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Ecosystem Sciences Division
Dept. of Environmental Science,
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RESEARCH INTERESTS

Biogeochemistry, nutrient cycling, soil organic matter dynamics, tropical forest ecology, land-use change, plant-soil-atmosphere interactions, hydrology, isotopic and ¹³C-NMR applications to soil science and ecosystem ecology, interdisciplinary solutions to environmental problems

EDUCATION

- 1999-2006 PhD. University of California, Berkeley, CA. Thesis: *“Above- and belowground carbon dynamics during reforestation of abandoned tropical pastures: Controls on soil carbon turnover.”*
- 1993-1997 B.S. Biology, Minor in Political Science, Stanford University, Stanford, CA.
12/2005 Mineralogical Society of America/Geochemical Society. Short Course, Berkeley, CA: *“Molecular Geomicrobiology: From Genes to Ecosystems.”*
- 6-8/2005 Organization for Tropical Studies, Costa Rica. Field Course: *“Tropical Biology: An Ecological Approach.”*

EXPERIENCE

- 1999-2006 Graduate Student Researcher. University of California, Berkeley.
2005 Graduate Student Instructor and Guest Lecturer. University of California, Berkeley.
- 2003-2005 Undergraduate Research Mentor. University of California, Berkeley.
1997-1999 Research Assistant. Stanford University and University of California, Berkeley.
- 1997-1998 Teaching Assistant. Stanford University.
1994-1997 Undergraduate Research Assistant. Stanford University.

FELLOWSHIPS AND AWARDS

- 2005 Marvin L. Wesely Distinguished Graduate Research Environmental Fellow Award, Department of Energy
<http://gonzalo.er.anl.gov/GCEP/Information/2005MLWAward.html>
- 2005 NSF Graduate Student Travel Award
- 2001-2005 Graduate Research Environmental Fellowship, Department of Energy
- 2001 James P. Bennet Agricultural Fund ESPM Departmental Fellowship
- 2001 NSF Graduate Student Fellowship Honorable Mention
- 1999 Arthur H. and Karen Nelson ESPM Departmental Fellowship
- 1995-1997 Academic Excellence Awards, Chicano/Latino Community

RESEARCH GRANTS

- 2004 *“Stabilization of soil organic matter: land use, erosion and burial.”* High Field Magnetic Resonance Facility, Environmental Molecular Sciences Lab, Pacific Northwest National Laboratory (with M.S. Torn and A.A. Berhe)
- 2003-2005 *“Tropical reforestation: Using radiocarbon in the measurement and modeling of belowground carbon stabilization.”* University Collaborative Research Mini-Grant, Center for Accelerated Mass Spectrometry, Lawrence Livermore National Laboratory, \$9696

PUBLICATIONS

- Schneider, S.H. and **E. Marín-Spiotta**. 1999. Review of Environmental Literacy Primer by Frank Golley. *Trends in Ecology and Evolution* 14: 205-206.
- Silver, W.L., **E. Marín-Spiotta**, and A. Lugo. 2000. The Caribbean region. In: A.D. Brown and M. Kappelle, eds. *Neotropical Montane Cloud Forests*. IUCN, Netherlands.
- Marín-Spiotta, E.**, R. Ostertag and W.L. Silver. Changes in forest structure, biomass and species composition during 80 years of tropical reforestation. (In prep.)
- Marín-Spiotta, E.**, W.L. Silver and R. Ostertag. Soil carbon gain and loss during reforestation of tropical pastures. (In prep.)
- Marín-Spiotta, E.**, C. Swanston, W.L. Silver and M.S. Torn. Land use effects on soil carbon fractions. (In prep.)
- Marín-Spiotta, E.**, C. Swanston, W.L. Silver, M.S. Torn and S.D. Burton. Chemical and physical controls on soil carbon stabilization during tropical reforestation. (In prep.)
- Ostertag, R., **E. Marín-Spiotta** and W.L. Silver. Litter decomposition and soil carbon storage along a secondary forest chronosequence in Puerto Rico. (In prep.)
- Huber-Sannwald, E., ... **E. Marín-Spiotta** et al. Chapter on Tropical Forests. State of the Carbon Cycle Report. Synthesis and Assessment Report 2.2 of the U.S. Climate Change Science Program. (In prep.)

RESEARCH PRESENTATIONS AND INVITED TALKS

- 2006 Ecological Society of America. Mérida, Mexico: *“Changes in above- and belowground biomass and floristic composition in secondary forests on abandoned pastures in Puerto Rico.”*
- 2005 2nd International Conference on Mechanisms of Organic Matter Stabilization and Destabilization in Soils. Pacific Grove, CA: *“Physical controls on soil carbon stabilization during tropical reforestation.”*
- 2005 Ecological Society of America. Montréal, Canada: *“Mechanisms of soil carbon storage during tropical reforestation.”*
- 2004 American Geophysical Union. San Francisco, CA: *“Soil carbon stabilization during reforestation of abandoned tropical pastures.”*
- 2004 Ecological Society of America. Portland, OR: *“Soil carbon gain and loss during eighty years of tropical reforestation.”*
- 2004 4th Annual Public Symposium on Ecological Research in Puerto Rico at the University of Puerto Rico. Río Piedras: *“Soil carbon dynamics with reforestation of tropical pastures.”*
- 2003 All Scientists’ Annual Meeting of NSF Long-Term Ecological Research (LTER) Network. Seattle, WA: *“Soil carbon stabilization with reforestation of tropical pastures.”*
- 2003 NSF-LTER site review of LTER-Luquillo. Palmer, PR: *“Soil carbon stabilization in reforested tropical pastures.”*

- 2003 Ecology Group at the University of Puerto Rico. Río Piedras, PR: *"The Application of isotopes to the study of soil organic matter."*
- 2001 Berkeley Atmospheric Sciences Center Symposium. Berkeley, CA: *"Fertilization effects on trace gas production and soil C and N pools in urban grasslands."*

FIELD EXPERIENCE

- 2001-2005 Secondary forests, active pastures and primary forests in Puerto Rico.
- 1999 and 1997 Large-Scale Biosphere Atmosphere Experiment in Amazônia project Tapajós National Forest, Santarém, Brazil.
- 1998 Mangrove surveys in Venezuela
- 1996-1998 Jasper Ridge Biological Preserve, Woodside, CA.

PROFESSIONAL AFFILIATIONS AND SYNERGISTIC ACTIVITIES

American Geophysical Union; Ecological Society of America; Organization for Tropical Studies; Association of Tropical Biology; Reviewer for Soil Science Society of America Journal

PRESENT COLLABORATORS (References available upon request)

Whendee Silver (U.C. Berkeley); Rebecca Ostertag (University of Hawaii, Hilo); Christopher Swanston (Lawrence Livermore National Laboratory); Margaret S. Torn (Lawrence Berkeley National Laboratory); Sarah D. Burton (Pacific Northwest National Laboratory); Ariel Lugo (International Institute of Tropical Forestry)

SPECIAL SKILLS and DIVERSITY LEADERSHIP ACTIVITIES

Languages: Spanish (native), Portuguese (almost fluent), French (proficient)

President, Spanish Student Association (2004-2005), Board Member since 2000

Student Advising Panel Member for Latino/a Association of Graduate Students in Engineering and Science, Black Graduate Engineering and Science Students, and Hispanic Engineers Society, 2005

Member, Latino Graduate Student Association, since 2005

Member, Latino/a Association of Graduate Students in Engineering and Science, since 2004

Coordinator for student performances in international and Latino Culture festivals showcasing diversity of student body (2001-2005)

President, International Undergraduate Community (1996-1997), Advisor (1997-1998)

Volunteer Tutor for Stanford Literacy Improvement Project and Barrio Assistance (1995-1998)

Member, Latin American Student Association (1993-1997)