

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

Postdoctoral Fellow, NASA Earth and Space Science Fellow

University of California, Irvine

Engineering Hall 5400, Irvine, CA 92697

dialynas@uci.edu

[www.prism.gatech.edu/~idialynas3](http://www.prism.gatech.edu/~idialynas3)



## 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. Carbon Cycle Science Program's 2<sup>nd</sup> State of the Carbon Cycle Report

([www.carboncyclescience.us/state-carbon-cycle-report-soccr](http://www.carboncyclescience.us/state-carbon-cycle-report-soccr))

NASA Earth and Space Science Fellowship, 2016

Gerondelis Foundation Grant (\$5,000)

Chi Epsilon

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

## 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 Contributions of a Greek Scientist"* Newspaper CretaLive, Greece, 03/27/17

## Proposals

NASA NESSF Program (\$120,000 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

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

Yannis G. Dialynas

## Professional Service

### Professional Affiliations and Committees

American Geophysical Union Ecohydrology Technical Committee, Member, 2017

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 Resources Research, Hydrology and Earth System Sciences, Environmental Modelling and Software, Journal of Geophysical Research Biogeosciences, Water, Atmosphere, Hydrological Sciences Journal

## Invited Talks

1. **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, Mar. 2017.
2. **Dialynas, Y. G.**, Influence of Coupled Hydrologic and Geomorphic Processes on the Terrestrial Carbon Cycle. Dep. of Civil & Environmental Engineering, University of California, Irvine, Feb. 2017.
3. **Dialynas, Y. G.**, Influence of Coupled Hydro-Geomorphic Processes on the Terrestrial Carbon Cycle. Dep. of Civil & Environmental Engineering, Rowan University, Feb. 2017.
4. **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. Cerkowski, 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. 2<sup>nd</sup> 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](http://www.carboncyclescience.us/state-carbon-cycle-report-soccr) (in review; to be published in Dec. 2017)
2. 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, 2017. Evolution and Management of the Water Dams Through the Centuries. International Journal of Water Resources Development (in review)

3. **Dialynas**, Y. G., and R. L. Bras, 2017. Evolution of Contrasting Tropical Landscapes and Critical Zone Response to Changing Climate. Earth Surface Processes and Landforms (in revision)
4. 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>
5. **Dialynas**, Y. G., R. L. Bras, and D. deB. Richter, 2017. Hydro-geomorphic Perturbations on the Soil-atmosphere CO<sub>2</sub> Exchange: How (Un)certain Are Our Balances? Water Resources Research, 53, doi:10.1002/2016WR019411
6. **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
7. 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>.
8. **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.
9. 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.
10. 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.
11. 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., 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.
2. 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*).
3. 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.
4. **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.
5. **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.
6. **Dialynas**, Y., P. Kossieris, K. Kyriakidis, A. Lykou, Y. Markonis, C. Pappas, S.M. Papalexiou, 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

7. 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.
8. 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.
9. **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.
10. 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.
11. 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.
12. Papalexiou, S. M., Y. G. **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.
13. **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, 2<sup>nd</sup> Annual Southeastern Biogeochemistry Symposium, Atlanta, GA, Mar. 28-29, 2015.

14. 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.
15. **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.
16. Papalexiou, S. M., Y. **Dialynas**, S. Grimaldi, Explorations on the Hershfield Factor, 5<sup>th</sup> STAHY International Workshop, International Association of Hydrological Sciences, Abu Dhabi, United Arab Emirates, 2014
17. 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
18. 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
19. **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