

Curriculum Vitae: Yannis G. Dialynas, Ph.D.

Postdoctoral Fellow, NASA Earth and Space Science Fellow

University of California, Irvine

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Education

Georgia Institute of Technology, Water Resources & Hydrology, Ph.D., Jan. 2017

Georgia Institute of Technology, Civil Engineering, M.Sc., Aug. 2013

National Technical University of Athens, Civil Engineering, Diploma, Mar. 2011

Honors & Awards

Co-author in the U.S. Global Change Research Program's 2nd State of the Carbon Cycle Report, 2018

(www.carboncyclescience.us/state-carbon-cycle-report-soccr)

NASA Earth and Space Science Fellowship, 2016

Gerondelis Foundation Grant, 2016

Chi Epsilon, 2014

D. Thomaidis Award, 2011 (NTUA, undergraduate speaker at the 2010 European Geosciences Union General Assembly)

In the News

"High-Res Model Explains Role of Erosion in Carbon Budgets" National Science Foundation News (NSF Science360 Headlines, June 2016)

"Climate Change Research" Newspaper Patris, Greece, March 2017

"Significant Research Findings with the Contribution of a Cretan Scientist" Newspaper CretaLive, Greece, 03/27/17

Research Grants

NASA NESSF Program (3-yr Award)

Professional Experience

University of California, Irvine (Postdoctoral Fellow), May 2017 – present

Georgia Institute of Technology (Postdoctoral Fellow), Jan. 2017 – May 2017

Georgia Institute of Technology (NASA Earth and Space Science Fellow), Sep. 2016 – May 2017

Georgia Institute of Technology (Research Assistant), Aug. 2011 – Jan. 2017

NASA GPM Mission, IPHEX Ground Validation Campaign (Field Participant), NC, May 2014

NASA GPM Mission, IFloodS Ground Validation Campaign (Field Participant), IA, May 2013

Georgia Water Resources Institute (Research Assistant), Aug. 2011 – Dec. 2012

Dialynas S.A. - Environmental Technology (Civil Engineering Assistant), Greece, Mar. 2011 – Aug. 2011

Yannis G. Dialynas, Ph.D.

National Technical University of Athens (Research Assistant), Mar. 2010 – Mar. 2011

Professional Service

Professional Affiliations and Committees

American Geophysical Union Ecohydrology Technical Committee, Invited Member, since 2016

Technical Chamber of Greece, Registered Engineer since 2011

American Geophysical Union (AGU), Member since 2011

American Society of Civil Engineers (ASCE), Member since 2011 (Elected Associate Member)

European Geosciences Union (EGU), Member since 2010

International Commission on Statistical Hydrology - International Association of Hydrological Sciences (ICSH - IAHS), Member since 2013

Reviewer

Water Recourses Research, Hydrology and Earth System Sciences, Land Degradation & Development, Environmental Modelling and Software, Journal of Geophysical Research Biogeosciences, Atmosphere, Water, Hydrological Sciences Journal

Invited Talks

1. **Dialynas, Y. G.**, Hydrologic Controls on Critical Zone Processes and Soil-atmosphere CO₂ Exchange at the Watershed Scale. Dep. of Civil and Environmental Engineering, University of Houston, TX, USA, Mar. 2018.
2. **Dialynas, Y. G.**, Hydrologic Controls on Critical Zone Processes and Soil-atmosphere CO₂ Exchange at the Watershed Scale. Dep. of Civil and Materials Engineering, University of Illinois, Chicago, IL, USA, Jan. 2018.
3. **Dialynas, Y. G.**, Hydrologic Controls on Critical Zone Processes and Soil-atmosphere CO₂ Exchange in Diverse Watersheds. Dep. of Civil & Environmental Engineering, University of Cyprus, Cyprus, Nov. 2017.
4. **Dialynas, Y. G.**, Hydrologically-driven Soil Erosion and Soil-atmosphere CO₂ Exchange in Diverse Landscapes and Critical Zone Response to Changing Climate, Dep. of Soil Science, University of Wisconsin-Madison, WI, USA, Oct. 2017.
5. **Dialynas, Y. G.**, Hydrologically driven Landslide Hazard Prediction and Implications of Land Surface Processes and Management Practices to Climate Change Risks. Dep. of Civil & Environmental Engineering, University of Maryland, MD, USA, Mar. 2017.
6. **Dialynas, Y. G.**, Influence of Coupled Hydrologic and Geomorphic Processes on the Terrestrial Carbon Cycle. Dep. of Civil & Environmental Engineering, University of California, Irvine, CA, USA, Feb. 2017.
7. **Dialynas, Y. G.**, Influence of Coupled Hydro-Geomorphic Processes on the Terrestrial Carbon Cycle. Dep. of Civil & Environmental Engineering, Rowan University, NJ, USA, Feb. 2017.
8. **Dialynas, Y. G.**, Topographic Variability and the Influence of Erosion on the Carbon Cycle in a Degraded Landscape at the Calhoun Critical Zone Observatory. Intensively Managed Landscapes Critical Zone Observatory Science Meeting (invited by Prof. T. Papanicolaou), Sep. 2016.

Publications

Refereed Publications

1. Lajtha, K., V. Bailey, K. McFarlane, D. Bachelet, R. Abramoff, D. Angers, S. A. Billings, D. Cerkowniak, Y. G. **Dialynas**, N. French, S. Frey, N. Gurwick, J. Harden, J. M. F. Johnson, K. Johnson, J. Lehmann, S. Liu, B. McConkey, U. Mishra, S. Ollinger, D. Paré, K. Paustian, F. Paz, D. deB. Richter, S. M. Schaeffer, J. Schimel, C. Shaw, J. Tang, K. Todd-Brown, C. Trettin, M. Waldrop, T. Whitman, and K. Wickland. 2nd State of the Carbon Cycle Report (SOCCR-2), Chapter 12: Soils. U.S. Carbon Cycle Science Program, Carbon Cycle Interagency Working Group (U.S. Global Change Research Program), www.carboncyclescience.us/state-carbon-cycle-report-soccr (in review; to be published in 2018)
2. **Dialynas**, Y. G., and R. L. Bras, 2018. Hydro-geomorphic Behavior of Contrasting Tropical Landscapes and Critical Zone Response to Changing Climate. Earth Surface Processes and Landforms (in revision)
3. Baba, A., C. Tsatsanifos, F. El Gohary, J. Palerm, S. Khan, S. A. Mahmoudian, A. T. Ahmed, G. Tayfur, Y. G. **Dialynas**, and A. N. Angelakis, 2018. Developments in water dams and water harvesting systems throughout history in different civilizations. Int. J Hydro, 2(2), 155–171, DOI:10.15406/ijh.2018.02.00064
4. Bastola, S., Y. G. **Dialynas**, R. L. Bras, L. V. Noto, and E. Istanbuluoglu, 2018. The role of vegetation on gully erosion stabilization at a severely degraded landscape: A case study from Calhoun Experimental Critical Zone Observatory. Geomorphology, <https://doi.org/10.1016/j.geomorph.2017.12.032>
5. Noto, L. V., S. Bastola, Y. G. **Dialynas**, E. Arnone, and R. L. Bras, 2017. Integration of Fuzzy Logic and Image Analysis for the Detection of Gullies in the Calhoun Critical Zone Observatory Using Airborne LiDAR Data. ISPRS Journal of Photogrammetry and Remote Sensing, 126, 209-224, doi:<http://dx.doi.org/10.1016/j.isprsjprs.2017.02.013>
6. **Dialynas**, Y. G., R. L. Bras, and D. deB. Richter, 2017. Hydro-geomorphic Perturbations on the Soil-atmosphere CO₂ Exchange: How (Un)certain Are Our Balances? Water Resources Research, 53, 1664-1682, doi:10.1002/2016WR019411
7. **Dialynas**, Y. G., S. Bastola., R. L. Bras, E. Marin-Spiotta, W. L. Silver, E. Arnone, and L. V. Noto, 2016. Impact of Hydrologically Driven Hillslope Erosion and Landslide Occurrence on Soil Organic Carbon Dynamics in Tropical Watersheds. Water Resources Research, 52(11), 8895-8919, doi: 10.1002/2016WR018925
8. Papalexiou, S. M., Y. G. **Dialynas**, and S. Grimaldi, 2016. Hershfield Factor Revisited: Correcting Annual Maximum Precipitation. Journal of Hydrology, 542, 884-895, <http://dx.doi.org/10.1016/j.jhydrol.2016.09.058>.
9. **Dialynas**, Y. G., S. Bastola., R. L. Bras, S. A. Billings, D. Markewitz, and D. deB. Richter, 2016. Topographic Variability and the Influence of Soil Erosion on the Carbon Cycle. Global Biogeochemical Cycles, 30(5), 644-660, doi: 10.1002/2015GB005302.
10. Arnone, E., Y. G. **Dialynas**, L. V. Noto, and R. L. Bras, 2016. Accounting for Soils Parameter Uncertainty in a Physically-Based and Distributed Approach for Rainfall-Triggered Landslides. Hydrological Processes, 30(6), 927-944, doi: 10.1002/hyp.10609.
11. Arnone, E., Y. G. **Dialynas**, L. V. Noto, and R. L. Bras, 2014. Parameter Uncertainty in Shallow Rainfall-Triggered Landslide Modeling at Basin Scale: A Probabilistic Approach. Procedia Earth and Planetary Science, 9, 101-111, doi:10.1016/j.proeps.2014.06.003.

12. Efstratiadis, A., Y. G. **Dialynas**, S. Kozanis, and D. Koutsoyiannis, 2014. A Multivariate Stochastic Model for the Generation of Synthetic Time Series at Multiple Time Scales Reproducing Long-term Persistence. Environmental Modelling and Software, 62, 139–152, doi:10.1016/j.envsoft.2014.08.017.

Other Publications

1. **Dialynas**, Y. G., 2017. Influence of Linked Hydrologic and Geomorphic Processes on the Terrestrial Carbon Cycle. Doctorate thesis, 234 pp., School of Civil and Environmental Engineering, Georgia Institute of Technology (<https://smartech.gatech.edu/xmlui/handle/1853/58233>)
2. Georgakakos, A. P., and M. Kistenmacher, 2012. Contr. Authors: H. Yao, C.-J. Chen, R. Kim, Y. **Dialynas**, C. Braneon, Unimpaired Flow Assessment for the Apalachicola-Chattahoochee-Flint River Basin. Technical Report Draft, prepared for the ACF Stakeholders (<http://acfstakeholders.org/>)
3. **Dialynas**, Y., 2011. A computer system for the multivariate stochastic disaggregation of monthly into daily hydrological time series. Diploma thesis, 337 pp., Dept. of Water Resources & Environmental Engineering, National Technical University of Athens (<http://itia.ntua.gr/en/docinfo/1142/>)

Conference Proceedings

Conference Talks

1. **Dialynas**, Y. G., E. Fofoula-Georgiou, W. E. Dietrich, and R. L. Bras, A Dynamic Hydrology-Critical Zone Framework for Rainfall-triggered Landslide Hazard Prediction, American Geophysical Union Fall Meeting, Abstract EP52B-05, New Orleans, LA, Dec. 11-15, 2017.
2. Bras, R. L., Y. G. **Dialynas**, and D. deB. Richter, Hydrologic Drivers of Soil Organic Carbon Erosion and Burial: Insights from a Spatially-explicit Model of a Degraded Landscape at the Calhoun Critical Zone Observatory, American Geophysical Union Fall Meeting, New Orleans, Abstract H44G-04, LA, Dec. 11-15, 2017 (*presenting author in bold*).
3. **Dialynas**, Y. G., E. Fofoula-Georgiou, W. E. Dietrich, and R. L. Bras, A dynamic hydrology-critical zone predictive framework for rainfall-triggered landslide hazards in a changing climate, Gilbert Club Annual Meeting, LA, Dec. 16, 2017.
4. **Dialynas**, Y. G., and R. L. Bras, Influence of Climate Change on the Evolution of Contrasting Tropical Landscapes in the Luquillo Critical Zone Observatory, American Geophysical Union Fall Meeting, Abstract H51N-08, San Francisco, CA, Dec. 12-16, 2016.
5. Bras, R. L., Y. G. **Dialynas**, S. A. Billings, D. Richter, and D. Markewitz, The Dependence on Topography of the Influence of Soil Erosion and Deposition on the Carbon Cycle at the Calhoun Critical Zone Observatory, American Geophysical Union Fall Meeting, Abstract H52C-04, San Francisco, CA, Dec. 14-18, 2015 (*presenting author in bold*).
6. Arnone, E., L. V. Noto, Y. G. **Dialynas**, D. Caracciolo, and R. L. Bras, A Physically-Based and Distributed Tool for Modeling the Hydrological and Mechanical Processes of Shallow Landslides, American Geophysical Union Fall Meeting, Abstract NH33D-01, San Francisco, CA, Dec. 14-18, 2015.
7. **Dialynas**, Y. G., S. Bastola, S. A. Billings, and R. L. Bras, Assessing the Impact of Landscape Evolution on Carbon Dynamics: A Coupled Physically-Based Modelling Approach, American Geophysical Union Fall Meeting, Abstract H42C-03, San Francisco, CA, Dec. 15-19, 2014.
8. **Dialynas**, Y. G., E. Arnone, L. V. Noto, R. L. Bras, A probabilistic approach for shallow rainfall-triggered landslide modeling at basin scale. A case study in the Luquillo Forest, Puerto Rico, American Geophysical Union Fall Meeting, Abstract NH32A-06, San Francisco, CA, Dec. 09-13, 2013.
9. **Dialynas**, Y., P. Kossieris, K. Kyriakidis, A. Lykou, Y. Markonis, C. Pappas, S.M. Papalexioiu, and D. Koutsoyiannis, Optimal infilling of missing values in hydrometeorological time series, European Geosciences

Union General Assembly 2010, Geophysical Research Abstracts, Vol. 12, Vienna, EGU2010-9702, European Geosciences Union, 2010.

Conference Poster Presentations

10. Bastola, S., Y. G. **Dialynas**, R. L. Bras, L. V. Noto, and E. Istanbuluoglu, The role of vegetation on gully stabilization at a severely degraded landscape: a case study from Calhoun experimental critical zone observatory, American Geophysical Union Fall Meeting, Abstract H53E-1751, San Francisco, CA, Dec. 12-16, 2016.
11. Papalexiou, S. M., Y. G. **Dialynas**, and C. Pappas, How extreme is extreme hourly precipitation? European Geosciences Union General Assembly 2016, EGU2016-13406, Vienna, Apr. 17-22, 2016.
12. **Dialynas**, Y. G., S. Bastola, R. L. Bras, E. Marin-Spiotta, W. Silver, E. Arnone, and L. V. Noto, Influence of Soil Erosion and Landslide Occurrence on Soil Organic Carbon Storage and Loss in the Luquillo Critical Zone Observatory, Puerto Rico, American Geophysical Union Fall Meeting, Abstract EP23C-0987, San Francisco, CA, Dec. 14-18, 2015.
13. Noto, L. V., S. Bastola, Y. G. **Dialynas**, and R. L. Bras, Integration of fuzzy logic and image analysis for the detection of gullies in the Calhoun critical zone observatory using airborne LiDAR data, American Geophysical Union Fall Meeting, Abstract H51B-1365, San Francisco, CA, Dec. 14-18, 2015.
14. Bastola, S., Y. G. **Dialynas**, R. L. Bras, E. Arnone, and L. V. Noto, Integration of a Physically based Distributed Hydrological Model with a Model of Carbon and Nitrogen Cycling: A Case Study at the Luquillo Critical Zone Observatory, Puerto Rico, American Geophysical Union Fall Meeting, Abstract H13C-1541, San Francisco, CA, Dec. 14-18, 2015.
15. Papalexiou, S. M., Y. **Dialynas**, S. Grimaldi, Explorations on the Hershfield Factor, *European Geosciences Union General Assembly 2015, Geophysical Research Abstracts, Vol. 17*, Vienna, EGU2015-10492, European Geosciences Union, 2015.
16. **Dialynas**, Y. G., S. Bastola, R. L. Bras, S. A. Billings, D. Richter, D. Markewitz, A Coupled Spatially Explicit Modelling Approach to Assess the Influence of Soil Erosion and Deposition on the Redistribution of Soil Organic Carbon at the Watershed Scale, 2nd Annual Southeastern Biogeochemistry Symposium, Atlanta, GA, Mar. 28-29, 2015.
17. Bastola, S., Y. G. **Dialynas**, E. Arnone, and R. L. Bras, Evaluation of fine soil moisture data from the IFloodS (NASA GPM) Ground Validation campaign using a fully-distributed ecohydrological model, American Geophysical Union Fall Meeting, Abstract H13B-1104, San Francisco, CA, Dec. 15-19, 2014.
18. **Dialynas**, Y. G., and S. M. Papalexiou, and The Hershfield Factor Revisited, American Geophysical Union Fall Meeting, Abstract H53G-0935, San Francisco, CA, Dec. 15-19, 2014.
19. Papalexiou, S. M., Y. **Dialynas**, S. Grimaldi, Explorations on the Hershfield Factor, 5th STAHY International Workshop, International Association of Hydrological Sciences, Abu Dhabi, United Arab Emirates, 2014
20. Arnone, E., Y. G. **Dialynas**, L. V. Noto, R. L. Bras, Effect of DEM resolution on rainfall-triggered landslide modeling within a triangulated network-based model. A case study in the Luquillo Forest, Puerto Rico, American Geophysical Union Fall Meeting, Abstract NH23A-1522, San Francisco, CA, Dec. 09-13, 2013
21. Venediki, A., S. Giannoulis, C. Ioannou, L. Malatesta, G. Theodoropoulos, G. Tsekouras, Y. **Dialynas**, S.M. Papalexiou, A. Efstratiadis, and D. Koutsoyiannis, The Castalia stochastic generator and its applications to multivariate disaggregation of hydro-meteorological processes, *European Geosciences Union General Assembly 2013, Geophysical Research Abstracts, Vol. 15*, Vienna, EGU2013-11542, European Geosciences Union, 2013
22. **Dialynas**, Y., S. Kozanis, and D. Koutsoyiannis, A computer system for the stochastic disaggregation of monthly into daily hydrological time series as part of a three-level multivariate scheme, *European Geosciences Union General Assembly 2011, Geophysical Research Abstracts, Vol. 13*, Vienna, EGU2011-290, European Geosciences Union, 2011