

Rodrigo Vargas

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(a) Professional Preparation

Universidad Nacional Autónoma de México, Mexico City, Mexico, Biology Licenciatura, 2002
University of California, Riverside, CA, USA, Environmental Sciences Ph.D., 2007
University of California, Berkeley, CA, USA, Ecosystem Ecology, Post-doctoral Research, 2009

(b) Appointments

2012 – present Associate Professor, Plant and Soil Sciences, University of Delaware
2012 – 2017 Assistant Professor, Plant and Soil Sciences, University of Delaware
2015 – present Adjunct Professor, Geography, University of Delaware
2012 - present Faculty Affiliate of Delaware Environmental Institute
2012 - 2015 Adjunct Professor, Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE)
11/2011 - 7/2012 Visiting Professor, Stanford University
2009 - 2012 Assistant Professor, Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE)

(c) Research interests

Ecosystem ecology, global environmental change, biogeochemical cycles, soil-plant-atmosphere interactions, big data, blue carbon, extreme events, environmental networks

(d) Honors and Awards

2018 Mentorship/Advancement award of the Hispanic/Latino Graduate Student Association (HLGSA) at the University of Delaware
2018 Mexican Carbon Program award
2015 Editors' Citations for Excellence in Refereeing for JGR-Biogeosciences
2014 Exemplary Achievement in Community Service, International Interdisciplinary Initiatives Lecture Series, University of Delaware
2013-2017 *Investigador Nacional* Level 2 (SNI-CONACyT; Mexican recognition for scientific productivity)
2009-2012 *Investigador Nacional* Level 1 (SNI-CONACyT; Mexican recognition for scientific productivity)
2006 Best student paper of Division S-7 at the Soil Science Society of America (SSSA) annual meeting
2005 Mildred E. Mathias graduate student award (University of California Natural Reserve System)
2004- 2006 University of California Kearney Foundation Fellowship
2002-2007 *Consejo Nacional de Ciencia y Tecnología* (CONACyT) Scholarship for Doctoral studies
2002-2005 Fulbright Scholarship for Doctoral studies
2002 *Mención Honorífica* (Honorable Mention) for Licenciatura degree
2002 PROBETEL Scholarship (undergraduate fellowship at Universidad Nacional Autónoma de México [UNAM])
2001 International exchange Award to study at the University of Waterloo, Canada
1998-1999 UCMEXUS-CONACyT Scholarship (undergraduate fellowship at Universidad Nacional Autónoma de México [UNAM])

(e) Publications

Total citations = 5130; h-index = 36; i10 index = 66

[Google Scholar Statistics](#) (revised on 9/2018)

Total publications (102); * denotes Student; ** denotes Postdoc

Example of ten recent publications

- Villarreal S***, **Guevara M***, Alcaraz-Segura D, Brunsell NA, Hayes D, Loescher HW, **Vargas R** (2018) Ecosystem functional diversity and the representativeness of environmental networks across the conterminous United States. *Agricultural and Forest Meteorology*. 262:423-433. <https://doi.org/10.1016/j.agrformet.2018.07.016>
- Vargas R**, Sánchez-Cañete E, Serrano-Ortiz P, Curiel Yuste J, Domingo F, López-Ballesteros A, Oyonarte C (2018) Hot-moments of CO₂ fluxes in a water-limited grassland. *Soil Systems*. 2:0047. <https://doi.org/10.3390/soilsystems2030047>
- Guevara M***, Olmedo GF, **Stell E***, Yigini Y, Agular Y, Arellano C, Arevalo G, Arroyo C, Bustamante N, Cruz-Gaistardo C, Hernandez J, Ibelles A, Mendoza F, Osorio R, Ramos I, Rey J, Rodriguez J, Roopnarine R, Rosales A, Rosales K, Schulz G, Spence A, Vasques G, Loayza V, Rivera R, Encina A, Bolivar A, Olivera C, Bunning S, Vargas RR, **Vargas R** (2018) No Silver Bullet for Digital Soil Mapping: Country-specific Soil Organic Carbon Estimates across Latin America. *SOIL*. 4:173-193. <https://doi.org/10.5194/soil-2017-40>
- Bond-Lamberty B, Bailey VL, Chen M, Gough CM, **Vargas R**. Globally rising soil heterotrophic respiration over recent decades (2018) *Nature* 560:80-83 <https://doi.org/10.1038/s41586-018-0358-x>
- Dietze MC, Fox A, Beck-Johnson L, Betancourt JL, Hooten MB, Jarnevich CS, Keitt T, Kenney MA, Laney CM, Larsen LG, Loescher HW, Lunch CK, Pijanowski B, Randerson JT, Read EK, Tredennick AT, **Vargas R**, Weathers KC, White EP (2018) Iterative near-term ecological forecasting: Needs, opportunities, and challenges. *Proceedings of the National Academy of Sciences*. 115(7):1424-1432. <https://doi.org/10.1073/pnas.1710231115>
- Barba J****, **Cueva A***, Bahn M, Barron-Gafford GA, Bond-Lamberty B, Hanson PJ, **Jaimes A****, Kulmala L, Pumpanen J, Scott RL, Wohlfahrt G, **Vargas R** (2018) Comparing ecosystem and soil respiration: a synthesis of tower-based and soil measurements. *Agricultural and Forest Meteorology*. 249:434-443. <https://doi.org/10.1016/j.agrformet.2017.10.028>
- Petrakis S***, **Barba J****, Bond-Lamberty B, **Vargas R** (2018) Using greenhouse gas fluxes to define soil functional types. *Plant and Soil*. 423(1-2):285-294 <https://doi.org/10.1007/s11104-017-3506-4>
- Harden J, Hugelius G, Ahlström A, Blankinship J, Bond-Lamberty B, Lawrence C, Loisel J, Malhotra A, Jackson R, Ogle S, Phillips C, Ryals R, Todd-Brown K, **Vargas R**, Vergara S, Cotrufo F, Keiluweit M, Heckman K, Crow S, Silver W, DeLonge M, Nave L (2018) Networking our science to characterize the state, vulnerabilities, and management opportunities of soil organic matter. *Global Change Biology*. 24:e705–e718 <https://doi.org/10.1111/gcb.13896>
- Warner D***, **Villarreal S***, **McWilliams K***, Inamdar S, **Vargas R** (2017) Carbon dioxide and methane fluxes from tree stems, coarse woody debris, and soils in an upland temperate forest. *Ecosystems*. 20:1205-1216. <https://doi.org/10.1007/s10021-016-0106-8>
- Phillips CL, Bond-Lamberty B, Desai AR, Lavoie M, Risk D, Tang J, Todd-Brown K, **Vargas R** (2017) The value of soil respiration measurements for interpreting and modeling terrestrial carbon cycling. *Plant and Soil*. 413:1-25 (Marschner Review). <https://doi.org/10.1007/s11104-016-3084-x>

(f) Career funded research grants

Funding to Vargas as PI: \$3,795,639

Funding to Vargas as Co-PI: \$11,378,942

Total funding to Vargas: \$15,174,581

(d) Presentations and Outreach

- Invited speaker for **23** international and **25** national presentations.
- Author or co-author of **>100** presentations at professional society meetings (e.g., American Geophysical Union, Ecological Society of America, North American Carbon Program).
- Presenter at outreach and extension events (4 national, 1 international)

(e) Synergistic Activities

- Associate Editor (*JGR-Biogeosciences* 2016-present); Editorial Advisory Board (*Global Change Biology* 2011-2017); Special Issue Editor (*Soil Systems* 2018-present)
- Scientific committee member for: United States National Committee on Soil Science (*National Academy of Sciences*), North American Forestry Commission (NAFC), Mexican Carbon Program (PMC), North American Carbon Program (NACP); NASA-Carbon Monitoring Systems; MexFlux (Mexican eddy covariance network); AmeriFlux (eddy covariance network of the Americas); Science and the Arts in the Earth and Environmental Science Cluster of *The Franklin Institute*
- Co-Chair of the committee meeting for the 5th North American Carbon Program (NACP) meeting; Organizing committee member for the 4th and 6th NACP meetings, and AGU meeting of the Americas (Mexico 2013); Convener and Session Chair in AGU fall meetings (2008-2013, 2016, 2018).
- Chapter co-leader for the second State of the Carbon Cycle Report (SOCCR-2; 2016-present), and contributing author for FAO's "Status of the World's Soil Resources 2015"