

Curriculum Vitae
Dr. Victor Hugo Rohden Prudente
Postdoctoral Fellow

University of Michigan School for Environment and Sustainability, Ann Arbor, Michigan
– United States of America.

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Research Focus

My general research focus is on combined multisensor data for LULC monitoring. In particular, I focus on exploring different data sources to apply them (individually or combined) for crop mapping and monitoring. Because of that, currently, I am working as a postdoc at the University of Michigan, to develop remote sensing estimates of maize sowing time, maize area, and maize variety which can be used to understand farmer decision-making in the face of climate change.

Education:

- 2017-2021 **Ph.D. in Remote Sensing**
National Institute for Space Research (INPE) – Brazil
Thesis Title: Multisensor Optical-SAR Approach to Land Use and Land Cover Characterization in Roraima
Advisors: Dr. Ieda Del’Arco Sanches and Dr. Marcos Adami
Internship at University of Maryland (UMD)– USA (Oct/2019 to Sep/2020)
Foreign Advisor: Dr. Sergii Skakun
- 2015-2017 **M.S. in Agricultural Engineering**
Western Paraná State University – Brazil
Dissertation title: Use of terrestrial remote sensing to characterize the spectro-temporal dynamics of soybean and beans
Advisors: Dr. Erivelto Mercante and Dr. Jerry Adriani Johann
- 2010-2014 **B.S. in Agricultural Engineering (with honors)**
Western Paraná State University – Brazil

Career/Employment

- 2022/October – **Postdoctoral Fellow - University of Michigan**
Now School for Environment and Sustainability
 PI: Dr. Meha Jain

2021/April to 2022/September Data Scientist at Newe Seguros
Worked with Remote Sensing data, optical and microwave, into the Google Earth Engine platform to create products for supporting crop insurance decisions.

2020/November to 2021/March Researcher at Santos Lab
Worked with Remote Sensing data, optical and microwave, to create new products for agriculture monitoring.

Achievements and Awards:

2014 Second Placed for best student - Agricultural Engineering Undergraduate Western Paraná State University – Brazil

2014 27th Paraná State Science and Technology Awards - **Best Undergraduate Student**, Department of Science, Technology and Higher Education - SETI.

Complementary Education

- 2018 TAT-6: Integration of Radar and Optical Remote Sensing in Studying LCLUC. (88h). European Space Agency, ESA-ESRIN. In: Croatia
- 2017 European Space Agency – Introduction to Radar Remote Sensing. (15h). European Space Agency, ESA. (Online).
- 2016 Application of Satellite Remote Sensing to Support Water Resources Management. (56h). Applied Remote Sensing Training - NASA, ARSET NASA. In: Brazil

Publication List

Journal articles (under review)

1. **Prudente, V. H. R.**; Garcia-Medina, M.; Krishna, V.; Euler, M.; Bhattarai, N.; Lerner, A. M.; McDonald, A. J.; Sherpa, S.; Rajan, H.; Urfels, A.; Santana, C. T. C.; Jain, M. *Mapping Grain Crop Start of Season in Smallholder Systems Using Optical Imagery*. [In Review]

Journal articles (peer-reviewed)

1. Garcia, A. D. B.; **Prudente, V. H. R.**; Silva, D. T.; Chaves, M. E. D.; Trabaquini K.; Sanches, I. D. *Detailed Mapping of Irrigated Rice Fields Using Remote Sensing data and Segmentation Techniques: A case of study in Turvo, Santa Catarina, Brazil*. Journal of Information and Data Management, v. x, p. x-x, 2024 (Accepted).
2. Garcia, A. D. B.; Celeste, J. Jr.; Cheng, I.; **Prudente, V. H. R.**; Sanches, I. D. *Evaluation of multiple SAR speckling filter techniques performance in irrigated rice areas*. The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, v. XLVIII-3-2024, p. 169-176, 2024. <https://doi.org/10.5194/isprs-archives-XLVIII-3-2024-169-2024>

3. Cunha, I. A.; Baptista, G. N. M.; **Prudente, V. H. R.**; Melo, D. D.; Amaral, L. R. *Integration of Optical and SAR Data with Different SAR Image Processing Techniques and Development Stages to Improve Soybean Yield Prediction*. Agriculture, v.14, p. 1-21, 2024. <https://doi.org/10.3390/agriculture14112032>
4. Oldoni, L. V.; Sanches, I. D.; Picoli, M.; **Prudente, V. H. R.**; Adami, M. *Geometric accuracy assessment and a framework for automatic sub-pixel registration of WFI images from CBERS-4, CBERS-4A, and Amazonia-1 satellites*. Remote Sensing Applications: Society and Environment, v. 28, p. 1-22, 2022, <https://doi.org/10.1016/j.rsase.2022.100844>
5. Vieira, D. C.; Sanches, I. D.; Montibeller, B.; **Prudente, V. H. R.**; Hansen, M.C.; Baggett, A.; Adami, M. *Cropland expansion, intensification, and reduction in Mato Grosso state, Brazil, between the crop years 2000/01 to 2017/18*. Remote Sensing Applications: Society and Environment, v. 28, p. 1-18, 2022, <https://doi.org/10.1016/j.rsase.2022.100841>
6. **Prudente, V. H. R.**; Skakun, S.; Oldoni, L. V.; Xaud, H. A. M.; Xaud, M.; Sanches, I. D.; Adami, M.; *Multisensor approach to Land Use and Land Cover Mapping in Brazilian Amazon*. ISPRS Journal of Photogrammetry and Remote Sensing, v.189, p. 95-109, 2022, <https://doi.org/10.1016/j.isprsjprs.2022.04.025>
7. Ganascini, D.; Mendes, I. S.; Caon, I. L.; Cattani, C. E. V.; Mercante, E.; Machado Coelho, S.R.; Viana, O. H.; **Prudente, V. H. R.**; *Evaluation of bean desiccation plants with diquat and glufosinate-ammonium using terrestrial hyperspectral sensor*. Australian Journal of Crop Science, v.16, p. 216-226, 2022, <https://doi.org/10.21475/ajcs.22.16.02.3344>
8. Oldoni, L. V.; Mercante, E.; Antunes, J. F. G.; Cattani, C. E. V.; Silva Junior, C. A.; Caon, I. L.; **Prudente, V. H. R.** *Extraction of crop information through the spatiotemporal fusion of OLI and MODIS images*. Geocarto International, v.37, p. 8336-8360, 2021. <https://doi.org/10.1080/10106049.2021.2000648>
9. **Prudente, V. H. R.**; Mercante, E.; Johann, J. A.; Souza, C. H. W.; Oldoni, L. V.; Almeida, L.; Becker, W.; Silva, B. B. *Comparison Between Vegetation Index Obtained by Active and Passive Proximal Sensors*. Journal Of Agricultural Studies, v. 09, p. 392-405, 2021. <https://doi.org/10.5296/jas.v9i2.18462>
10. **Prudente, V. H. R.**; Martins, V. S.; Vieira, D. C.; Silva, N. R. F.; Adami, M.; Sanches, I. D. *Limitations of cloud cover for optical remote sensing of agricultural areas across South America*. Remote Sensing Applications: Society and Environment, v. 20, p. 1-14, 2020. <https://doi.org/10.1016/j.rsase.2020.100414>
11. Sanches, I. D.; Feitosa, R. Q.; Montibeller, B.; Achancaray Diaz, P. M.; Luiz, A. J. B.; Soares, M. D.; **Prudente, V. H. R.**; Vieira, D. C.; Murano, L. E. P.; Happ, P. N.; Chamorro, J.; Oldoni, L. V. *First results of the LEM benchmark database for agricultural applications*. ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, v. XLIII-B5-2020, p. 251-256, 2020. <https://doi.org/10.5194/isprs-archives-XLIII-B5-2020-251-2020>
12. Oldoni, L. V.; **Prudente, V. H. R.**; Diniz, J. M. F. S.; Wiederkehr, N. C.; Sanches, I. D.; Gama, F. F. *Polarimetric SAR data from Sentinel-1a applied to early crop classification*. ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, v. XLIII-B3-2020, p. 1039-1046, 2020. <https://doi.org/10.5194/isprs-archives-XLIII-B3-2020-1039-2020>

13. **Prudente, V. H. R.**; Mercante, E.; Johann, J. A.; Souza, C. H. W.; Cattani, C. E. V.; Mendes, I. S.; Caon, I. L. *Use of terrestrial remote sensing to estimate soybeans and beans biophysical parameters*. Geocarto International, v. 36, p. 773–790, 2019. <https://doi.org/10.1080/10106049.2019.1624982>
14. **Prudente, V. H. R.**; Oldoni, L. V.; Vieira, D. C.; Cattani, C. E. V.; Sanches, I. D. *Relationship between SAR/Sentinel-1 Polarimetric and interferometric data with biophysical parameters of agricultural crops* ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences. v.WG III/10, p. 599-607, 2019. <https://doi.org/10.5194/isprs-archives-XLII-3-W6-599-2019>
15. Girolamo-Neto, C. D.; Sanches, I. D.; N., Kasahara, A.; **Prudente, V. H. R.**; Körting, T. S.; Picoli, M. C. A.; Aragão, L. E. O. C. *Assessment of Texture Features for Bermudagrass (Cynodon dactylon) Detection in Sugarcane Plantations*. Drones, v. 3, p. 1-15, 2019. <https://doi.org/10.3390/drones3020036>
16. Sanches, I. D.; Feitosa, R. Q.; Achancaray, P.; Montibeller, B.; Luiz, A. J. B.; Soares, M. D.; **Prudente, V. H. R.**; Vieira, D. C.; Maurano, L. E. P. *LEM benchmark database for tropical agricultural remote sensing application*. ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, v.XLII-1, p.387 - 392, 2018. <https://doi.org/10.5194/isprs-archives-XLII-1-387-2018>
17. Wrublack, S C.; Mercante, E.; Vilas Boas, M.A; **Prudente, V. H. R.**; Silva, J. L. G. *Variation of water quality along a river in an agricultural watershed with support of geographic information systems and multivariate analysis*. Engenharia Agricola, v. 38, p. 74-81, 2018. <https://doi.org/10.1590/1809-4430-Eng.Agric.v38n1p74-81/2018>
18. Remor, M. B.; Sampaio, S. C.; Model, K. J.; Falco, T. D.; **Prudente, V. H. R.** *Mercury in the sediment of Pelotas river basin, Brazil*. Engenharia Agricola, v. 38, p. 117-123, 2018. <http://dx.doi.org/10.1590/1809-4430-Eng.Agric.v38n1p117-123/2018>
19. **Prudente, V. H. R.**; Silva, B. B.; Johann, J. A.; Mercante, E.; Oldoni, L. V. *Comparative assessment between per-pixel and object-oriented for mapping land cover and use*. Engenharia Agricola., v.37, p.1015 - 1027, 2017. <http://dx.doi.org/10.1590/1809-4430-Eng.Agric.v37n5p1015-1027/2017>
20. Wrublack, S.C.; Mercante, E.; Correa, M. M.; **Prudente, V. H. R.**; Silva, J.L.G.; Vilas Boas, M. A. *Geotechnologies in mapping on land use and cover in an agricultural watershed*. Revista Geama, v. 8, p. 5-9, 2017. <http://www.journals.ufrpe.br/index.php/geama/article/view/1369>
21. Wrublack, S. C.; Mercante, E.; **Prudente, V. H. R.**; Silva, J. L. G.; Vilas Boas, M. A.; Oldoni, L. V. *Geotechnologies and multivariate statistics applied to water resources management in a predominantly agricultural watershed*. International Journal of Food, Agriculture and Environment, v. 13, p. 201-209, 2015. <https://doi.org/10.1234/4.2015.3991>
22. **Prudente, V. H. R.**; Souza, C. H. W.; Mercante, E.; Johann, J. A.; Uribe-Opazo, M. A. *Spatial statistics applied to soybean production data from Paraná State for 2003-04 to 2009-10 crop-years*. Engenharia Agricola, v. 34, p. 755-769, 2014. <https://doi.org/10.1590/S0100-69162014000400015>
23. Souza, C. W.; Mercante, E.; **Prudente, V. H. R.**; Justina, D. D. D. *Methods of performance evaluation for the supervised classification of satellite imagery in determining land cover classes*. Ciencia e Investigacion Agraria., v.40, p.419 - 428, 2013. <http://dx.doi.org/10.4067/S0718-16202013000200016>

24. Wrublack, S. C.; **Prudente, V. H.R.**; Mercante, E.; Machado Coelho, S.R. *Spatial distribution of Canola culture in the State of Paraná (Brazil) between the agricultural years of 2005 and 2009*. *Ciencia e Investigacion Agraria*, v. 40, p. 523-535., 2013. <http://dx.doi.org/10.4067/S0718-16202013000300005>

Books

1. Wrublack, S.C.; Mercante, E.; Xavier, A. H.; Silva, B. B.; Neneve, F.; Silva, J. L. G.; Reginatto, J. H.; Marcondes, L.; Vilas Boas, M. A.; **Prudente, V. H. R.** *GIS as a tool for water resources management: Lontra Rivers Microbasin study case*. (In Portuguese) 1. ed. Cascavel: EDUNIOESTE, 2017. v. 1. 83p.

Book Chapters

1. **Prudente, V. H. R.**; Oldoni, L. V.; Wrublack, S.C.; Mercante, E. . *Erosive susceptibility analysis in the micro basin of Lontras rivers in southwest Paraná by multi-criteria analysis*. (In Portuguese) In: 2015 Brazilian Congress of Agricultural Engineering Book. 1 ed.: SBEA.
2. Oldoni, L. V.; Mercante, E.; **Prudente, V. H. R.**; Kusminski, D.; Silva, B. B. . Identification of soybean and corn areas using Landsat-8 image classification methods. (In Portuguese). In: 2015 Brazilian Congress of Agricultural Engineering Book. 1 ed.: SBEA.
3. Lima, L. E. P.; Lima, P. H. P.; **Prudente, V. H. R.**; Souza, C. H. W.; Mercante, E. . *Mapping of the expansion of the perimeter irrigated by a central pivot in the municipality of Unai-MG using geoprocessing techniques*. (In Portuguese). In: 2012 Brazilian Congress of Agricultural Engineering Book. 1 ed.: SBEA.
4. Lima, L. E. P.; Justina, D. D. D.; Prudente, V. H. R.; Mercante, E.; Opazo, M. A. U. . *Estimated area planted with soybean by digital processing of Landsat 5/TM satellite images*. (In Portuguese). In: 2011 Brazilian Congress of Agricultural Engineering Book. 1 ed.: SBEA.

Complete works published in proceedings of conferences.

1. Garcia, A. D, B.; Chaves, M. E. D.; **Prudente, V. H. R.**; Sanches, I. D. . Assessing the Influence of Borders and Roads on the Segmentation of Rice Fields: A Case Study. In: XXIV GEOINFO, 2023, Sao Jose dos Campos. https://http://www.geoinfo.info/geoinfo2023/proceedings2023_red.pdf
2. **Prudente, V. H. R.**; Silva, N. R. F. E.; Garcia, A. D, B.; Oldoni, L. V.; Xaud, H. A. M.; Xaud, M.; Adami, M.; Sanches, I. D. . Land Use and Land Cover classification using a SAR optical cloud computer approach in southern of Roraima. In: XX Brazilian Symposium on Remote Sensing, 2023, Florianopolis. <https://proceedings.science/sbsr-2023/trabalhos/land-use-and-land-cover-classification-using-a-sar-optical-cloud-computer-approa?lang=pt-br>
3. **Prudente, V. H. R.**; Sanches, I. D.; Adami, M.; Skakun, S.; Oldoni, L. V.; Xaud, H. A. M.; Xaud, M.; Zhang, Y. *SAR data for Land Use Land Cover classification in a tropical region with frequent cloud cover*. In: IEEE Geoscience and Remote Sensing, 2020, Hawaii. IEEE Geoscience and Remote Sensing, 2020. <https://doi.org/10.1109/IGARSS39084.2020.9323404>

4. Zhang, Y.; Skakun, S.; **Prudente, V. H. R.** *Detection of changes in the impervious surface using Sentinel-2 imagery.* In: IEEE Geoscience and Remote Sensing, 2020, Havai. IEEE Geoscience and Remote Sensing, 2020. <https://doi.org/10.1109/IGARSS39084.2020.9323327>
5. **Prudente, V. H. R.**; Vieira, D. C.; Montibeller, B.; Oldoni, L. V.; Sanches, I. D.; Adami, M. . Use of SAR data to classify first and second harvest. In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. . (In Portuguese). <https://proceedings.science/sbsr-2019/papers/utilizacao-de-dados-sar-na-classificacao-de-especies-agricolas-de-primeira-e-segunda-safra>
6. Oldoni, L. V.; Sanches, I. D.; **Prudente, V. H. R.**; Vieira, D. C.; Gama, F. F. . Characterization of soybean, corn, and cotton dynamics based on Sentinel-1A polarimetric SAR data. In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. (In Portuguese). <https://proceedings.science/sbsr-2019/papers/caracterizacao-da-dinamica-da-soja--milho-e-algodao-com-base-em-dados-sar-polarimetricos-do-sentinel-1a->
7. Oliveira, W. V.; Silva, N. R. F. E.; Vieira, D. C.; **Prudente, V. H. R.**; Moreira, M. A.; Sanches, I. D. Analysis of the expansion and dynamics of agriculture in central pivots in the microregion of Barreiras/BA from the interpretation of Landsat-8/OLI images. In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. (In Portuguese). <https://proceedings.science/sbsr-2019/papers/analise-da-expansao-e-dinamica-da-agricultura-em-pivos-centrais-na-microrregiao-de-barreiras-ba-a-partir-da-interpretacao>
8. Oldoni, L. V.; **Prudente, V. H. R.**; Vieira, D. C.; Sanches, I. D. . Mapping of agricultural crops using Sentinel-1A polarimetric multitemporal SAR data. In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. (In Portuguese). <https://proceedings.science/sbsr-2019/papers/mapeamento-de-culturas-agricolas-utilizando-dados-multitemporal-sar-polarimetricos-do-sentinel-1a->
9. Vieira, D. C.; **Prudente, V. H. R.**; Silva, N. R. F. E.; Oliveira, W. V.; Oldoni, L. V.; Adami, M.; Becker, W. R.; Korting, T. S.; Sanches, I. D. . Identification of annual cycle agricultural areas in the state of Paraná from EVI2 and NDVI time metrics using the google earth engine. In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. (In Portuguese). <https://proceedings.science/sbsr-2019/papers/identificacao-de-areas-agricolas-de-ciclo-anual-no-estado-do-parana-a-partir-de-metricas-temporais-de-evi2-e-ndvi-utiliz>
10. Caon, I. L.; Becker, W. R.; Ganascini, D.; Cattani, C. E. V.; Mendes, I. S.; **Prudente, V. H. R.**; Oldoni, L. V.; Antunes, J. F. G.; Mercante, E. . Comparison between rf and Maxver classifiers, for land use and coverage classification, in different time densities. In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. (In Portuguese). <https://proceedings.science/sbsr-2019/papers/comparativo-entre-os-classificadores-rf-e-maxver--para-classificacao-de-uso-e-cobertura-da-terra--em-diferentes-densidad?lang=en>
11. **Prudente, V. H. R.**; Vieira, D. C.; Silva, N. R. F. E.; Oliveira, W. V.; Oldoni, L. V.; Adami, M.; Sanches, I. D.; Identification of areas suitable for the installation of cereal collection storage units in the state of Rio Grande do Sul. In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. (In Portuguese). <https://proceedings.science/sbsr-2019/papers/identificacao-de-areas-aptas-a-instalacao-de-unidades-armazenadoras-coletoras-de-cereais-no-estado-do-rio-grande-do-sul->

12. Becker, W. R.; Caon, I. L.; Cattani, C. E. V.; Mercante, E.; Johann, J. A.; Ganascini, D.; **Prudente, V. H. R.**; Median and standard deviation of NDVI spectrum-temporal profile as rating parameters. In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. (In Portuguese). <https://proceedings.science/sbsr-2019/papers/mediana-e-desvio-padrao-do-perfil-espectro-temporal-de-ndvi-como-parametros-de-classificacao>
13. Silva, N. R. F. E.; Oliveira, W. V.; Vieira, D. C.; **Prudente, V. H. R.**; Moraes, E. C. . Characterization of environmental fragility of the Gi8/PE water basin through multi-criteria analysis. In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. (In Portuguese). <https://proceedings.science/sbsr-2019/papers/caracterizacao-da-fragilidade-ambiental-da-bacia-hidrografica-gi8-pe-por-meio-de-analise-multicriterio>
14. **Prudente, V. H. R.**; Dutra, A. C.; Vieira, D. C.; Silva, N. R. F. E.; Moraes, E. C.; Shimabukuro, Y. E.; Sanches, I. D. Influence of the calibration factor between plates in the study of vegetation. In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. (In Portuguese). <https://proceedings.science/sbsr-2019/papers/influencia-do-fator-de-calibracao-entre-placas-no-estudo-da-vegetacao>
15. Dutra, A. C.; Prudente, V. H. R.; Vieira, D. C.; Silva, N. R. F. E.; Silva Junior, C. H. L.; Moraes, E. C.; Shimabukuro, Y. E.; Sanches, I. D. . Reflectance factor of different beach almond vegetation leaves (T. catappa sp). In: XIX Brazilian Symposium on Remote Sensing, 2019, Santos. (In Portuguese). <https://proceedings.science/sbsr-2019/papers/fator-de-reflectancia-de-diferentes-folhas-de-vegetacao-de-amendoeira-da-praia--t-catappa-sp-?lang=en>
16. **Prudente, V. H. R.**; Mercante, E; Oldoni, L. V.; Cattani, C. E. V.; Silva, B. B. . Comparison between Leaf Area Index and Vegetation Index obtained by terrestrial remote sensing. In: XVII Selper International Symposium, 2016, Puerto Iguazú - Argentina. (In Portuguese). https://www.researchgate.net/publication/315664437_COMPARACAO_ENTRE_O_I_NDICE_DE_AREA_FOLIAR_E_INDICES_DE_VEGETACAO_OBTIDOS_POR_S_ENSORIAMENTO_REMOTO_TERRESTRE
17. Becker, W R; **Prudente, V H R**; Johann, J A; Richetti, J; Mercante, E: Obtaining spatial and temporal data of crops in the state of Paraná. In: XVIII Brazilian Symposium on Remote Sensing, 2015, João Pessoa. (In Portuguese). <http://www.dsr.inpe.br/sbsr2015/files/p0650.pdf>

Peer review for the following journals:

- Remote Sensing of Environmental
- International Society for Photogrammetry and Remote Sensing (ISPRS)
- International Journal of Applied Earth Observation and Geoinformation
- Remote Sensing Applications: Society and Environment
- AIMS Agriculture and Food
- Sensors
- Remote Sensing
- Rural Science
- Brazilian Journal of Cartography
- Geocarto International
- Agricultural and Forest Meteorology

- Online Geoenvironmental
- Computers and Electronics in Agriculture
- Heliyon

Grant Reviewer:

- NASA

Funding:

Current

2021-2024 **NASA (\$448,693)**. Land-Cover and Land-Use Change (LCLUC) Program. January 2021 to 2024. PI: M. Jain. Collaborators: V. Krishna, A. Lerner. **Postdoc: V. Prudente.**

Past

2019-2020 **CAPES-Print (US\$ 23,662.00)**. Institutional Program for Internationalization. SENSING - Satellites for ENvironmental Solutions Informing Nations Globally. October/2019 to September/2020. Ph.D Candidate: **V. Prudente**. Brazilian advisors: I. Sanches, M. Adami (INPE). Foreign Advisor: S. Skakun (UMD)

2018-2021 **CNPq (BRL 10,638.00)**. Research Grant, CNPq Bench Fee. Ph.D Candidate: **V. Prudente**. Advisors: I. Sanches, M. Adami (INPE).

Teaching/Lectures and Advising Experience:

- 2024 Co-advising Andre Dalla Bernardina Garcia at the National Institute for Space Research (INPE/Brazil). Thesis: Advancing fruit crop mapping using remote sensing.
- 2023 Co-advising Andre Dalla Bernardina Garcia at the National Institute for Space Research (INPE/Brazil). Thesis: Mapping of irrigated rice in Santa Catarina based on optical and radar images of the sentinel constellation.
- 2023 Talk/poster at the NASA LCLUC Science Team Meeting. Poster: Policy, Market, and Climate Change Impacts on Maize Production in Mexico.
- 2024 Poster at the NASA LCLUC Science Team Meeting. Poster: Policy, Market, and Climate Change Impacts on Maize Production in Mexico.
- 2019 Speaker at the International Workshop on Earth Observations for Agricultural Monitoring. Lecture: SAR Polarimetric and Interferometric data for Crop Classification. New Delhi, India
- 2018 Instructor for the “*Agriculture Remote Sensing*” module, at the **XX Course on the school use of Remote Sensing in the study of the Environment**

- 2017 Undergraduate Senior Thesis Advisor for agricultural engineering course entitled ***Correlation between leaf area, chlorophyll and NDVI indices with the phenological phases of soybean and common bean crops*** (In Portuguese) for the undergraduate student: Elvis Roberto Picinato Junior
- 2017 Undergraduate Senior Thesis Advisor for agricultural engineering course entitled ***Comparison between leaf area indices and NDVI of bean and soybean crops obtained through terrestrial sensors*** (In Portuguese) for the undergraduate student: Fayllon Ricardo Furquim Garcia Rodrigues
- 2016 Instructor for **Introduction to QGIS software** course

Committee Member:

- 2022 Committee member: Henrique dos Santos Felippeto, Ph.D. Agricultural Engineering, Western Paraná State University – Brazil.,
Title: ***Multispectral Images from a UAV (Unmanned Aerial Vehicle) in wheat yield estimation*** (In Portuguese)
- 2022 Committee member: Carlos Eduardo Vizzotto Cattani, Ph.D. Agricultural Engineering, Western Paraná State University – Brazil.,
Title: ***Gross primary productivity in areas with different types of land use and coverage*** (In Portuguese)
- 2023 Committee member: Newmar Wegner, Ph.D. Agricultural Engineering, Western Paraná State University – Brazil.,
Title: ***Use of geographical data and forecast automated with Neural Networks in agriculture*** (In Portuguese)
- 2023 Committee member: Alex Paludo, Ph.D. Agricultural Engineering, Western Paraná State University – Brazil.,
Title: ***Geospatial analysis of the storage capacity units in relation to agricultural production*** (In Portuguese)
- 2023 Committee member: Isabella Alves da Cunha, Master in Agricultural Engineering (Qualifying Examination), University of Campinas – Brazil.,
Title: ***Using SAR Images to Predict Soybean Yield*** (In Portuguese)
- 2024 Committee member: Samuel Kuhl, Master. Agricultural Engineering, Western Paraná State University – Brazil.,
Title: ***Variable Selection for Deforestation Classification Optimization on the Google Earth Engine Platform*** (In Portuguese)
- 2024 Committee member: Isabella Alves da Cunha, Master in Agricultural Engineering, University of Campinas – Brazil.,
Title: ***Using SAR Images to Predict Soybean Yield*** (In Portuguese)

Ph.D. – Academic History - Courses:

1. Physical Principles of Remote Sensing
2. Introduction to Remote Sensors
3. Introduction to Geoprocessing
4. Imaging Radar: Principles and Applications
5. Targets Spectral Behavior
6. Agricultural Remote Sensing
7. Digital Image Processing of Remote Sensing
8. Advanced Topics in Image Processing
9. Spatial Analysis
10. Hyperspectral Remote Sensing

Certifications (courses and training):

- | | |
|------|---|
| 2016 | Application of Satellite Remote Sensing to Support Water Resources Management.
ARSET-NASA, Brazil. |
| 2017 | Echoes in space - Introduction to Radar Remote Sensing. EO-College (Online) |
| 2018 | TAT-6: Integration of Radar and Optical Remote Sensing in Studying LCLUC.
European Space Agency, ESA-ESRIN, Croatia. |
| 2022 | Basic Principles of Radar Backscatter - EO-College (Online) |

Languages

Portuguese: Native
Spanish: Proficient
English: Proficient

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