American Geophysical Union, San Francisco, California, USA.
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• **Fisher, J.B.**, Njoku, E.G., Entekhabi, D., 2010. Soil Moisture Active Passive (SMAP): NASA's Earth observation mission to measure soil moisture and freeze/thaw state globally, and provide improved estimates of net ecosystem exchange. Ecological Society of America, Pittsburgh, Pennsylvania, USA.
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• **Fisher, J.B.**, Armanios, D., Tu, K.P., 2009. Global evapotranspiration from remote sensing driven by SRB, AIRS and MODIS, validated at 36 FLUXNET sites. American Geophysical Union, San Francisco, California, USA.
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• **Fisher, J.B.**, Tu, K., Armanios, D., 2009. Global evapotranspiration from remote sensing. Joint 6th International GEWEX and 2nd iLEAPS Science Conference; iLEAPS ECSW Meeting; LandFlux Meeting. Melbourne, Australia.
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• **Fisher, J.B.**, Malhi, Y., Fisher, R.A., Tan, S.-Y., Sitch, S., Huntingford, C., 2008. A globally applicable, mechanistic model of plant nitrogen uptake, retranslocation and fixation. American Geophysical Union, San Francisco, California, USA.
• **Fisher, J.B.**, Malhi, Y., de Araújo, A.C., Bonal, D., Gamo, M., Goulden, M.L., Hirano, T., Huete, A.R., Kondo, H., Kumagai, T., Loescher, H., Miller, S., Nobre, A.D., Nouvellon, Y., Oberbauer, S.F., Panuthai, S., von Randow, C., da Rocha, H.R., Roupsard, O., Saleska, S., Tanaka, K., Tanaka, N., Tu, K.P., 2007, 2008. The land-atmosphere water flux in the tropics. LBA-ECO 11th Science Team Meeting, Salvador, Bahia, Brazil. iLEAPS Science Conference: Current understanding of how integrated land ecosystem atmosphere processes influence climate dynamics, Hyères, France.
• **Fisher, J.B.**, 2008. QUERCC: Quantifying and Understanding Ecosystem Roles in the Carbon Cycle. QUEST Annual Science Meeting, Winchester, UK. (*Invited*)
• **Fisher, J.B.**, Malhi, Y., de Araújo, A.C., Bonal, D., da Rocha, H.R., Goulden, M.L., Hirano, T., Kumagai, T., Loescher, H., Miller, S., Nobre, A.D., Oberbauer, S., Saleska, S., von Randow, C., Tu, K.P., 2007. The tropical land-atmosphere water flux: Measurements, models and controls for evapotranspiration in the Amazon. LBA-ECO 11th Science Team Meeting, Salvador, Bahia, Brazil.
• **Fisher, J.B.**, Tu, K.P., 2007. Global trends in potential and actual evapotranspiration based on 20 years of satellite observations. American Geophysical Union, San Francisco, California, USA.
• **Fisher, J.B.**, Malhi, Y.S., 2006, 2007. Modelling plant nitrogen: fixation, uptake and

allocation. QUEST, QUERCC Fall meeting, Edinburgh, UK. First JULES Science Meeting, Exeter, UK.
• Tu, K.P., **Fisher, J.B.**, 2006. Remote sensing of the land-atmosphere water flux: Global validation using FLUXNET data. AmeriFlux meeting, Boulder, Colorado, USA.
• **Fisher, J.B.**, 2006. Summary of past, present and future research. International Networking of Young Scientists on Imaging Techniques and GIS: Applications in Environmental and Natural Resources Management. British Council, Universiti Malaya, Kuala Lumpur, Malaysia.
• **Fisher, J.B.**, Trulio, L.A., Biging, G., Chromczak, D., 2006. Use of GIS and spatial analysis for wildlife management measures. American Society for Photogrammetry and Remote Sensing, Reno, Nevada, USA.
• **Fisher, J.B.**, Misson, L., Goldstein, A.H., 2006. Sap flow measurements for ponderosa pine, manzanita and ceanothus at Blodgett Forest, California. Blodgett Forest Research Workshop, Georgetown, California, USA.
• Tu, K.P., **Fisher, J.B.**, 2006. Remote sensing of the land-atmosphere water flux: Global validation using FLUXNET data. Proceedings of the 1st iLEAPS Science Conference, Boulder, Colorado, USA.
• **Fisher, J.B.**, Tu, K., 2005. New global estimates of the land-atmosphere water flux: A fully remote sensing driven, flux site-validated ecophysiological model of evapotranspiration. The 9th International Symposium on Physical Measurements and Signatures in Remote Sensing, Beijing, China.
• Dawson, T., Tu, K., **Fisher, J.B.**, Baldocchi, D., 2004. Partitioning Evaporation and Transpiration Using 18-0 of Water. Biosphere Atmosphere Stable Isotope Network Meeting, Point Reyes, California, USA.
• **Fisher, J.B.**, 2004. Estimation of Evapotranspiration Across Multiple Scales: Sap Flow, Flux Measurement, Remote Sensing, and Sociology. NASA Earth System Science Network Symposium, Washington, D.C., USA.
• **Fisher, J.B.**, Tu, K., 2004. Validation of MODIS-Derived Parameters with FLUXNET Measurements: Surface Temperature, Air Temperature, Fraction of Photosynthetically Absorbed Radiation, and Albedo. Numerical Terradynamic Simulation Group's MODIS Vegetation Workshop II, Missoula, Montana, USA.
• Tu, K.P., **Fisher, J.B.**, 2004. Remote sensing of plant transpiration and soil evaporation using MODIS data. Numerical Terradynamic Simulation Group's MODIS Vegetation Workshop II, Missoula, Montana, USA.
• **Fisher, J.B.**, 2003. Environmental Justice / Air Toxics analysis for West Oakland: Combining GIS and spatial data analysis. American Public Health Association (Awarded 1st Place in the Environment Section Student Award Poster Session), San Francisco, California, USA.
• **Fisher, J.B.**, 2003. Environmental Justice / Air Toxics analysis for West Oakland: Combining GIS and spatial data analysis. GIS Day – Public Interest GIS, University of California, Berkeley, USA.
• **Fisher, J.B.**, DeBiase, T.A., Qi, Y., Xu, M., Goldstein, A., 2001. Evapotranspiration methods compared on a Sierra Nevada forest ecosystem. American Geophysical Union, San Francisco, California, USA.
• DeBiase, T.A., Qi, Y., **Fisher, J.B.**, Baldocchi, D., Goldstein, A., Xu, M., Liang, X., 2001. Comparison of potential evapotranspiration methods based on results from FLUXNET sites in the United States. American Geophysical Union, San Francisco, California, USA.
• DeBiase, T.A., **Fisher, J.B.**, Qi, Y., Goldstein, A., 1999. Evapotranspiration revisited: Linking soil moisture and canopy resistance. International Symposium on Integrated Water Resource Management, University of California, Davis, USA.

MEDIA
• **Chapman Presidential Fellow Among Most-Cited Researchers**, 2022
• **Remote sensing of tree canopies reveals the identity of belowground fungi**, The Academic Times, 2021
• **Satellite data reveals impact of warming on global water cycle**, CarbonBrief, 2021

• **Climate Change Rap**, 2021
• **What Causes the Seasons?** REACH: A Space Podcast for Kids, 2021
• **Living Planet: Capturing carbon in Costa Rica**, Deutsche Welle Radio's World Service, 2021
• **On the Surface**, NASA podcast, 2020
• **NASA'S ECOSTRESS Takes Surface Temperature Around California Fires**, 2020
• **Saturation Point**, New Scientist, 2020
• **Clues to the impact of climate change may seep from a volcano in Costa Rica**, The Washington Post, 2020
• **Forests Respond to Volcanic Emissions**, 2020
• Profiled, VoyageLA, 2020
• **NASA Gauges Plant Stress in Costa Rican Drought**, 2019
• **Drought-Stressed Forest Fueled Amazon Fires**, 2019
• **Houston, We're Here to Help the Farmers**, 2019
• **NASA and CCST Partner to Improve Science and Applications outcomes for NZ**, 2018
• **New Tool Will Help Save Water By Measuring Plant Health From Space**, News Deeply, 2018
• **Monitoring Plant Health from Space: NASA's ECOSTRESS Mission**, 2018
• **New NASA Mission to Detect Plant Water Use from Space**, 2018
• **Can plants tell us when the next drought will happen? JPL's 'space botanist' may have the answer**, Press-Telegram, 2018
• **Study Finds Drought Recoveries Taking Longer**, 2017
• Interviewed, featured on Repretal (Costa Rican national news): NASA estudia los boques ticos (http://www.repretel.com/actualidad/nasa-estudia-bosques-ticos-70438), Vulcanólogos se unen a trabajo de científicos de la NASA (http://www.repretel.com/actualidad/vulcanologos-trabajo-cientificos-nasa-70415), 2017
• **NASA Satellite Images Uncover Underground Forest Fungi**, 2016
• **As the Climate Change Threat Grows, So Does a Theatrical Response**, American Theatre, 2016
• Featured on: *Art In Science*, Los Angeles County Office of Education, 2015
• Expert Consultant to: *Madam Secretary* ("Face the Nation", S1Ep17), 2015
• **NASA Finds Good News on Forests and Carbon Dioxide**, 2014
• **NASA's ECOSTRESS Will Monitor Plant Health**, 2014
• **With Few Data, Arctic Carbon Models Lack Consensus**, 2014
• Featured on: *The Playboy Morning Show*, 2013
• Sound byte for: *KTLA* on Climate Change, 2013
• **NASA Maps How Nutrients Affect Plant Productivity**, 2012
• **NASA Map Sees Earth's Trees in a New Light**, 2012
• Interviewed in: *HydroRisk* website—http://www.hydrorisk.com/index.php/blog/11
• Featured in: Hambly, Vivienne, 2009. Into the Amazon's Heart. *Sublime* (October): 12-20.

INVITED TALKS (NON-CONFERENCE)
• UC Riverside: Department of Environmental Sciences (2022)
Riverside, CA, USA
"The Fate of the Terrestrial Biosphere"
• University of Arizona: Department of Hydrology and Atmospheric Sciences (2022)
Tucson, Arizona, USA
"The Fate of the Terrestrial Biosphere"
• UN FAO: Remote Sensing Determination of Evapotranspiration (2021)
Rome, Italy
"The Future of Evapotranspiration"
• MIT: Climate Snacks (2021)
Cambridge, Massachusetts, USA
"The Fate of the Terrestrial Biosphere"

• **UCI: Civil & Environmental Engineering Seminar Series** (2021)
Santa Barbara, California, USA
"The Fate of the Terrestrial Biosphere"
• **DOE: EMSL Integration** (2021)
Richland, Washington, USA
"The Fate of the Terrestrial Biosphere"
• **UCSB: Bren Seminar Series** (2021)
Santa Barbara, California, USA
"The Fate of the Terrestrial Biosphere"
• **Chapman University: Grand Challenges Initiative** (2021)
Orange, California, USA
"Climate ∆"
• **UN FAO: Remote Sensing Determination of Evapotranspiration** (2021)
Rome, Italy
"PT-JPL, ECOSTRESS, and Hydrosat"
• **Eagle Rock Elementary School: 4th Grade** (2021)
Los Angeles, California, USA
"A Window Into the Future of the Earth, Hidden in the Jungles of Costa Rica's Volcanoes"
• **California State University, Northridge: Remote Sensing** (2021)
Northridge, California, USA
"The Future of Earth's Ecosystems"
• **AIA|LA Committee on the Environment (COTE): 2 Degrees Symposium** (2020)
Los Angeles, California, USA
"The Future of Earth's Ecosystems"
• **Lincoln Beer Company: Space Night** (2020)
Burbank, California, USA
"The Future of Earth's Ecosystems (and the Future of Beer!)"
• **California Institute of Technology: Fundamentals of Sustainability Science and Engineering** (2020)
Pasadena, California, USA
"The Fate of the Terrestrial Biosphere"
• **US Bureau of Reclamation: Reclamation Reservoir Operations Workshop** (2019)
Boulder City, NV, USA
"Remote Sensing of Terrestrial Hydrology"
• **Chapman University** (2019)
Orange, California, USA
"The Fate of Earth's Ecosystems"
• **Northern Arizona University: Eco-informatics Seminar** (2019)
Flagstaff, Arizona, USA
"The Fate of Earth's Ecosystems"
• **Arcosanti** (2019)
Arcosanti, Arizona, USA
"Climate ∆"
• **NAC Architecture: ChangeMakers** (2019)
Los Angeles, California, USA
"The Fate of Earth's Ecosystems"
• **University of Southern California: Department of International Relations** (2019)
Los Angeles, California, USA
"Climate ∆"
• **University of Southern California: Department of Earth Sciences** (2019)
Los Angeles, California, USA
"Evapotranspiration"
• **Pasadena Rotary** (2019)
Pasadena, California, USA

"Climate ∆"
• **Napa Lighted Arts Festival** (2019)
Napa, California, USA
"Earth From Beyond"
• **California Science Education Conference** (2018)
Pasadena, California, USA
"The Fate of Earth's Ecosystems"
• **NASA Museum Alliance** (2018)
Pasadena, California, USA
"ECOSTRESS: NASA'S next mission to the International Space Station to measure plant water use and stress worldwide"
• **Jet Propulsion Laboratory & Pasadena Community College: Von Karman Lecture** (2018)
Pasadena, California, USA
"The Fate of Earth's Ecosystems"
• **California Institute of Technology: Science for March** (2018)
Pasadena, California, USA
"The International Space Station as a Key to Unlocking Terrestrial Ecosystems"
• **California Institute of Technology: Earth Week 2017** (2017)
Pasadena, California, USA
"The Fate of the Terrestrial Biosphere"
• **California Institute of Technology: Fundamentals of Sustainability Science and Engineering** (2017)
Pasadena, California, USA
"The Fate of the Terrestrial Biosphere"
• **University of California, Riverside** (2016)
Riverside, California, USA
"The Fate of the Terrestrial Biosphere"
• **University of Pennsylvania** (2016)
Philadelphia, Pennsylvania, USA
"The Fate of the Terrestrial Biosphere"
• **Killefer Flammang Architects** (2016)
Santa Monica, California, USA
"Climate ∆"
• **League of Women Voters** (2016)
Pasadena, California, USA
"The Fate of the Terrestrial Biosphere"
• **Our Lady of the Assumption Catholic Church** (2016)
Claremont, California, USA
"Climate ∆"
• **Pasadena Climate Day** (2016)
Pasadena, California, USA
"ECOSTRESS: NASA's next-generation mission to measure evapotranspiration from the International Space Station"
• **Action LA: Climate Change Theater** (2015)
Santa Monica, California, USA
"Climate ∆"
• **The Waverly School, Middle School** (2015)
Pasadena, California, USA
"Climate ∆"
• **Holy Name of Mary Parish: Caring for Our Common Home** (2015)
San Dimas, California, USA
"Climate ∆"
• **Church of Scientology: World Environment Day** (2015)
Los Angeles, California, USA

"Climate ∆"
• **EarthCube: Essential Variables and Associated Challenges for EarthCube Science Drivers** (2015)
Arlington, Virginia, USA
"Terrestrial Remote Sensing"
• **Stanford University: Carnegie Institute for Global Ecology** (2015)
Palo Alto, California, USA
"The Fate of the Terrestrial Biosphere Under a Changing Climate"
• **University of Texas at Austin: Center for Integrated Earth System Science** (2015)
Austin, Texas, USA
"The Fate of the Terrestrial Biosphere Under a Changing Climate"
• **NASA Museum Alliance** (2015)
Pasadena, California, USA
"The Fate of the Terrestrial Biosphere Under a Changing Climate"
• **SMAP Mission Launch Event** (2015)
Pasadena, California, USA
"Mud, Mud, Glorious Mud: The Science of SMAP"
• **Art Center College of Design** (2015)
Pasadena, California, USA
"Climate ∆"
• **SMAP Mission Pre-Launch Educator Conference** (2014)
Pasadena, California, USA
"Mud, Mud, Glorious Mud: The Science of SMAP"
• **Environmental Science and Technology High School** (2014)
Los Angeles, California, USA
"Career Development of a NASA Climate Scientist"
• **United Nations Association – Pomona Valley (PVUNA)** (2014)
Pomona, California, USA
"Climate Change: The Science & Challenge"
• **University of California, Los Angeles: Seminar in Department of Atmospheric & Oceanic Sciences** (2014)
Los Angeles, California, USA
"The Fate of the Terrestrial Biosphere Under Climate Change"
• **KIPP Academy Elementary School** (2014)
Los Angeles, California, USA
"Climate ∆"
• **Active Claremont** (2014)
Claremont, California, USA
"Climate ∆"
• **University of Southern California: Seminar in Department of Earth Sciences** (2014)
Los Angeles, California, USA
"The Fate of the Terrestrial Biosphere Under Climate Change"
• **Child Educational Center: Mud Week** (2013)
La Cañada, California, USA
"Mud, Mud, Glorious Mud"
• **Laboratoire des Sciences du Climat et l'Environnement** (2013)
Gif-sur-Yvette, France
"CHANGE: Carbon, Hydrology And Nutrients Global Evaluation"
• **Observatoire de Paris** (2013)
Paris, France
"CHANGE: Carbon, Hydrology And Nutrients Global Evaluation"
• **Tel Aviv University: Porter School for Environmental Studies** (2013)
Tel Aviv, Israel
"CHANGE: Carbon, Hydrology And Nutrients Global Evaluation"

• **LA Climate Rally** (2013)
Los Angeles, California, USA
"Climate Science"
• **JPL Climate Day** (2012)
Pasadena, California, USA
"Climate ∆"
• **University of Southern California: Science, Technology and Society** (2012)
Los Angeles, California, USA
"Climate Science and Society"
• **East Los Angeles College: STEM Summer Academy** (2012)
Los Angeles, California, USA
"Climate ∆"
• **Lawrence Magnet School** (2012)
Pasadena, California, USA
"Climate ∆"
• **League of Women Voters: When It Rains It Doesn't Pour: Climate Change and Water: A Primer for Voters** (2012)
Pasadena, California, USA
"Climate ∆"
• **Jet Propulsion Laboratory: Earth Week Earth Science Talks: What's New in JPL Earth Science?** (2012)
Pasadena, California, USA
"What JPL is Doing to Observe and Predict Changes in Earth's Terrestrial Ecosystems and Water Cycle"
• **Pasadena Community College: Environmental Studies** (2012)
Pasadena, California, USA
"NASA Earth Science"
• **Jet Propulsion Laboratory: Climate Change Symposium** (2011)
Pasadena, California, USA
"CHANGE: Carbon, Hydrology And Nitrogen for Global Evaluation"
• **Jet Propulsion Laboratory: SIRI & USRP Speaker Series** (2011)
Pasadena, California, USA
"CHANGE: Carbon, Hydrology And Nitrogen for Global Evaluation"
• **Occidental College: Physical Geology** (2011)
Eagle Rock, California, USA
"NASA Earth Science"
• **California Institute of Technology: Yuk Lunch Seminar, Div. of Geological and Planetary Sciences** (2011)
Pasadena, California, USA
"CHANGE: Carbon, Hydrology And Nitrogen for Global Evaluation"
• **IEEE: Los Angeles Metro Section** (2010)
Monterey Park, California, USA
"CHANGE: Carbon, Hydrology And Nitrogen for Global Evaluation"
• **Occidental College: The Remsen Bird Lecture for Geology, Biology and Chemistry** (2010)
Eagle Rock, California, USA
"CHANGE: Carbon, Hydrology And Nitrogen for Global Evaluation"
• **Yale University: School of Forestry and Environmental Studies** (2010)
New Haven, Connecticut, USA
*"*Remote Sensing of the Hydrological Cycle"
• **European Science Foundation** (2008)
Porquerolles, France
"QUEST: The State of UK Climate Modelling"
• **Korea University: Division of Environmental Science & Ecological Engineering** (2008)

Seoul, South Korea
"QUEST: The State of UK Climate Modelling"
• **University of Oxford: Biodiversity Research Seminar, School of Geography and the Environment** (2008)
Oxford, UK
"Evapotranspiration is a proxy for biodiversity, but how accurate are these estimates?"
• **TippingPoint Climate Art Programme: Climate Change: Scientific Briefing Day for Artists** (2007)
Oxford, UK
"Earth Observation"
• **University of Oxford: Oriel College, Forum on the Environment** (2007)
Oxford, UK
"From Leaf Measurements to Satellite Remote Sensing: Methods in the Environmental Sciences"
• **Korea University: Division of Environmental Science & Ecological Engineering** (2005)
Seoul, South Korea
"The land-atmosphere water flux: the individual plant, ecosystem fluxes, global patterns, and the sociological advancement of science"
• **University of California, Berkeley: Department of Environmental Science, Policy, & Management** (2005)
Berkeley, California, USA
"Spatial dimensions of environmental justice: GIS and spatial analysis in West Oakland"

HONORS AND AWARDS
• Highly Cited Researchers, Clarivate Analytics (2018, 2019, 2020, 2021)
• Rotary National Award for Space Achievement Stellar Award, ECOSTRESS Team (2020)
• NASA Group Achievement Award, ECOSTRESS Science Team (2020)
• NASA Group Achievement Award, ECOSTRESS Anomaly Response Team (2020)
• NASA Group Achievement Award, ECOSTRESS Payload Development Team (2019)
• JPL Team Award (8X), ECOSTRESS (2018, 2019)
• Voyager Award, ECOSTRESS (2015)
• JPL Team Award (32), ECOSTRESS (2014)
• NASA Group Achievement Award, Carbon Monitoring System Flux Pilot Project Team (2013)
• JPL Team Award (8000), Water Cycle Workshop (2013)
• JPL Team Award (324), Water Cycle Workshop (2012)
• JPL Team Award (324), Carbon Monitoring System (2012)
• JPL Team Award (324), CARVE (2012)
• JPL Team Award (388), CARVE (2012)
• New Phytologist Trust, Travel Award to 96th ESA Annual Meeting (2011)
• JPL Team Award (324), SMAP Science Cal/Val (2010)
• Junior Research Fellowship, Linacre College, Oxford University (2009)
• Cape Farewell, Designated Scientist to Andes Expedition (2009)
• Oxford University, School of Geography and the Environment, ECI Divisional Merit Award (2008)
• Royal Society, Conference Grant (2008)
• European Science Foundation Conference Travel Award (2008)
• iLEAPS Conference Travel Award (2008)
• Large Scale Biosphere-Atmosphere Experiment in Amazonia Travel Award (2007)
• Oxford University ECI Small Grants for Postgraduate Research (2007)
• British Council International Networking for Young Scientists (2006)
• University of California, Berkeley Faculty Research Grant (2004 – 2006)
• G. Fitzgarrald Martin Scholarship (2005)
• NASA Earth System Science Fellowship (2002 – 2005)
• American Public Health Association Environment Section Student Award Poster Session (*1st*

Place) (2003)
• US EPA, Region 9 Air Division Certificate of Appreciation (2001)
• The National Dean's List Award (2001)
• Association of California Water Agencies (2000)
• Los Angeles Audubon Society Urban Wildlife Award (1993)

ACADEMIC ACTIVITIES
• Advisory Committee, AmeriFlux Theme Year of Remote Sensing (2022)
• ET Remote Sensing Breakout Lead, AmeriFlux Evapotranspiration Workshop. Virtual (2021)
• Organizer, AmeriFlux Annual Meeting. Virtual (2020)
• Convener, Harnessing the Data Revolution: Insights into Ecosystem Dynamics Enabled By New Instruments on the International Space Station. Ecological Society of America. Virtual (2020)
• Editor, *Environmental Research Letters* (Special Issue: Resiliency and Vulnerability of Arctic and Boreal Ecosystems to Environmental Change: Advances and Outcomes of ABoVE (the Arctic Boreal Vulnerability Experiment) (2017-current)
• Judge, *Sentinel Awards* (2019)
• Editor, *Remote Sensing* (Special Issue: Recent Advances in Remote Sensing of Evapotranspiration) (2017-2018)
• Host, *Make-A-Wish-Foundation* visit with scientists (2017)
• Editor, *Hydrosphere* (2015-current)
• Contributing Author, 2nd State of the Carbon Cycle Report (SOCCR), US Global Change Research Program (USGCRP) (2016-current)
• Working Group Lead, Science Team Member, NASA Arctic Boreal Vulnerability Experiment (ABoVE) (2015-current)
• Judge, AGU Fall Meeting, Outstanding Student Paper Award (2012-current)
• Convener, The Resilience and Vulnerability of Arctic and Boreal Ecosystems to Climate Change, AGU Fall Meeting (2016)
• Convener, Carbon Dynamics in Tropical, Arctic/Boreal, Coastal, and Wetland-Dominant Regions, AGU Fall Meeting (2016)
• Convener, Remote Sensing of Vegetation Function and Traits, AGU Fall Meeting (2014)
• Member, NASA Carbon Cycle & Ecosystems Joint Science Workshop Steering Committee (2014)
• Editor, *International Journal of Applied Earth Observation and Geoinformation* (Special Issue: "Advances in Remote Sensing of Vegetation Function and Traits") (2014)
• Panelist, Ask A Climate Scientist, Earth Day Events at Caltech (2014)
• Convener, Remote Sensing of Vegetation for Monitoring Ecosystem Functioning, AGU Fall Meeting (2013)
• Coordinator, NASA Carbon Monitoring System Capability Risk Working Group (2013)
• Member, NASA Terrestrial Ecology Modeling Working Group (2013)
• Judge, Climate Debate, Notre Dame High School, Sherman Oaks, CA (2013)
• Panelist, Moderator, ClimatePalooza, USC Annenberg School for Communication and Journalism, NASA JPL (2013)
• Science Team Member, NASA Carbon Monitoring System, NASA (2012)
• Lead Organizer, JPL Workshop on "Water in a Changing Climate: The Science", NASA JPL (2012)
• Host, UC Berkeley Student Externship Program (2012)
• Presider, Biogeochemistry: New Paradigms in Biogeochemical Cycling 1; and, Judge, Bell-Braun Student Presentations, Ecological Society of America (2011)
• Co-chair, New and Emerging Satellite Missions for Remote Sensing Hydrology I, American Geophysical Union (2010)
• iLEAPS Scientific Organizing Committee, Early Career Scientist Workshop (2010-2011)
• TES/AIRMOSS Hiring Committee Member, NASA JPL, CalTech (2010)
• External Reviewer, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences

(2010)
• Member, Oxford University Supreme Governing Body (Congregation) (2009-2010)
• Ecosystems Group Representative, ECI Management Team, University of Oxford (2008-2010)
• Member, ECI MSc Core Teaching Team, University of Oxford (2008-2010)
• Coach, Oxford University Men's Basketball Team (Blues) (2006)
• Contributing Sports Journalist, Cherwell 24 Newspaper and The Oxford Student (2006)
• Departmental Liaison, UC Berkeley Graduate Assembly (2005-2006)
• Member, Graduate Programs Committee, UC Berkeley Dept. ESPM (2004-2005)
• Graduate Student Representative, Graduate Student Admissions, UC Berkeley Dept. ESPM (2004-2005)
• Member, Judicial Committee, UC Berkeley Graduate Assembly (2004-2005)
• Departmental Delegate, UC Berkeley Graduate Assembly (2002-2005)
• Graduate Student Representative, Faculty Search Committee, UC Berkeley Dept. ESPM (2004)
• Chair, UC Berkeley Graduate Assembly's Committee on Affirmative Action (2004)
• President, UC Berkeley Environmental Sciences Students Association (2001)
• Member, UC Berkeley Hapa Issues Forum (1998-2001)
• Student advisor to the dean, UC Berkeley College of Natural Resources (1997)
• President, Taft High School Ecology Club (1997)

REVIEWER

• *Advances in Water Resources*
• *Agricultural & Forest Meteorology*
• *American Public Health Association*
• *Annals of Botany*
• *Atmospheric Chemistry and Physics*
• *Belgian Remote Sensing Research Programme*
• *Big Earth Data*
• *Biogeosciences*
• *Biology Letters*
• *BioScience*
• *Biotropica*
• *Climate Research*
• *Climatic Change*
• *Earth's Future*
• *Ecological Engineering*
• *Ecological Indicators*
• *Ecological Modelling*
• *Ecology*
• *Ecosystems*
• *Elementa: Science of the Anthropocene*
• *Environmental Modelling & Software*
• *Environmental Research Letters*
• *Environmental Science & Policy*
• *EOS*
• *European Research Council (ERC)*
• *French National Research Agency (ANR)*
• *Frontiers in Earth Science*
• *Geophysical Research Letters*
• *Geoscience & Remote Sensing*
• *IEEE Transactions on Geoscience & Remote Sensing*
• *IEEE Geoscience and Remote Sensing Letters*
• *International Journal of Digital Earth*
• *IPCC AR5 (Expert Reviewer)*
• *Irish Research Council (IRC)*
• *Journal of Advances in Modeling Earth Systems*
• *Journal of the American Water Resources Association*
• *Journal of Applied Meteorology and Climatology*
• *Journal of Biogeography*
• *Journal of Climate*
• *Journal of Geography & Regional Planning*
• *Journal of Geophysical Research – Atmospheres*
• *Journal of Geophysical Research – Biogeosciences*
• *Journal of Great Lakes Research*
• *Journal of Hydrology*
• *Journal of Hydrometeorology*
• *Journal of Selected Topics in Earth Observations & Remote Sensing*
• *Journal of Wildlife Management*
• *Land Use Policy*
• *Landscape and Urban Planning*
• *Nature*
• *Nature Climate Change*
• *Nature Geoscience*
• *Nature Plants*
• *New Phytologist*
• *Oecologia*
• *Plant Ecology & Diversity*
• *PLOS ONE*
• *Progress in Physical Geography*

Letters
• *Geoscientific Model Development*
• *Global Change Biology*
• *Global Change Biology – Bioenergy*
• *Global Ecology and Biogeography*
• *Global and Planetary Change*
• *Health & Place*
• *Hydrogeology Journal*
• *Hydrological Processes*
• *Hydrological Sciences Journal*
• *Hydrology and Earth System Sciences*
• *Remote Sensing of Environment*
• *Scientific Reports*
• *Theoretical and Applied Climatology*
• *Tree Physiology*
• *UK Natural Environment Research Council (NERC)*
• *US Department of Energy (DOE)*
• *US Geological Survey (USGS)*
• *US National Aeronautics and Space Administration (NASA)*
• *US National Science Foundation (NSF)*
• *Water*
• *Water Resources Research*

TEACHING

• **Grand Challenges in Science & Engineering (SCI-150)** (2022)
Chapman University

• **First Year Foundations (Grand Challenges in Science & Engineering): Climate Change (FFC 100B)** (2021)
Chapman University

• **Climate Change** (2021)
Occidental College

• **Terrestrial Biosphere Modeling** (2016)
University of California, Los Angeles

• **Storytelling for Scientists** (2016)
California Institute of Technology

• **Introduction to Remote Sensing, GIS & Modelling** (2007 – 2009)
University of Oxford, UK, Environmental Change Institute and School of Geography and the Environment
MSc in Environmental Change & Management
MSc in Biodiversity, Conservation & Management
MSc in Water Science, Policy & Management

• **Earth Observation: Ecological Applications** (2006 – 2009)
University of Oxford, UK, School of Geography and the Environment

• **Land-Surface Climatology** (2007)
University of Oxford, UK, School of Geography and the Environment

• **Evapotranspiration: Sap Flow, Isotopes, Eddy Flux, Modelling & Remote Sensing** (2006)
University of Oxford, UK, Centre for the Environment – Water Science, Policy & Management MSc

• **Senior Research Seminar in Environmental Sciences** (2005 – 2006)
University of California, Berkeley, USA, Department of Environmental Science, Policy, & Management

• **Environmental Justice: Race, Class, Equity & the Environment** (2004)
University of California, Berkeley, USA, Department of Environmental Science, Policy, & Management

• **Natural Resource Sampling & Assessment** (2002)
University of California, Berkeley, USA, Department of Environmental Science, Policy, & Management

STUDENTS & POST-DOCS

Current

• Nelson, Katie, M.S., Michigan Tech. U.
Volcanic CO_2

• Joshi, Ryan, B.S., Chapman University
Ecosystem remote sensing

• von Allmen, Zoë, B.S., Chapman University
Ecosystem remote sensing
• Puri, Radhika, B.S., Chapman University
Sea turtle habitat temperature
• Jensen, Ben, B.S., Chapman University
Ecosystem remote sensing
• Hatch, Holland, B.S., Chapman University
Remote sensing water applications

2022
• Javadian, Mostafa, Ph.D. candidate, University of Arizona
Dryland hydrology
• Milosevich, Miles, B.S., Chapman University
Ecosystem remote sensing

2021
• Sousa, Daniel, Post-doc
Multi-sensor fusion
• Braghiere, Renato, Post-doc
Modeling nutrient cycle dynamics
• Aragon, Bruno, Post-doc
ET remote sensing
• Santana, Ethan, B.S., Chapman University
Ecosystem remote sensing
• Morancy, Joalda, B.S., U. Chicago
ECOSTRESS climate events
• Gerlich, Gina, B.S., Cal State Northridge
Arctic-Boreal Vulnerability Experiment data synthesis
• Wallace, Kourtney, B.S., Howard University
Nutrient cycling
• Graham, Mariah, B.A., Humboldt State U.
ECOSTRESS-OCO-3 synergies
• Sea, Mony, M.S., Cal State Northridge
Water applications
• Hantson, Wouter, Ph.D., University of Maine
Arctic-Boreal Ecosystem Dynamics
• Dohlen, Matt, M.S., Cal Poly Pomona
Evapotranspiration

2020
• Krishnamurthy, Krishna, D.Env., UCLA
Drought tipping points: can satellite remote sensing provide improved early warning signals for food and water security?
• Ngyuen, Cody, B.S., Cal Poly Pomona
Arctic-Boreal Vulnerability Experiment data synthesis
• Ayanna Jones, Ph.D., Emory
Rhizosphere modeling

2019
• Purdy, AJ, Post-doc
Soil moisture improvements to evapotranspiration modeling
• Khanna, Malvika, B.S., Occidental College
Evapotranspiration
• Galvan, Fernando, B.S., CSUN

Evapotranspiration
• Halverson, Gregory, M.A. in Department of Geography, CSUN
Operational evapotranspiration application system
• Phillips, Michala, Ph.D., UC Riverside
Remote sensing of mycorrhizal associations
• Perakalapudi, Naga, M.S., USC
Model Farm
• Lee, Brian, M.S., Yale
ECOSTRESS validation
• Gagne-Landmann, Anna, B.S., Université Laval
Model Farm
• Moyano Pérez, María del Carmen, Ph.D., Universidad Politécnica de Madrid, Spain
A Case Study in the Doñana Region and Surrounding Irrigated Areas

2018
• Magney, Troy, Post-doc
SIF
• Stofferahn, Eric, Post-doc
ABoVE
• Purdy, AJ, Ph.D. in Department of Earth System Science, UC Irvine
Soil moisture improvements to evapotranspiration modeling
• Famiglietti, Caroline, UCLA
Error assessment of MODIS near surface meteorological products
• Bogue, Robert, Occidental College
Plant responses to volcanically-elevated CO_2 in two Costa Rican forests
• Spater, Molly, DEVELOP
Linking Managed and Natural Ecosystems through Evapotranspiration
• Kucera, Leah, DEVELOP
Linking Managed and Natural Ecosystems through Evapotranspiration
• Wang, Audrey, Caltech
Model Farm
• Poletti, Alyssa, Caltech
Model Farm

2017
• Verma, Manish, Post-doc
Remote sensing of ET
• Ciochina, Mark, Ph.D. in Department of Geography, UCLA
Tropical nutrient dynamics and canopy reflectance
• Kolus, Hannah, M.S. in School of Earth Sciences & Environmental Sustainability, Northern Arizona University
Multi-scale Synthesis and Terrestrial Model Intercomparison Project

2016
• Lawal, Shakirudeen, Ph.D. in Department of Environmental and Geographical Science, University of Cape Town
Vegetation Modeling for Southern Africa
• Qiu, Bo, Visiting Scholar in Department of Geography, UCLA
Integration of remotely sensed soil moisture and fluorescence to constrain coupled water-carbon cycle
• Wang, Audrey, B.S., Applied Math, Caltech
ECOSTRESS cal/val
• Littles, Raleigh, B.S., UCSB
ECOSTRESS cal/val

• Cooley, Savannah, B.S., Clark University
ECOSTRESS applications to Costa Rica
• Pestana, Steven, B.S., CSU Poly Pomona
ECOSTRESS applications
• Barker, Mark, B.S., Geography, CSUN
ECOSTRESS applications
• Nase, Arash, B.S., Computer Science, UC Irvine
ECOSTRESS software development
• Kim, Sol, B.S., UC Berkeley
Costa Rica drought assessment
• Cavanaugh, Katherine, B.S., Environmental Studies, Gettysburg College
Costa Rica drought assessment
• Heming, Ian, B.S., Computer Science, U. Maryland
Costa Rica drought assessment
• Comer, Samuel David, B.S., Environmental Science, UT Austin
Costa Rica drought assessment
• Reynolds, Margaux, M.A., Industrial Design, ArtCenter College of Design
Drought indicators user experience
• Guckian, Gina Om, B.A., Product Design, ArtCenter College of Design
Drought indicators user experience
• Wong, Kyle, Glendale Community College
Model Farm software development

2015
• Cai, Xitian, Ph.D. in Department of Geosciences, UT-Austin; JPL DRDF/SURP/SC 2013
Integration of Nitrogen Cycle Dynamics into the Noah-MP Land Surface Model: Application for Environmental Modeling and Prediction
• Vickers, Emily, B.S. in Environmental Science, Tulsa Community College
Evapotranspiration from drones
• McDonald, Trevor, B.S. in Department of Geography, UCLA
Evapotranspiration web development
• Kim, Sol, B.S., UC Berkeley
Evapotranspiration web development
• Muñoz, Gus, B.S., M.S., USC
Evapotranspiration web development

2014
• Mallick, Kaniska, Post-doc
Remote sensing of ET
• Halterman, Sarah, Ph.D. in Department of Geography, UCLA; JVSRP
Links Between Long-Term Soil Carbon Storage and Canopy Properties in Tropical Wet Forests
• Deamer, Kacey, M.S. in Annenberg School for Communication and Journalism, USC; JVSRP
Climate science communication
• Vergopolan, Noemi, B.S. in Environmental Engineering, Federal University of Paraná, Brazil; JVSRP 2013
Impact of deforestation in Amazonia on the regional hydrological cycle from remote sensing

2013
• Sok, Malen, B.S. in Computer Science, Cal State Poly Pomona; SIRI, JVSRP 2012-2013
Global land surface modeling with the HyLand dynamic global vegetation model
• Palmer, Claralyse, Agoura High School 2012-2013
The potential of potential evapotranspiration

2012

• O'Connor, Daniel, B.S. in Biology, Occidental College; SIRI 2012 (completed internship)
Expansion and refinement of the Fixation & Uptake of Nitrogen model
• Marquez, Elisha, Eagle Rock High School; Minority Student Programs 2012
Ecohydrology
Awarded the Sister Clarice Lolich Outstanding Student Presentation Award

2011
• Tsao, Nicholas, MSC in Environmental Change and Management, Oxford University 2010-2011
Can vegetation water content be observed globally from satellite remote sensing? An assessment of six products using a combination of radar, microwave and optical data, and implications for water and carbon cycles

2010
• Badgley, Grayson, MSC in Environmental Change and Management, Oxford University 2009-2010
Nutrients from space: Remote sensing nutrient limitation in terrestrial vegetation
Awarded Distinction and Overall Distinction (Coursework, Dissertation and Exams)
• Garonna, Irene, MSC in Environmental Change and Management, Oxford University 2009-2010
Land surface temperature model intercomparison and validation with FLUXNET and MODIS data
Awarded Distinction
• Moore, Scott, MSC in Environmental Change and Management, Oxford University 2009-2010
Charting the subterranean sea: The promise of groundwater storage change assessment from satellite observations and the persistent challenges of water management in Yemen
Awarded Overall Distinction (Coursework, Dissertation and Exams)
• Polhamus, Aaron, MSC in Environmental Change and Management, Oxford University 2009-2010
Sources of bias in latent heat of evaporation model predictions: Should parameterizing resistances be a priority?
Awarded Distinction

2009
• Armanios, Daniel, MSc in Water Science, Policy & Management, Oxford University 2008-2009
A remote sensing framework to gauge sustainability of community water practices: A quantitative diagnostic for integrated water resource management decision support models
• Gadsden, Martin, MSc in Biodiversity, Conservation & Management, Oxford University 2008-2009
Maximising biodiversity conservation benefits of REDD strategies in Peru
Awarded Distinction
• Krishnamurthy, Krishna, MSc in Environmental Change and Management, Oxford University 2008-2009
Mainstreaming disaster risk reduction into development strategies
Awarded Distinction and Best Overall Performance, ECM 2008-2009 (Coursework, Dissertation and Exams)
• Massey, Ashley, MSc in Biodiversity, Conservation & Management, Oxford University 2008-2009
Dragons prevent deforestation? The protection and governance of Kiang West National Park in the Gambia, West Africa
Awarded Distinction and Best Overall Performance, BCM 2008-2009 (Coursework, Dissertation and Exams)
• Plotnykova, Hanna, MSc in Biodiversity, Conservation & Management, Oxford University 2008-2009

GIS-based conservation management for the Ukraine
• Thomas, Matt, MSc in Environmental Change and Management, Oxford University 2008-2009
Impacts of climate change on an ancient woodland
Awarded Distinction
• Wong, Chun (John) Yuen, MSc in Biodiversity, Conservation & Management, Oxford University 2008-2009
Climate change impacts on polar migratory bird routes

2008
• Gibbon, Adam, MSc in Environmental Change & Management, Oxford University 2007-2008
Carbon stocks of the high elevation Andes Mountains: Puna grasslands and upper tropical cloud forests of Manu National Park, Peru
Awarded Distinction and Best Overall Performance, ECM 2007-2008 (Coursework, Dissertation and Exams)
• MacDonald, Ewan, MSc in Environmental Change & Management, Oxford University 2007-2008
Evaluating measures of conservation success: The case study of Nantu Nature Reserve, Sulawesi
Awarded Distinction
• Tan, Su-Yin, MSc in Environmental Change & Management, Oxford University 2007-2008
Modelling nitrogen uptake in temperate and tropical forests
Awarded Best Presentation, Dissertation Proposal

2007
• Blandford, Rebecca, MSc in Environmental Change & Management, Oxford University 2006-2007
An investigation of the temporal dynamics of self-organised vegetation patterns in a semi-arid ecosystem
Awarded Distinction and Best Overall Dissertation, ECM 2006-2007

PROFESSIONAL EXPERIENCE
• **Science Lead** (2021 – current)
Hydrosat, Inc.
• **Presidential Fellow of Ecosystem Science** (2021 – current)
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