

Mariana Fontolan Litell

Maiden name: Mariana Rozendo Fontolan

PhD Student in Atmospheric Sciences – Department of Geography
The Ohio State University, Columbus, OH, USA

Phone: +1 (850)530-7550

E-mail: marianafontolan@hotmail.com, fontolanlitell.1@osu.edu

EDUCATION

- **The Ohio State University (Columbus, OH, USA)**
PhD in Atmospheric Sciences – Polar Meteorology Group – Byrd Polar and Climate Research Center
(August 2022 – Present)
Advisors: David Bromwich and Alvaro Montenegro
- **IAC Instituto Agrônomo de Campinas (Campinas, SP, Brazil)**
Masters in Tropical and Subtropical Agriculture, field: Agro-Environmental Resource Management
(March 2017 - April 2019)
Thesis: "ETA-HadGEM2-ES and ETA-MIROC5 climatic models in the study of extreme events in the state of São Paulo".
Advisor: Gabriel Constantino Blain
- **Pontifical Catholic University of Campinas (PUC Campinas, Campinas, SP, Brazil)**
Bachelors Of Environmental Engineering (March 2010 - December 2015)
Undergraduate Thesis: “Análises Estatísticas De Parâmetros Climáticos Na Mata-Atlântica”
Advisor: Liliane Alves Benatti
- **San Diego State University (San Diego, CA, USA)**
Non degree International Student - Major in Environmental Engineering (August 2014 - June 2015)
Scholarship by Science Without Borders Brazilian Program

EXPERIENCE

- The Ohio State University, Columbus, OH, USA (May 2022 – Present)
Graduate Research Associate
Polar Meteorology Group - Byrd Polar and Climate Research Center
- IAC - Instituto Agrônomo de Campinas, Campinas, SP, Brazil (March 2017 - April 2019)
Fellowship by CAPES - Coordination for the Improvement of Higher Education Professionals
Evaluation of the nested climate models ETA-MIROC5 and ETA-HadGEM2-ES in the probabilistic description of extreme weather events (precipitation, minimum and maximum temperature) in the state of Sao Paulo-Brazil.
- San Diego State University, San Diego, CA, USA (June 2015 - August 2015)
Research Assistant in the project “Remote Sensing of Recreational Trails in the San Bernardino Mountains”
Advisor: Alicia Kinoshita
Seeking to identify possible changes in San Bernardino Forest, related to erosion, soil deposition and damages in the watersheds, by processing Landsat remote sensing data using ArcGIS.
- EMBRAPA Satellite Monitoring, Campinas, SP, Brazil (August 2013 - May 2014)
Internship - Mozambique project
Work with Mozambique geodatabase using ArcGIS and ERDAS, to develop activities that aim to allow better use of natural resources in Mozambique.

- CNPq - National Council for Scientific and Technological Development - Campinas-SP, Brazil (August 2012 - July 2013). (Sponsored Researcher CNPq)
Undergraduate Research Assistant (Scientific Initiation) in the project: “Application of Statistical Models as Support for Study of Trends in Information Available on the Coast of São Paulo”
Advisor: Denise Helena Lombardo Ferreira
Use of statistics tests to identify trends in historical series of temperature, precipitation, and river flows in the coast of Sao Paulo-Brazil.
- CNPq - National Council for Scientific and Technological Development - Campinas-SP, Brazil (August 2011 - July 2012). (Sponsored Researcher CNPq)
Advisor: Denise Helena Lombardo Ferreira
Undergraduate Research Assistant (Scientific Initiation) in the project: “Using Mathematical Models in Technology to Analyze the Influence of Climatic Parameters in River Flows.”
Use of statistics tests to identify trends in historical series of temperature, precipitation, and river flows in along the Tiete river in Sao Paulo-Brazil.
- **Teaching Assistantship:** Calculus A for 6 hours a week (February to June in 2011)

COMMUNITY SERVICE

- Antarctic Meteorological Research and Data Center (AMRDC) Advisory Board Member (2023-Present)
- Active reviewer of the Brazilian Magazine of Environment (Revista Brasileira de Meio Ambiente – RBMA) in the field: Management and Environment

PUBLICATIONS

- Tomanek, A.J., Lazzara, M. A., Mikolajczyk, D. E., Norton, T. P., Onsi, I. I., Bromwich, D. H., **Litell, M. F.** (2023). The 17th Workshop on Antarctic Meteorology and Climate and 7th Year of Polar Prediction in the Southern Hemisphere Meeting. *Advances in Atmospheric Sciences*, in review.
- Wang, S-H, Bromwich, D. H., **Litell, M.F.** (2022). The 7th Year of Polar Prediction in the Southern Hemisphere (YOPP-SH) Meeting, Pyle Center, University of Wisconsin, Madison, WI, August 6, 2022. BPCRD *Technical Report* 2022-001, Byrd Polar and Climate Research Center, The Ohio State University, Columbus, Ohio, USA, 21pp.
- **Fontolan, M. R.**, Xavier, A. C. F., Blain, G. C. (2022). Evaluation of the climate change models Eta-HadGEM2-ES and Eta-MIROC5 in the study of extreme events. *Journal of Earth System Science*, **131**,120. <https://doi.org/10.1007/s12040-022-01853-w>
- **Fontolan, M. R.**, Xavier, A. C. F., Pereira, H. R., Blain, G. C. (2019). Using Climate Change Models to access the probability of weather extremes events: A local scale study based on the Generalized Extreme Value Distribution. *Bragantia*, **7**, 146-157. <https://doi.org/10.1590/1678-4499.2018144>
- Ferreira, D. H. L., Penereiro, J. C., **Fontolan, M. R.** (2015). Análises Estatísticas de Tendências das Séries Hidro-climáticas e de Ações Antrópicas ao Longo das Sub-bacias do Rio Tietê. *Holos*, **2**, 50-68. <https://doi.org/10.15628/holos.2015.1455>
- Meschiatti, M., **Fontolan, M. R.**, Penereiro, J. C., Ferreira, D. H. L. (2012). Caracterização Estatística de Tendências em Séries Anuais de Dados Hidro-climáticos no Estado de São Paulo. *Revista Geográfica Acadêmica*, **6**(1), 52. doi: 10.7198/S2237-0722201300040001
- **Fontolan, M. R.**, Ferreira, D. H. L., Penereiro, J. C. (2012). Comportamento Climático ao Longo do Rio Tietê: Aplicações Envolvendo Testes Estatísticos. *Revista Geonorte – UFAM*, **3**, 466-475.

CONFERENCE PROCEEDINGS/ABSTRACTS

- **Litell, M. F.**, (2020). Evaluation of the climate change models Eta-HadGEM2-ES and Eta-MIROC5 in the study of extreme events in South America region. The 9th International Workshop on Advances in Cleaner Production (IWACP) May 2020, Melbourne, Australia – Online.
- **Fontolan, M. R.**, Blain, G. C., (2018). Estudo dos Modelos Climáticos ETA-Miroc5 e ETA-Hadgem2-ES para Eventos Extremos de Precipitação em Região de Clima Tropical-Subtropical. VIII GeoSciEd/VIII EnsinoGEO Symposium, July 2018, UNICAMP, Campinas, SP, Brazil.
- **Fontolan, M. R.**, Blain, G. C., (2018). Avaliação do Modelo Climático ETA-MIROC5 no Estudo de Eventos Extremos em Região de Clima Tropical-Subtropical. III IAC Graduate Conference, October 2018, Instituto Agrônomo de Campinas, Campinas, SP, Brazil.
- Bolfe, E. L., **Fontolan, M. R.**, Oshiro, O. T., Tosto, S. G., Victoria, D. C., (2014). Plataforma de Inovação Agrária de Moçambique – Informações Geoespaciais para a Gestão dos Recursos Naturais e Desenvolvimento Agrícola, 8th Institutional Conference of Scientific Initiation – CIIC, August 2014, Campinas, SP, Brazil.
- **Fontolan, M. R.**, Ferreira, D. H. L., Pereneiro, J. C., (2013). Análises de Tendências em Séries de Dados Hidro-climáticos no Litoral de São Paulo. The 13th National Conference of Scientific Initiation, November 2013, Anhanguera Campinas – Unit III, Campinas, SP, Brazil.
- Longo, R. M., Santos, I. R. C., Lima, E. C., **Fontolan, M. R.**, (2013). Monitoramento Qualitativo da Microbacia do Corrego Fazenda Santa Candida. XX Brazilian Symposium of Water Resources, November 2013, Bento Gonçalves, RS, Brazil.
- **Fontolan, M. R.**, Ferreira, D. H. L., Pereneiro, J. C., (2013). Análises de Tendências Hidro-climáticas no Litoral Paulista. X National Environmental Conference (Congresso Nacional do Meio Ambiente), May 2013, Poços de Caldas, MG, Brazil.
- **Fontolan, M. R.**, Ferreira, D. H. L., Pereneiro, J. C., (2012). O uso da Estatística na Análise de Tendências em Séries de Dados Hidro-climáticos na Bacia do Rio Tietê. 12th Nacional Conference of Scientific Initiation, December 2012 São Judas University, São Paulo, SP, Brazil.
- **Fontolan, M. R.**, Ferreira, D. H. L., Pereneiro, J. C., (2012). Comportamento Climático ao Longo do Rio Tietê: Aplicações Envolvendo Testes Estatísticos. X Brazilian Symposium of Geography Climatology – XSBC, November 2012, UFAM, Manaus, AM, Brazil.
- **Fontolan, M. R.**, Ferreira, D. H. L., Pereneiro, J. C., Meschiatti, M., (2012) Análises de Tendências em Precipitações e Vazões no Rio Tietê. IX Nacional Conference of Environment, May 2012, Poços de Caldas, MG, Brazil.

CONFERENCES AND WORKSHOPS

- Participant, International Atmospheric Rivers Conference, October 10-14, 2022, Santiago, Chile
- Bromwich, D. H. (Contributing author and participant). An Overview of the Year of Polar Prediction in the Southern Hemisphere (YOPP-SH) - Achievements and Future Plans. Year of Polar Prediction Final Summit, August 29 – September 1, 2022, The Centre Mont-Royal, Montreal, Quebec, Canada
- Bromwich, D. H. (Contributing author and participant). An Overview of the YOPP-SH 2022 Winter Observing Period. The 7th Year of Polar Prediction in the Southern Hemisphere (YOPP-SH) Meeting, August 6, 2022, Pyle Center, University of Wisconsin, Madison, WI, USA.
- Participant, Summer 2022 WRF Tutorial – NCAR, July 18 – 22, 2022, Boulder, CO, USA
- Fontolan, M. R. (Presenter), Blain, G. C. Estudo dos Modelos Climáticos ETA-Miroc5 e ETA-Hadgem2-ES para Eventos Extremos de Precipitação em Região de Clima Tropical-Subtropical. VIII GeoSciEd/VIII EnsinoGEO Symposium, July 2018, UNICAMP, Campinas, SP, Brazil.

- Fontolan, M. R. (Presenter), Blain, G. C. Avaliação do Modelo Climático ETA-MIROC5 no Estudo de Eventos Extremos em Região de Clima Tropical-Subtropical, III IAC Graduate Conference, October 2018, Instituto Agrônomo de Campinas, Campinas, SP, Brazil.
- Fontolan, M. R. (Presenter), Ferreira, D. H. L., Pereneiro, J. C. Análises de Tendências em Séries de Dados Hidro-climáticos no Litoral de São Paulo. 13th National Conference of Scientific Initiation, November 2013, Anhanguera Campinas – Unit III, Campinas, SP, Brazil.
- Fontolan, M. R. (Presenter), Ferreira, D. H. L., Pereneiro, J. C. Análises de Tendências Hidro-climáticas no Litoral Paulista. X Congresso Nacional do Meio Ambiente, May 2013, Poços de Caldas, MG, Brazil.
- Fontolan, M. R. (Presenter), Ferreira, D. H. L., Pereneiro, J. C. O uso da Estatística na Análise de Tendências em Séries de Dados Hidro-climáticos na Bacia do Rio Tietê. 12th Nacional Conference of Scientific Initiation, December 2012, São Judas University, São Paulo, SP, Brazil.
- Fontolan, M. R. (Presenter), Ferreira, D. H. L., Pereneiro, J. C. Climate Behavior Along the Tietê River: Comportamento Climático ao Longo do Rio Tietê: Aplicações Envolvendo Testes Estatísticos. X Brazilian Symposium of Geography Climatology – XSBC, November 2012, UFAM, Manaus, AM, Brazil.
- Fontolan, M. R. (Presenter), Ferreira, D. H. L., Pereneiro, J. C., Meschiatti, M. Análises de Tendências em Precipitações e Vazões no Rio Tietê. IX Nacional Conference of Environment, May 2012, Poços de Caldas, MG, Brazil.

ACHIEVEMENTS

- Top ten undergrad research paper in Exact and Earth Sciences, The 13th Nacional Conference of Scientific Initiation, November 2013, Anhanguera Campinas – Unit III, Campinas, SP, Brazil. Title: Análises de Tendências em Séries de Dados Hidro-climáticos no Litoral de São Paulo.
- 5th place undergrad research paper in Exact and Earth Sciences, The 12th Nacional Conference of Scientific Initiation, December 2012, São Judas University, São Paulo, SP, Brazil. Title: O Uso da Estatística na Análise de Tendências em Séries de Dados Hidro-climáticos na Bacia do Rio Tietê

RELEVANT SKILLS

- Knowledge in the following:
 - ArcGIS
 - ERDAS
 - R Studio
 - NCL – NCAR Command Language
- Operating systems: Windows, MAC, Linux/Unix