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**Education**

- 2012 - 2015     **D.Sc. Soil Science**, University of São Paulo, Piracicaba, SP, Brazil.  
 Thesis title: “Soil engineering by macroinvertebrates: controls on soil organic matter storage across land use change”.  
 Advisor: Dr. Carlos C. Cerri.
- 2010 - 2012     **M.S. Bioenergy**, Universidade Estadual de Londrina, Londrina, PR, Brazil.  
 Thesis title: “Methane emissions from Brazilian biodiesel industry”.  
 Advisor: Dr. Ivone Y. Mizubuti.
- 2008 - 2010     **Specialization Course in Biomass Energy Resources**, Universidade Estadual de Santa Cruz, Ilhéus, BA, Brazil.
- 2004 - 2008     **B.S. Agronomy**, Universidade Estadual de Santa Cruz, Ilhéus, BA, Brazil.

**Research Experience**

- 2015 - present     **Post-Doctoral Researcher** – Department of Biology: Colorado State University, Fort Collins, CO, USA.  
 Dr. Diana Wall’s Soil Biodiversity and Ecosystem Functioning Lab.
- 2014 - 2015     **Visiting Scholar** – School of Global Environmental Sustainability and Department of Biology: Colorado State University, Fort Collins, CO, USA.  
 Dr. Diana Wall’s Soil Biodiversity and Ecosystem Functioning Lab.
- 2012 - 2015     **Graduate Research Assistant** – Center for Nuclear Energy in Agriculture: University of São Paulo, Piracicaba, SP, Brazil.  
 Dr. Carlos Cerri’s Environmental Biogeochemistry Lab.
- 2010 - 2012     **Graduate Research Assistant** – Graduate Program in Bioenergy: Universidade Estadual de Londrina, Londrina, PR, Brazil.
- 2007             **Crop Science Research Intern** - Brazilian Corporation of Agricultural Research (EMBRAPA), Petrolina, PE, Brazil.

**Teaching Experience**

- 2019             **Guest Lecturer** – Soil Ecology (SOCR 441).  
 Department of Soil & Crop Sciences, Colorado State University.

- 2019      **Guest Lecturer** – Introduction to Environmental Science (ENV 101).  
Environmental Sciences, Front Range Community College.
- 2017      **Co-Instructor** – Interdisciplinary Seminar: Soil Ecology in the Anthropocene (ECOL592-002).  
Graduate Degree Program in Ecology, Colorado State University.
- 2013      **Graduate Teaching Assistant** – Lab Instructor: Soil Management and Conservation (LSO 660).  
Department of Soil Science, USP, Piracicaba, Brazil.
- 2012      **Graduate Teaching Assistant** – Lab Instructor: Animal Production (ZOO 221).  
Department of Agricultural Science, UEL, Londrina, Brazil.

### Mentoring

- 2016 - 2018      **Abigail Jackson, CSU Senior Honors Thesis**  
Title: “*Water Availability Effects in the Vertical Distribution of Nematode Trophic Groups*”.
- 2015 - 2016      **Eden Senay, High-School STEM Internship Program at CSU**  
Poster presentation at the 2016 Front Range Student Ecology Symposium: “*An Endoparasitic Nematode Hunts a Suitable Host: Exploring the Dominant Grasses from the Shortgrass and Tallgrass Prairies*”
- 2013 - 2014      **Giusti D. Novaes, MBA in Agroenergy, University of São Paulo, Brazil**  
Title: “*Análise de viabilidade econômica da implantação de um laboratório de manutenção de sistemas de injeção diesel em um grupo sucroalcooleiro*”

### Honors

Nominated **International Presidential Fellow** at Colorado State University, 2016-2017.

**Honorable Mention**, Student Poster Presentation, The 2015 Soil Ecology Society Meeting.

### Grants and Fellowships

- 2019      **Co-author**, Invited Pre-proposal: System-Level Predictive Understanding of Microbial Interactive Responses to Experimental Warming and Nitrogen Enrichment.      \_  
US Department of Energy. Funding Opportunity Announcement Number: DE-FOA-0002059 (PIs: Zhou, J., Wall, D.H., Firestone, M.K.)
- 2017-2019      **Co-author**, Research Support: Developing a CSU-Brazil collaboration to explore the soil biodiversity-one health interface and land use change in Amazonia. Office of Vice President for Research, CSU. (PIs: Wall, D.H., Sobral, B.W.)      \$16,896  
\$30,018 in matching funds.

2015-2018	<b>Co-author</b> , Collaborative Research: Water Availability Controls on Above-Belowground Productivity Partitioning: Herbivory versus Plant Response. National Science Foundation. (PIs: Sala, O.E., Wall, D.H.)	\$718,935
2014-2015	<b>Author</b> , Research Fellowship Abroad: Understanding the role of soil (macro)biota in mediating shifts on structural stability and soil organic matter allocation in the land use change for sugarcane production. São Paulo Research Foundation – FAPESP 2013/24982-7.	\$27,520
2012-2015	<b>Author</b> , Programs for Research and Scholarly Excellence Fellowship: Soil engineering by macroinvertebrates: controls on soil organic matter storage across land use change. São Paulo Research Foundation – FAPESP 2012/22510-8.	BR\$50,460
2012-2012	Graduate Fellowship, Graduate Program in Soils and Plant Nutrition, USP.	BR\$8,800
2010-2012	Graduate Fellowship, Graduate Program in Bioenergy, UEL.	BR\$28,800

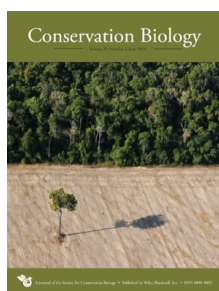
### Refereed Journal Publications

Google Scholar (citations: 372, h-index 12 as of July 2019)

19. **Franco, ALC**; Gherardi, LA; de Tomasel CM; Andriuzzi, WS; Ankrom, KE; Shaw, EA; Bach, EM; Sala, OE; Wall, DH (2019) Drought suppresses soil predators and promotes root herbivores in mesic, but not in xeric grasslands. *Proceedings of the National Academy of Sciences (PNAS)*. 116, 12883-12888; DOI: 10.1073/pnas.1900572116.

*See press release in the CSU SOURCE: <https://source.colostate.edu/new-study-shows-how-climate-change-could-affect-impact-of-roundworms-on-grasslands/>*

17. **Franco, ALC**; Sobral, BW; Silva, ALC; Wall, DH (2018) Amazonian deforestation and soil biodiversity. *Conservation Biology*. 33, 590-600; doi.org/10.1111/cobi.13234.



*Featured in the cover front of the journal's issue and in CSU SOURCE: <https://source.colostate.edu/soil-communities-threatened-by-destruction-instability-of-amazon-forests-new-study-finds/>*

18. Oliveira, DMS; Cherubin, MR; **Franco, ALC**; Santos, AS; Gelain, JG; Dias, NMS; Diniz, TR; Almeida, AN; Feigl, BJ; Davies, CA; Paustian, K; Karlen, DL; Smith, P; Cerri, CC; Cerri, CEP (2019) Is the expansion of sugarcane over pasturelands a sustainable strategy for Brazil's biofuel industry? *Renewable & Sustainable Energy Reviews*. 102, 346-355.

16. **Franco, ALC**; Knox, MA; Andriuzzi, WS; de Tomasel, CM; Sala, OE; Wall, DH (2017) Nematode exclusion and recovery in experimental soil microcosms. *Soil Biology and Biochemistry*, 108, 78-83.
15. **Franco, ALC**; Cherubin, MR; Cerri, CEP; Guimarães, RML; Cerri, CC (2017) Relating the visual soil structure status and the abundance of soil engineering invertebrates across land use change. *Soil & Tillage Research*, 173, 49-52.
14. Cherubin, MR; **Franco, ALC**; Guimarães, RML; Tormena, CA; Cerri, CEP; Karlen, DL; Cerri, CC (2017) Assessing soil structural quality under Brazilian sugarcane expansion areas using Visual Evaluation of Soil Structure (VESS). *Soil & Tillage Research*, 173, 64-74.
13. **Franco, ALC**; Bartz, MLC; Cherubin, MR; Baretta, D; Cerri, CEP; Wall, DH; Fiegl, BJ; Davies, CA; Cerri, CC (2016) Loss of soil (macro)fauna due to the expansion of Brazilian sugarcane acreage. *Science of the Total Environment*, 563-564, 160-168.
12. Cherubin, MR; Karlen, DL; **Franco, ALC**; Cerri, CEP; Davies, C; Tormena, CA; Cerri, CC (2016) Soil quality indexing strategies for evaluating sugarcane expansion in Brazil. *Plos One*, 11, 1-26.
11. Oliveira, DMS; Paustian, K.; Davies, CA; Cherubin, MR; **Franco, ALC**; Cerri, CC; Cerri, CEP (2016) Soil carbon changes in areas undergoing expansion of sugarcane into pastures in south-central Brazil. *Agriculture, Ecosystem & Environment*, 228, 38-48.
10. Cherubin, MR; Karlen, DL; **Franco, ALC**; Tormena, CA; Cerri, CEP; Davies, C; Cerri, CC (2016) Soil physical quality response to sugarcane expansion in Brazil. *Geoderma*, 267, 156-168.
9. Cherubin, MR; **Franco, ALC**; Cerri, CEP; Karlen, DL; Pavinato, PS; Rodrigues, M; Davies, CA; Cerri, CC (2016) Phosphorus pools responses to land-use change for sugarcane expansion in weathered Brazilian soils. *Geoderma*, 265, 27-38.
8. Cherubin, MR; Karlen, DL; **Franco, ALC**; Cerri, CEP; Tormena, CA; Cerri, CC (2016) A Soil Management Assessment Framework (SMAF) evaluation of Brazilian sugarcane expansion on soil quality. *Soil Science Society of America Journal*, 80, 215-226.
7. **Franco, ALC**; Cherubin, MR; Pavinato, PS; Six, J; Cerri, CEP; Davies, CA; Cerri, CC (2015) Soil carbon, nitrogen and phosphorus changes under sugarcane expansion in Brazil. *Science of the Total Environment*, 515-516, 30-38.
6. Cherubin, MR; **Franco, ALC**; Cerri, CEP; Oliveira, DMS; Davies, CA; Cerri, CC (2015) Sugarcane expansion in Brazilian tropical soils - effects of land use change on soil chemical attributes. *Agriculture, Ecosystem & Environment*, 211, 173-184.
5. **Franco, ALC**; Lobo, IP; da Cruz, RS; Teixeira, CMLL; Neto, JAD; Menezes, RS (2013) Biodiesel de microalgas: avanços e desafios. *Química Nova*, 36, 437-448.

4. **Franco, ALC** ; Mizubuti, IY; Azevedo, JAG; Ribeiro, ELD; Pereira, ES; Peixoto, ELT; Ferreira, DMF; Neto, AQD (2013) Fermentação ruminal e produção de metano in vitro de dietas contendo torta de algodão. *Semina-Ciências Agrárias*, 34, 1955-1966.
3. Dórea, JRR; Oliveira, JS; Santos, EM; Zanine, AD; da Silva, TC; Danes, MDC; de Gouvea, VN; Mizubuti, IY; **Franco, ALC** (2013) Cinética de degradação ruminal de silagem de capim-efefante com diferentes níveis de jaca e raspa de mandioca. *Semina-Ciências Agrárias*, 34, 2437-2446.
2. Dórea, JRR; Pereira, LGR; Pereira, Ferreira, AL, L.F.P.; da Silva, TC; Azevedo, JAG; de Gouvea, VN; **Franco, ALC** (2013) Composição bromatológica e dinâmica de fermentação da silagem de jaca. *Semina-Ciências Agrárias*, 34, 1967-1975.
1. Mizubuti, IY; Ribeiro, ELD; Pereira, ES; Pinto, AP; **Franco, ALC**; Syperreck, MA; Dórea, JRR; Cunha, GE; Capelari, MGM; Muniz, EB (2011) Cinética de fermentação ruminal in vitro de alguns co-produtos gerados na cadeia produtiva do biodiesel pela técnica de produção de gás. *Semina-Ciências Agrárias*, 32, 2021-2028.

#### Publications under peer review

1. Phillips, H *et al.* (2019) Global distribution of earthworm diversity. *Science*. Under revision.
2. Andriuzzi, WS; **Franco, ALC**; Ankrom, KE; Cui, S; de Tomasel CM; Guan, P; Gherardi, LA; Sala, OE; Wall, DH (2019) Body size structure of soil fauna along geographic and temporal gradients of precipitation in grasslands. *Soil Biology & Biochemistry*. Under revision.

#### Conference Presentations

**Franco, ALC**; de Tomasel CM; Andriuzzi, WS; Ankrom, KE; Bach, EM; Gherardi, LA; Sala, OE; Wall, DH (2019) Root herbivory controls the effects of precipitation on above-belowground grass biomass partitioning: a greenhouse study. *Soil Ecology Society Biennial Meeting*, Toledo, OH, USA.

**Franco, ALC**; Gherardi, LA; de Tomasel CM; Andriuzzi, WS; Ankrom, KE; Bach, EM; Sala, OE; Wall, DH (2018) Drought supresses soil predators and promotes root herbivores in mesic, but not in xeric grasslands. *Ecological Society of America Annual Meeting*, New Orleans, USA.

Ankrom, KE; **Franco, ALC**; Wall, DH (2018) Plant-parasitic nematodes: response to changing precipitation regimes across a climatic gradient. *Society of Nematologists Annual Meeting 2018*, Albuquerque, USA.

Gherardi, LA; Sala, OE; Currier, CM, **Franco ALC**; Wall, DH (2017) Partitioning of above-belowground productivity: Spatial and temporal controls of water availability. *Ecological Society of America Annual Meeting*, Portland, USA.

**Franco ALC**; Gherardi, LA; de Tomasel CM; Andriuzzi, WS; Shaw, EA; Ankrom, KE; Sala, OE; Wall, DH (2017) Cross-site responses of soil nematodes to abnormal growing-season precipitation. *Ecological Society of America Annual Meeting*, Portland, USA.

**Franco ALC**; Knox, MA; Andriuzzi, WS; Tomasel, CM; Wall, DH (2016) Nematode exclusion and recolonization for experimental soil microcosms. *Ecological Society of America Annual Meeting*. Fort Lauderdale, USA.

**Franco, ALC**; Cerri, CEP; Cerri, CC (2015) Macroinvertebrate community modulates the influence of land use change to the functioning of tropical soils. *Ecological Society of America Annual Meeting*. Baltimore, USA.

**Franco, ALC**; Cherubin, MR; Cerri, CEP; Cerri, CC (2015) Soil engineering by macroinvertebrates: controls on soil organic matter storage across land use change. *Soil Ecology Society Biennial Meeting*. Colorado Springs, USA.

**Franco, ALC**; Cherubin, MR; Bartz, MLC; Baretta, D; Wall, DH; Cerri, CEP; Davies, CA; Fiegl, BJ; Cerri, CC (2014) Ethanol's growing demand and belowground biodiversity: soil macroinvertebrate community responses to sugarcane expansion in Brazil. *Global Soil Biodiversity Initiative Conference*. Dijon, France.

### Invited Talks

2019      Dunn Elementary School, 1<sup>st</sup> Grade Class.  
 2018      Colorado State University, One Health Institute.  
 2018      *Instituto Tecnológico Vale* (ITV), Belém, Brazil.  
 2018      Colorado State University, Microbiome Network  
 2018      University of Northern Colorado, School of Biological Sciences  
 2017      Colorado State University, Dept. Soil & Crop Science

### Peer Review Activity

#### Journals:

Agriculture, Ecosystem & Environment; Biomass and Bioenergy; Catena; Ecology & Evolution; Frontiers in Ecology and the Environment; Functional Ecology; Global Change Biology; Global Change Biology Bioenergy; ISME Journal; Land Degradation & Development; Plos One; Science of the Total Environment; Scientia Agricola; Soil & Tillage Research; Soil Science Society of America Journal.

#### Grant Review:

2019      Czech Science Foundation (GAČR).  
 2019      School of Global Environmental Sustainability, Colorado State University.  
 2018      Instituto Antártico Chileno (INACH).  
 2017      South African National Research Foundation (NRF).  
 2017      National Natural Science Foundation of China (NSFC).  
 2015      External scientific reviewer for research proposals submitted in the framework of the €30M 2015 European BiodivERsA call.

## Professional Affiliations

Ecological Society of America  
 Soil Science Society of America  
 Soil Ecology Society

## Professional Service and Outreach

- 2019 Member of the judging panel for the oral session on Disease Ecology at the Front Range Student Ecology Symposium, Colorado State University.
- 2017 - present Early Career Representative, Ecological Society of America (ESA), Soil Ecology Section.
- 2015 - 2018 Representative of the Global Soil Biodiversity Initiative (GSBI) in the International Network of Next-Generation Ecologists (INNGE).
- 2017 Judge, ESA's Buell and Braun awards for best student presentation.
- 2017 Member of the judging panel for two oral sessions (Behavioral Ecology and Disease Ecology) at the Front Range Student Ecology Symposium, Colorado State University.
- 2017 Panelist at The Summit for Youth Wellness, a conference for Poudre School District students in grades 6<sup>th</sup>-12<sup>th</sup>, Fort Collins, Colorado.
- 2016 Member of the judging panel for 6 research proposals at the Graduate Student Showcase, Colorado State University.
- 2016 Press interviews to Agência FAPESP (Portuguese) and SciDev.Net (Spanish) about the research article "Loss of soil (macro)fauna due to the expansion of Brazilian sugarcane acreage".

## Organized Symposia & Side-Events

- 2018 - present **Organizer and presenter**  
 Antarctic Lecture Series  
*School of Global Environmental Sustainability, CSU*
- 2016 **Organizer and moderator**  
 Unearthing the Role of Global Soil Biodiversity in Ecosystems (Symposium)  
*Soil Science Society of America Annual Meeting, Phoenix, USA*
- 2013 **Organizer and speaker**  
 Challenges and Opportunities for Sustainable Agroecosystem Research  
 (International Seminar)

*Department of Soil Science, University of São Paulo*

2013

**Organizer and member of the review panel**

Student poster section at the International Symposium of Scientific Initiation  
*University of São Paulo*

**Language Proficiency**

Portuguese: native tongue

English: bilingual

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