Leonardo Brandão do Prado

Ph.D. Student ldoprado@asu.edu

RESEARCH INTERESTS

a. The daily life production of urban climates at multiple scales (e.g., intra-urban scale, as UHI effects, and outdoor thermal comfort).
b. The social, economic, racial, and gendered distribution of climate vulnerability and risk in urban areas.

En – Translation of activity or publication originally in Portuguese

EDUCATION

Ph.D. student in Geography (2024 – 2029 Expected graduation)
School of Geographical Science and Urban Planning - Arizona State University (ASU)
Advisors: Jose-Benito Rosales Chavez and Jennifer Vanos

M.Sc. in Geography (2020 – 2023)
Federal University of Rio de Janeiro (UFRJ), Cidade Universitária/RJ, Brazil.
Master thesis title: Urban Climate and Thermal Comfort in the Periphery of Rio de Janeiro: An Essay based on Urban Climate Units (*En*)
Advisor: Nubia Beray Armond

B.Sc., Geography (2015 -2019)
Federal University of Viçosa (UFV), Viçosa/MG, Brazil.
Thesis title: The Land Use and Surface Temperature: A Case Study in the Ubá City – MG/Brazil (*En*)
Advisor: Edson Soares Fialho

COMPLEMENTARY TRAINING

1. Data Visualization with Python: Plotly Library, online (5h), Udemy, 2023.
2. Data Analysis with Python and Machine Learning, online (5), Udemy,2023.
3. Time Series Analysis with Python, online (5h), Udemy, 2023.
4. Statistics for Data Science and Machine Learning, online (5h), Udemy,2023

RESEARCH POSITIONS

2024/1 Intern, Department of Geography, São Paulo State University. Supervisor: Karime Pechutti Fante.
- Identifying Heatwaves through Warm spell duration index (WSDI)

2023/2 Intern, Department of Geography, São Paulo State University. Supervisor: Karime Pechutti Fante.
- Teaching Assistance

2022 – 2023 Researcher, Department of Geography, Federal University of São João Del Rei. Research: *Socioenvironmental crossing processes and monitoring of agricultural insurance areas in Brazil.* Supervisor: Fernando Teixeira
- Modeling precipitation
- Google Earth Engine

PUBLICATIONS PEER-REVIEWED

1. **Prado, L.B**; Fialho, E.S.; Santos, L. G. F. Remote Sensing and Urban Climate: An Investigative Perspective through Surface Thermal Field in the Central Area of Viçosa**. Brazilian Journal of Climatology**, v. 27, p. 919-946, 2020. (*En*)

2. **Prado, L.B**; Fernandes, L. A; Fialho E. S. The variation of the air temperature along the Ponte Nova-Ubá - MG (Brazil) route in the years of 2014 and 2015**. Cadernos de Geografia (Coimbra**), v. s/n, p. 55-69, 2018. (*En*)

3. Fialho, E.S; Sanches, F. O; Paulo, M. L. S. ; Fernandes,L. A; **PRADO, L. B**. Proximities and Contentions: An Analysis of Differences in Climatic Parameters Along the Transect Ponte Nova - Ubá in the Zona da Mata Mineira. **Brazilian Journal of Climatology**, v. 14, p. 357-368, 2018. (*En*)

4. Fernandes, L ;**Prado, L. B**; Fialho, E . The Relationship between the Geoecological and Anthropic Aspects for the Conformation of the Urban Climate of Viçosa-MG in the Synotic Situation of Stability in 2015. **Climate**, v. 5, p. 35, 2017;

CONFERENCES PUBLICATIONS

1. **Prado,L.B**; Fante, K. P. Analyzing Heat Wave Frequency in Brazil 1991-2020 Study Across Diverse Climates Using the Warm Spell Duration Index. American Association of Geographers – AAG, Detroit/MI, 2025

2. Fante, K. P; **Prado, L. B**. Spatiotemporal comparison of heat waves in different Brazilian climates from 1991 to 2020. In Brazilian Symposium of Physical Geography, Cariri, 2024 (*En*)

3. **Prado, L.B;** Marchatti, G.E; Pereira, M.A; Junior, J.R.A; Santos, F; Silva, P.A.A; Hirsh, A; Pinheiro, D.C; Santos, A.C.R; Pimenta, F.M; Ataíde, G.M; Castro, R.V.O; Ferreira, M.C; Pinto, W.S; Teixeira, F.A; Pereira, G.; Spectral Analysis Model Utilizing Computational Tools for Identifying Crop Planting and Harvest Dates in Brazil. In Brazilian Symposium of Remote sensing, Florianópilos, 2023.

4. **Prado, L.B;** Marchatti, G.E; Pereira, M.A; Junior, J.R.A; Santos, F; Silva, P.A.A; Hirsh, A; Pinheiro, D.C; Santos, A.C.R; Pimenta, F.M; Ataíde, G.M; Castro, R.V.O; Ferreira, M.C; Pinto, W.S; Teixeira, F.A; Pereira, G.; Google Earth Engine as a tool for identifying climate anomalies in Brazil in: XXIII Brazilian Symposium on GeoInformatics, São José dos Campos, São Paulo, 2022**.**

5. **Prado, L. B.;** Instances of outdoor thermal discomfort assessed using the TE and TEv index in the São Cristóvão neighborhood - RJ. In: Brazilian Symposium on Applied Physical Geography - SBGFA, Rio de Janeiro, 2022. (*En*)

6. Pinto, W.S;Pereira, M.A; Junior, J.R.A; Santos, F; Marchetti, G.E; Silva, P.A.A; Hirsh, A; Santos, A.C.R; Gomes, I; Pimenta, F.M; Ataíde, G.M; Pereira, G; Castro O, R.V.O; Ferreira, M.C; **Prado, L.B**; Teixeira, F.A;Pinheiro, D.C.A compliance verification method for planting carried out in the context of Rural Insurance in Brazil with the Agricultural Risk Zoning (ZARC) in: XXIII Brazilian Symposium on GeoInformatics, São José dos Campos, São Paulo, 2022. (*En*)

7. **Prado, L. B.;** Silva, W. M; Saraiva, C. S; Marco J. S; Fialho, E. S . Analysis of the Difference between Land Surface Temperature (LST) and Air Temperature in the Case of Viçosa -

MG. In: GEONORDESTE - Regional Symposium on Geoprocessing and Remote Sensing, Salvador v. 8. 2017. **(***En*)

8. **Prado, L. B.;** FIALHO, E. S. Topoclimatic Classification for the Topographic Profile from Ponte Nova to Ubá: A Case Study for the Zona da Mata Mineira - MG. In: Geonordeste - Regional Symposium on Geoprocessing and Remote Sensing. Salvador v. 8. 2017 **(***En*);

9. Ferreira, G. R.; **Prado, L. B.;** Paulo, M. L. S.; Fialho E. S.Seasonal Variation of Nighttime Cooling in Urban and Rural Environments in the city of Viçosa, MG., MG. In: International Symposium of Climaotology, 2017, Petrópolis, MG, 2017(*En*);

PROFESSIONAL PRESENTATIONS

1. **Prado, L.B.;** Outdoor thermal discomfort: A case study of street vendors in the periphery of Rio de Janeiro. In: International Congress of Biometeorology. Oral presentation, 2023.

2. **Prado, L.B.;** Spectral Analysis Model Utilizing Computational Tools for Identifying Crop Planting and Harvest Dates in Brazil. In Brazilian Symposium of Remote sensing, Florianópilos. Oral presentation, 2023 (*En*)

3. **Prado, L.B.;** Instances of outdoor thermal discomfort assessed using the TE and TEv index in the São Cristóvão neighborhood - RJ. In: Brazilian Symposium on Applied Physical Geography - SBGFA, Rio de Janeiro. Oral presentation 2022. (*En*)

4. **Prado, L.B.;** Google Earth Engine as a tool for identifying climate anomalies in Brazil in: XXIII Brazilian Symposium on GeoInformatics, São José dos Campos, São Paulo, 2022.

5. **Prado, L.B.;** .A compliance verification method for planting carried out in the context of Rural Insurance in Brazil with the Agricultural Risk Zoning (ZARC) in: XXIII Brazilian Symposium on GeoInformatics, São José dos Campos, São Paulo, 2022. (*En*)

6. **Prado, L.B.;** Analysis of the Difference between Land Surface Temperature (LST) and Air Temperature in the Case of Viçosa - MG. In: Geonordeste - Regional Symposium on Geoprocessing and Remote Sensing, Salvador v. 8. 2017, Oral presentation. **(***En*)

7. **Prado, L.B.;** Topoclimatic Classification for the Topographic Profile from Ponte Nova to Ubá, a Case Study for the Zona da Mata Mineira - MG. In: Geonordeste, 2017, Salvador. Regional Symposium on Geoprocessing and Remote Sensing, 2017. v. 8 **(***En*)

8. **Prado, L.B.;** Climatic Conditions Favoring the Proliferation and Development of the Aedes aegypti Mosquito in the Municipality of Rio de Janeiro. In: Minas Gerais Geography Symposium, 2016, Juiz de Fora. Proceedings of the II Minas Gerais Geography Symposium and IV Postgraduate Geography Seminar, 2016. **(***En*)

CONFERENCES, SYMPOSIUMS, MEETINGS AND WORSHOPS ORGANIZED

1. Climate and Society Workshop: University, Protection and Civil Defense – Monitoring and response to climate emergencies in Rio Claro, São Paulo State University. November 24, 2023.
2. III Geography and Climate Seminar. Federal University of Viçosa. August, 26, 2019
3. Bioclima Workshop. Federal University of Viçosa. October, 2016

Articles – *in review*

1. **Prado, L. B**; Fante, K.P. Human Biometeorology: Past, present and future prospects. **Brazilian Journal of Climatology (***EN*)

Articles – in prep.

1. Chavez. J.B.R,;**Prado, L,B**.;Seong, T.;Ehlenz, M.;Nystrom, S.;Gaylord,A.;Tong, D. Business Partnerships for Food Accessibility: The Case of Auto Shop and Street Food Businesses

2. **Prado. L.B.** Vulnerability, Exposure and Human Thermal discomfort: A case Study in the periphery of Rio de Janeiro. **International Journal of Biometeorology.**

3. **PRADO, L.B.;** Armond, N.B; Urban Climatic Map in the Tropics: Heat, Exposure, and Vulnerability. **Progress in Physical Geography**.

INVITED TALKS

Prado, L.B (2023). Urban Climate and Thermal Comfort in the Carioca Periphery: An Essay from Urban Climate Units. Equitable places Lab – Arizona State University – Az, USA
Invited by: Jose-Benito Rosales Chavez

Prado, L.B. (2023). Pondering Human Thermal Comfort and Socio-spatial Vulnerabilities in the Face of the Informal Job Market in the Periphery of Rio de Janeiro. 51st Geographical Studies Week, São Paulo State University – SP, Brazil. (*En*)
Invited by: Dayana Aparecida Marques de Oliveira Cruz

Prado, L.B (2023). Research Project in Geography: Challenges and theoretical-methodological approaches in climatology. São Paulo State University – SP, Brazil. (*En*)
Invited by: Marina Castro de Almeida

Prado, L.B (2022). Climatic meetings: Biometeorology, Thermal comfort, and comfort index. Federal University of Viçosa, MG, Brazil. (*En*)
Invited by: Edson Soares Fialho

Prado, L.B (2022). Landscapes in a trance: Socioenvironmental verification process and monitoring of agricultural insurance areas in Brazil. Federal University of Viçosa, MG, Brazil. (*En*)
Invited by: Edson Soares Fialho

PRADO, L.B (2019). Surface Heat island in the urban area of Viçosa, MG. Federal University of Viçosa, 3rd Seminar on Geography and Climate. Brazil. (*En*)
Invited by: Edson Soares Fialho

FELLOWSHIPS

2024-2025 Enrichment Fellowship, a merit-based award to support the recruitment and professional development of outstanding incoming campus-based masters and doctoral students who help advance ASU ($25,600.00).

2022-2023 Researcher fellowship III, Development in Science, Technology, and Innovation (BDCTI) ($5,300.00)

2020 – 2022 Master fellowship, Coordination for the Improvement of Higher Education (CAPES) ($4,500.00).

2016 – 2018 Undergraduate fellowship, National Council for Scientific and Technological Development (CNPq) ($3,600.00).

2015/2 Institutional Program for Teaching Initiation Scholarships (PIBID) ($200.00)

AFFILIATIONS

Brazilian Association of Climatology - SBCG
International Society of Biometeorology – ISB
Students and New Professionals- Biometeorology - SNP
International Association for Urban Climate - IAUC

COMMITTEES

2024. Thiago Almeida Diniz. Identification of Heat Islands in Rio Claro - SP: A comparative analysis between neighborhoods with different economic profiles. São Paulo State University, Rio claro, São Paulo, Brazil, Undergraduate level (*En*).

2023. Leonardo Caçadini Bizerra da Silva. Human Thermal Comfort in Espirito Santo State: An Analysis based on hourly data throughout 2019. National School of Statistical Sciences - Brazilian Institute of Geography and Statistics, Rio de Janeiro, Brazil, Graduate level (*En*)