Julio Cesar Pedrassoli

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AREAS OF EXPERTISE

Remote Sensing, Slum Mapping, Machine Learning, Cloud Computing, Urban Poverty

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REFERENCE CONTACTS:

1) Dr. Reinaldo Paul Pérez Machado (University of São Paulo, Brazil – USP)
E-mail: rpmgis@usp.br, phone number: +55 11 99377-7770

2) Dr. Monika Kuffer (University of Twente, Netherlands - UTwente)
E-mail: m.kuffer@utwente.nl, phone number: +31 6 24663308

CONTENTS

1. EDUCATION AND TRAINING

23/05/2012 – 22/12/2016 - **PH.D. IN GEOGRAPHY** – University of São Paulo (USP)
Thesis: Housing and remote sensing: an analysis of urban expansion in the MRSP using satellite images and spectral mixture models
Advisor: Reinaldo Paul Pérez Machado

27/05/2015 – 25/06/2016 – **DOCTORAL RESEARCH INTERNSHIP IN REMOTE SENSING AND GEOSCIENCE** – Columbia University
Thesis: Remote Sensing time-series and spectral mixture models for slum mapping
Advisor: Christopher Sennen Small

28/12/2009 – 28/05/2012 - **M.SC. IN GEOGRAPHY** – University of São Paulo (USP)
Thesis: Object-based image analysis for slum detection and classification of land use in Taboão da Serra/SP
Advisor: Ailton Luchiari

29/12/2003 – 28/12/2009 - **B.SC. IN GEOGRAPHY** – São Paulo State University (UNESP)
Thesis: Analysis of environmental justice in the cities of the Middle Paranapanema-SP river basin: Integration between GIS and RS
Advisor: Andrea Aparecida Zacharias

28/12/2003 – 27/12/2008 - **LICENCIATE IN GEOGRAPHY** – São Paulo State University (UNESP)

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2. WORK EXPERIENCE

31/12/2020 – CURRENT – São Paulo, Brazil - **URBAN MAPPING COORDINATOR – BRAZILIAN BIOMES MAPPING PROJECT (MAPBIOMAS)**

The Brazilian Annual Land Use and Land Cover Mapping Project is an initiative that involves a collaborative network of Biomes, land use, remote sensing, GIS, and computer science experts that rely on the Google Earth Engine platform, its cloud processing architecture, and automated classifiers capabilities to generate Brazil's annual land use and land cover time series

My duties are coordinating, along with a team of researchers and technicians, the following urban infrastructure mapping collections to compose the annual statistics and land cover change analysis in Brazil from 1985.

https://mapbiomas.org/en/

24/05/2015 – 07/07/2016 – New York, United States - **RESEARCH SCHOLAR – COLUMBIA UNIVERSITY, LAMONT-DOHERTY EARTH OBSERVATORY**

Brazilian Coordination for the Improvement of Higher Education Personnel (CAPES) and a Lemann Foundation Fellow:

Development of methodological procedures for detecting land use/land cover changes using spectral mixture models in Landsat time-series applying global reference end members, aiming to detect and quantify slums in the São Paulo Metropolitan Area, Brazil, in collaboration with Lamont-Doherty Earth Observatory professor Christopher Small.

https://www.ldeo.columbia.edu/

10/04/2014 – CURRENT – Salvador, Brazil **- ADJUNCT PROFESSOR – FEDERAL UNIVERSITY OF BAHIA (UFBA) - DEPARTMENT OF TRANSPORTATION ENGINEERING AND GEODESY**

1) Teaching (undergraduate) - 8 hours/week (alternate semesters):
- Geo-processing;
- Orbital Remote Sensing;
- Digital Image Processing;
- Digital Photogrammetry;
- Spatial Analysis;
- Materials Technology Applied to Cartographic Engineering;
- Cartographic visualization and generalization;
- Land Parceling;
- Final undergrad dissertation;

2) Teaching (post-graduate) - 2 hours/week:

- Applied Remote Sensing - Masters/Ph.D. in Civil Engineering;
- Applied Geo-processing - Masters/Ph.D. in Civil Engineering;

www.ufba.br

26/05/2013 – 04/03/2014 – São Paulo, Brazil - **GEOGRAPHER – POLIS INSTITUTE**

Coordinator of spatial data construction for the Institute's activities, including:

- Urban and environmental planning consulting;
- Advisory services to movements fighting for housing in Brazil;
- Construction and revision of master plans;
- Training in Geographic Information Systems;
- Construction of digital and analog resources for participatory mapping activities.

www.polis.org.br

26/04/2010 – 25/12/2012 – Taboão da Serra, Brazil - **GEOSPATIAL ANALYST – MUNICIPALITY OF TABOÃO DA SERRA, MUNICIPAL HOUSING OFFICE, CARTOGRAPHY DEPARTMENT**

Maintenance of the local government geospatial databases, aiming to:

- Slum mapping;
- Support urban land tenure projects (slum upgrading);
- Analysis of urban environmental degradation processes and value of territorial tax inconsistencies;
- Updating of the georeferenced municipal multi-purposes registry;
- Preparation and revision of the master plan maps;
- Coordination of aerophotogrammetric mapping for cadastral update purposes.

As complementary activities, I participated as a member in several bidding commissions and administrative commissions.

https://ts.sp.gov.br/

29/05/2009 – 25/04/2010 – São Paulo, Brazil - **GEOGRAPHY TEACHER – SÃO PAULO STATE GOVERNMENT, EDUCATION DEPARTMENT**

Geography teacher for elementary and high school students.

www.educacao.sp.gov.br/

3. LANGUAGE SKILLS

Mother tongue: Portuguese

Other languages:

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2
SPANISH	B2	B2	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

4. DIGITAL SKILLS

Office tools: Microsoft Office | Microsoft Word | Google Drive | Microsoft Excel | Microsoft Powerpoint | Google Docs | Google suite (Gmail Google Drive Google Slide Google Docs Google Sheets Google Forms Google)

GIS and Remote Sensing tools: QGIS | ArcGIS Suite (ArcMap ArcCatalog ArcGlobe ArcScene ArcPro) | ILWIS | ArcGIS | ENVI

Photogrammetry tools: Agisoft Photoscan | Pix4D | DJI drone | AgiSoft Metashape

Programming language and statistical packages: R and Rstudio | python | Google Earth Engine (GEE) | Javascript | Familiarity with Webscraping

Field geo-data collection: Kobo ToolBox | Open Data Kit (ODK)

5. HONORS AND AWARDS

11/06/2019 - **Best paper award** - 2019 Brazilian Symposium on Applied Physical Geography – Federal University of Ceará (UFC). Counter-hegemonic cartographies as tools for the realization of rights: the case of the community of Banhado in São José dos Campos – SP.

04/08/2018 - **Travel Grant award** - 2018 International Geographical Union (IGU) Conference (Canadá) – International Geographical Union (IGU).

09/08/2017 - **Best paper award** - 2017 Young Scholars paper competition winner of International Geographical Union - IGU – International Geographical Union (IGU). Remote sensing application to identify and analyze slums over the São Paulo Metropolitan Area

30/04/2015 - **Lemman Fellowship** - Culumbia University (2015) – Lemman Foundation.

2008 - **Highest individual score** in the State of São Paulo in the national undergraduate performance exam (Second place nationally) in Geography – Brazilian Federal Government

6. NETWORKS AND MEMBERSHIPS

27/05/2020 – CURRENT - International Geographical Union (IGU) - Urban Commission - **steering committee member (2020-2024)**

7. PUBLICATIONS

Journal Articles

1. Justiniano, E. F.; Santos Jr., E. R.; Siqueira, J. V. N.; Morato, R. G.; Pedrassoli, J. C. et. al. "Proposal for an index of roads and structures for the mapping of non-vegetated urban surfaces using OSM and Sentinel-2 data". International Journal of Applied Earth Observation and Geoinformation. Impact factor (2021 JCR): 7,6720, v.109, p.102791, 2022. DOI: https://doi.org/10.1016/j.jag.2022.102791

2. Souza, T. G. D.; Fonseca, F. D. R.; Fernandes, V. D. O.; Pedrassoli, J. C. "Exploratory Spatial Analysis of housing prices obtained from web scraping techniques". The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 2021. Impact factor: 0.305. DOI: https://doi.org/10.5194/isprs-archives-XLIII-B4-2021-135-2021.

3. Gomes, J. G.; Pedrassoli, J. C. "Survey of Slum Housing Characteristics Using Drones: An Experiment in the Alto das Pombas Community, Salvador de Bahia/Brazil". Quaestiones Geographicae. Volume 40 (2021) - Issue 3 (September 2021). Cite Score: 2.2. DOI: https://doi.org/10.2478/quageo-2021-0031.

4. Ribeiro, J. C. D.; Melo, B. M. M.; Fantin, M.; Tavares, J. C.; Pedrassoli, J. C.; Martines, M. R. "Monitoring and decision support platform for territorial planning of the São Paulo water circuit (Plataforma de monitoramento e suporte a decisão para o planejamento territorial do circuito das águas Paulista) ". 2021, Revista Engenharia Urbana em Debate.

5. Santos, M. E. P.; Borja, P. C.; Pedrassoli, J. C.; Santos, A. F. "City Production Strategies in the Neoliberalization Context - Salvador as Example". 2021, Organizações & Sociedade. DOI: https://doi.org/10.1590/1984-92302021v28n9807EN.

6. Oliveira, U. R.; Brito, P. L.; Alixandrini Júnior, M. J.; Pedrassoli, J. C. "Change detection from Landsat images in the Ecological Station Raso da Catarina (Detecção de mudanças a partir de imagens Landsat na Esec Raso da Catarina)". 2021, Brazilian Journal of Development. DOI: https://doi.org/10.34117/bjdv7n12-762.

7. Brito, P. L.; Kuffer, M.; Koeva., M.; Pedrassoli, J. C.; Wang, J. "The Spatial Dimension of COVID-19: The Potential of Earth Observation Data in Support of Slum Communities with Evidence from Brazil". ISPRS International Journal of Geo-Information. 2020, 9(9), 557. Impact factor: 3.388. DOI: https://doi.org/10.3390/ijgi9090557.

8. Fantin, M.; Tavares, J. C.; Pedrassoli, J C.; Coelho, I. L. F.; Oyama, A. C.; Melo, B. "Counter-hegemonic cartographies as tools to enforce rights: the case of the Banhado community in São José dos Campos (Cartografias contra-hegemônicas como ferramentas de efetivação de direitos: o caso da comunidade do Banhado em São José dos Campos)". 2020 REDE - Revista Eletrônica do PRODEMA. DOI: https://doi.org/10.22411/rede2019.1301.05.

9. Fantin, M.; Pedrassoli, J. C; MorelliI, A. F. "Geotechnologies applied to the analysis of the impacts from the Federal Law Project 3,682 / 2012: risks and threats to conservation units (Geotecnologias aplicadas à análise dos impactos do Projeto de Lei Federal 3.682/2012: riscos e ameaças às unidades de conservação)". 2015 Revista Equador.

10. Pedrassoli, J. C. "Visual comparison between fusion of CBERS II B/CCD and Landsat 5/TM images using the panchromatic CBERS II B/HRC in free software (Comparação visual entre fusão de imagens CBERS II B/CCD e Landsat 5/TM utilizando a pancromática CBERS II B/HRC em software livre)". 2013, Revista eletrônica FACP.

11.　　Pedrassoli, J. C; Zacharias, A. A. "Analysis of Environmental Justice with support from Geotechnologies: Diagnostics and Subsidies to Public Policies and Urban Socio-Environmental Planning in the Middle Paranapenama/SP (Análise da Desigualdade Ambiental com apoio de Geotecnologias: Diagnósticos e Subsídios as Políticas Públicas e Planejamento Sócio- Ambiental Urbano nos Municipios do Médio Paranapenama/SP) ". Revista Ciencia Geográfica v.XIII, p.10 - 25, 2009.

Books

1.　　Santos, E.; Benevides, T.; Borja, P. C.; Borja, L. R. S. M.; Pedrassoli, J. C.; et. al. (Orgs). "QUALISalvador: Quality of the Urban Environment in the City of Bahia (QUALISalvador: qualidade do ambiente urbano na cidade da Bahia)". ISBN: 978-65-5630-288-1. EdUFBA, 2022.

Book Chapters

1.　　Pedrassoli, J. C.; Santos, L.; Santos, M. "The cartography of dwelling in Salvador (cartografia do habitar em Salvador)" in: QUALISalvador - qualidade do ambiente urbano na cidade da Bahia. Santos, E.; Benevides, T.; Borja, P. C.; Borja, L. R. S. M.; Pedrassoli, J. C.; et. al. (Orgs). p. 187-206. ISBN: 978-65-5630-288-1. EdUFBA, Salvador, 2022.

2.　　Pedrassoli, J. C.; Santos, L.; Santos, M. "The cartography of dwelling in Salvador (cartografia do habitar em Salvador)" in: QUALISalvador - qualidade do ambiente urbano na cidade da Bahia. Santos, E.; Benevides, T.; Borja, P. C.; Borja, L. R. S. M.; Pedrassoli, J. C.; et. al. (Orgs). p. 187-206. ISBN: 978-65-5630-288-1. EdUFBA, Salvador, 2022.

3.　　Borja, P. C.; Santos, M. E. P.; Pedrassoli, J. C.; Souza, J. R.; Moraes, L. R. S.; Santos, L et al. "The paths for the construction of the Urban-Environmental Quality Index of Salvador (Os caminhos para a construção do índice de qualidade urbano-ambiental de Salvador)". in: QUALISalvador - qualidade do ambiente urbano na cidade da Bahia. Santos, E.; Benevides, T.; Borja, P. C.; Borja, L. R. S. M.; Pedrassoli, J. C.; et. al. (Orgs). p. 465-522. ISBN: 978-65-5630-288-1. EdUFBA, Salvador, 2022.

4.　　Santos, R.; Branco, N.; Pedrassoli, J. C.; Zangali Junior, P.; Oliveira M. M. "The green, the climate and socio-environmental inequality in Salvador (O verde, o clima e desigualdade socioambiental em Salvador)". in: QUALISalvador - qualidade do ambiente urbano da cidade da Bahia. Santos, E.; Benevides, T.; Borja, P. C.; Borja, L. R. S. M.; Pedrassoli, J. C.; et. al. (Orgs). p. 95-124. ISBN: 978-65-5630-288-1. EdUFBA, Salvador, 2022.

5.　　Borja, P. C.; Santos, M. E. P.; Moraes, L. R. S.; Oliveira, N.; Pedrassoli, J. C. et.al. "Living in Salvador: the Salvador Urban-Environmental Quality Index (Viver em Salvador: o índice de qualidade ambiental urbana)" in: QUALISalvador - qualidade do ambiente urbano na cidade da Bahia. Santos, E.; Benevides, T.; Borja, P. C.; Borja, L. R. S. M.; Pedrassoli, J. C.; et. al. (Orgs). p. 59-84. ISBN: 978-65-5630-288-1. EdUFBA, Salvador, 2022.

6.　　Oyama, A. C.; Melo, B. M.; Santos Junior, E. R.; Pedrassoli, J. C.; Fantin, M. "Botton-up Geoprocessing for community action (Geoprocessamento Popular para atuação comunitária)". in: Caminhos da Região Central Paulista. Vizioli. S. H. T; Fantin, M.; Sossae, F. C.; Júnior, O. A. (orgs). DOI: https://doi.org/10.11606/9786586810240. ISBN: 978-65-86810-24-0. São Carlos, IAU-USP, 2021.

7.　　Oliveira, U. R; Brito, P. L.; Alixandrini, M. J.; Pedrassoli, J. C.; Brito, R. L. "Use of Landsat satellite images in the temporal study of land cover in the Raso of Catarina Ecological Station (Uso de imagens de satélite Landsat no estudo temporal da cobertura da terra no Raso da Catarina) ". in: Aplicações de Sensoriamento Remoto 3, Leonardo Tulio (org). Athena Publishing. DOI: 10.22533/at.ed.3791923094, 2021.

8.   Pedrassoli, J. C. "Urban expansion and housing inequality in São Paulo Metropolitan region in the last 30 Years: an approach from cartography and remote sensing ". in: Digital Cities and Spatial Justice Fonseca, A. A. M.; Vilariño, P. B. E. (Eds.) ISBN 978-84-697-4984-5. V.1, 2017, p. 21-40.

9.   Pedrassoli, J. C.; Machado, R. P. P. "Remote sensing application to identify and analyze slums over the São Paulo Metropolitan Area". in: Digital Cities and Spatial Justice Fonseca, A. A. M.; Vilariño, P. B. E. (Eds.) ISBN 978-84-697-4984-5. V.1, 2017, p. 41-58.

10.   Ambrósio, R.P.; Pedrassoli, J. C.; Santos, A. R.; Vasquez, D. A. "Organization of the territory and forms of housing provision in the RMBS (Organização do território e formas de provisão da moradia na RMBS)". in: Baixada Santista: transformations in the urban order. ISBN: 978-85-7785-357-1. Brandão M. V. M.; Morell, M. G. G.; Santos, A. R. (Eds.) 2015. Letra Capital.

Conference Papers

1.   Martines, M. R.; Pedrassoli, J. C.; Fantin, M.; Ferreira, R. V. "Analysis of racial segregation through the exploration of spatial indices of residential urban segregation: The case of the city of Salvador - BA ". 2022, Proceedings of the XIX National Meeting of Post-graduate Research in Geography.

2.   Pedrassoli, J. C.; Gomes, J. G. "Development of an Interactive Time-Series Sampling Tool for Urban Environment Land Use/Land Cover (LULC) Indicators: Concept Test in Salvador, Bahia, Brazi". 12th Geomundus Conference, 2020. Munster.

3.   Fantin, M. Pedrassoli, J. C.; Zaratine, G, N.; Coelho, I. L. F.   "The use of UAV for slums land regularization: potentialities, hindrances and challenges".   XXII International Conference of the Iberoamerican society of digital graphics, 2018, São Carlos proceedings, 2018. DOI: 10.5151/sigradi2018-1498.
4.
5.   Oyama, A. C.; Coelho, I. L. F.; Pedrassoli, J. C.; Fantin, M.; Martines, M. "The use of Remoted Piloted Aircraft as a didactic tool in subjects of the architecture and urbanism course. (O uso de RPA como ferramenta didática em disciplinas do curso de arquitetura e urbanismo)". 2019, Proceedings of XIX Brazilian Symposium on Remote Sensing. ISBN: 978-85-17-00097-3.

6.   Fantin, M.; Pedrassoli, J. C. "Selection of study areas through the Municipal Human development Index and vertical residential real estate projects (1985 - 2013) for the municipality of São Paulo - SP. (Seleção de áreas de estudos através do IDHM e dos lançamentos imobiliários verticais para o município de São Paulo)". 2019. Proceedings of XIX Brazilian Symposium on Remote Sensing ISBN: 978-85-17-00097-3.

7.   Santos, R. A.; Andrade, T.; Branco, N.; Borja, P.; Pedrassoli, J. C.; Vale, T. "Vegetation Cover and Surface Temperature in Urban Areas: An Analysis Using Remote Sensing in the City of Salvador, Bahia, Brazil". Proceedings of the Passive Low Energy Archtecture Design to Thrive - PLEA 2017, 2017, Edimburgo.

8.   Cruz, P. H.; Pedrassoli, J. C.; Heimer, M. "Illegal housing occupation in conservation units: case study in the Pituaçu Metropolitan Park using orbital images available in the cloud (Ocupação indevida em unidades de conservação: estudo de caso no Parque Metropolitano de Pituaçu com uso de imagens orbitais disponíveis na nuvem)". 2017, Proceedings of the XVIII Brazilian Symposium on Remote Sensing ISBN: 978-85-17-00088-1.

9.   Fantin, M.; Pedrassoli, J. C. "Geotechnologies applied to the analysis of conflicts between preferred areas for the production of mineral aggregates and their main vectors of sterilization (Geotecnologias aplicadas à análise dos conflitos entre as áreas preferenciais para a produção de agregados minerais e seus

principais vetores de esterilização)". Proceedings of the XIV Brazilian Symposium on Remote Sensing. João Pessoa-PB, Brazil, 2015.

10.   Carvalho, I. M.; Cunha, A. A,; Souza, F. A,; Pedrassoli, J. C. "Integration between SR and GIS for modeling and managing spatiotemporal surface temperature data using LANDSAT 7 ETM imagery (Integração entre SR e SIG para a modelagem e o gerenciamento de dados espaçotemporais de temperatura de superfície utilizando imagens do sensor ETM do LANDSAT 7)". Proceedings of the XVII Brazilian Symposium in Remote Sensing. João Pessoa, PB, Brazil, 2015.

11.   Pedrassoli, J. C. "Technical Procedures Adopted for the Definition of Territorial Monitoring Areas in the Baixada Santista and Northern Coast of São Paulo for the Sustainable Coast Project". Proceedings of the Brazilian Symposium in Applied Physical Geography - SBGFA 2013, Vitória-ES, Brazil.

12.   Pedrassoli, J. C.; Zacharias, A. A. "Integration between Remote Sensing and Geographic Information Systems (ISRSIG) for analysis of environmental inequality in Ourinhos/SP". Proceedings of the XIV Brazilian Symposium on Remote Sensing, Natal, Brazil, 2009.

13.   Gomes, J. G.; Pedrassoli, J. C. "Unintentional falls and its correlation to slums housing characteristics in São Paulo city, Brazil". Proceedings of the 3rd CEGOT International Meeting. university of Coimbra, Portugal, 2019.

14.   Brito, P.; Costa, F.; Pedrassoli, J. C.; Grundy, C.; Brito, R. L.; Hussen, K. "The potential use of drones to identify epidemiological risk predictors in slums". Proceedings of the I Seminar on Technologies for Intelligent and Sustainable Cities. Salvador, Brazil. 2019.

15.   Santos, R. A.; Pedrassoli, J. C.; Branco, N. L. "Mapping vegetation cover and surface temperature by remote sensing: Intra-urban analysis in Salvador". Proceedings of the XXII Brazilian Congress on Urban Trees. Salvador, Brazil, 2018.

Conference Abstracts
1.   Pedrassoli, J. C. "Remote Sensing, GIS, and urban farming mapping: examples, potential and limitations. An approach in Salvador, Brazil". Brazilian-German frontiers of science and technology papers book. Potsdam, 2017.

2.   Rios Oliveira, U.; Lustosa Brito, P.; Pedrassoli, J. C.; Antunes Zaloti, F.; Mara Hadlich, G. "Landsat 8 image classification through segmentation in free software to analyze the land use/land cover surrounding the Raso da Catarina ecological station, Bahia/Brazil". Proceedings of the 27 International Cartographic Conference 16 General Assembly August 23-28, 2015, | Rio de Janeiro / Brazil: Maps Connecting the World.

Technical Reports
1.   Santos Junior, E. R.; Justiniano, E. F.; Melo, B. M.; Shimbo, J.; Azevedo, T.; Pedrassoli, J. C. "Analysis of urban occupation around water bodies in Brazil ". MapBiomas Technical note. Available at: https://tinyurl.com/zx6w9c9h.

8. PROJECTS

11/2022 – CURRENT - **ESA Tender - Earth Observation for SDG Targets and Indicators (Lot-1) - INFORMAL SETTLEMENT MAPPING**
Keywords: Earth Observation, Deprived Areas, Machine Learning, Deep Learning.
Participants: Julio César Pedrassoli (MapBiomas/Federal university of Bahia); Monika Kuffer Coordinator/University of Twente); Claudio Persello (University of Twente); Dana Thomsom (IDEAMAPS Network); Sabine Vanhuysse (University Libre de Bruxelles); Eleonore Wolff (University Libre de Bruxelles);

12/2021 – 10/2022 - **Solving Ethical Challenges in the Design of Open-Source Environments: Scaling Urban Mapping Models in View of the Locus Charter**
Keywords: Scalability, Urban Classification Models, Machine Learning, Transparency.
Participants: Lorraine Oliveira Trento (University of Twente); Julio Cesar Pedrassoli (MapBiomas/Federal University of Bahia); Monika Kuffer (University of Twente).
The project is funded by IBM/Notre Dame University (https://techethicslab.nd.edu/news/notre-dame-ibm-technologyethics-lab-announces-funding-for-proposals/).

01/2020 – CURRENT – **MapBiomas: Annual Brazilian LULC Maps**
Keywords: Remote Sensing, Cloud Computing, Google Earth Engine, Time-series, LULC changes, Brazil.
Participants: multiple.
The project is funded by multiple partners globally.
https://mapbiomas.org/en/project

09/2021 – CURRENT - **Platform for monitoring the urban green areas of the State of São Paulo using Cloud Computing – UrbVerde (UrbGreen)**
Keywords: Remote Sensing, Cloud Computing, Google Earth Engine, Urban Green Spaces, Heat Islands
Participants: Julio Cesar Pedrassoli (MapBiomas/Federal University of Bahia); Marcel Fantin (University of São Paulo); Marcos Roberto Martines (Federal University of São Carlos); Rubia Gomes Morato (University of São Paulo); Fernando Shinji Kawakubo (University of São Paulo).
The project is funded by the University of São Paulo/PIPAE arrangement.

12/2018 – CURRENT - **Mapping Urban Growth and Electrification in Brazil using Night Light**
Keywords: Remote Sensing, NighLights, Time-series, Brazil.
Participants: Julio Cesar Pedrassoli (MapBiomas/Federal University of Bahia); Reinaldo Paul Perez Machado (University of São Paulo); Christopher Small (Columbia University); Ulisses Denache (Federal Institute of Maranhão). The project is funded by the FullBright Foundation.

12/2019 – CURRENT - **Socio-Environmental Atlas of Lençóis Maranhenses**
Keywords: Cybercartography, Atlas, Remote Sensing, Environment.
Participants: Julio Cesar Pedrassoli (MapBiomas/Federal University of Bahia); Reinaldo Paul Perez Machado (University of São Paulo); Ulisses Denache (Federal institute of Maranhão); Fraser Taylor (Carleton University).
The project is funded by the Foundation for Research Support of the State of São Paulo (FAPESP).

01/2020 – 06/2022 – **GeoFight COVID 19 Bahia (GeoCombate)**
Keywords: Data Analysis, Data Integration, Mapping, Covid 19, Bahia
Participants: Julio Cesar Pedrassoli (MapBiomas/Federal University of Bahia), Patricia Lustosa Brito (Federal University of Bahia), Artur Caldas Brandão (Federal University of Bahia), Vivian de Oliveira Fernandes (Federal University of Bahia), Marcella Sgura Viana (Federal University of Bahia), Fabíola Andrade Souza (Federal

University of Bahia), Juan Pedro Moreno Delgado (Federal University of Bahia), Jorge Ubirajara Pedreira Júnior (Federal University of Bahia).
https://monitor-geocombate.github.io/

12/2016 – 12/2021 - **High Rise Living and the Inclusive City (HIGHRISE)**
Keywords: Urban Nerticalization, cartography, France, Brazil.
Participants: Manoel Rodrigues Alves (University of São Paulo); Julio Cesar Pedrassoli (MapBiomas/Federal University of Bahia); Christian Montes (Univerity Lyon 2).
The project was jointly funded by FAPESP (Brazil) and ANR (France).
https://anr.fr/Project-ANR-16-CE41-0010

9. TALKS AND WORKSHOPS

07/09/2022 - Earth Observation in support of SDG11: Mapping urban deprivation using remote sensing
The Geoscience and Remote Sensing Society (GRSS) webinar series.
Webinar Speakers: Monika Kuffer, University of Twente, Julio Pedrassoli, Federal University of Bahia, Dennis Mwaniki, UN-Habitat. https://www.grss-ieee.org/events/earth-observation-in-support-of-sdg-11/

27/11/2020 - Accessing, mapping and exporting Nitrogen Dioxide data on Google Earth Engine
Workshop taught at Geomundus conference 2020. https://geomundus.org/2020/

03/06/2019 – 03/06/2019 - Verticalization processes and readings of urban territory
Workshop taught at the Symposium on real estate production and other city doings" in the Federal University of Bahia, Brazi.

22/01/2019 – L'utilisation de donneés télédetection (Sattelite et drone) pour l'analyse de l'habitat précarieet les inegalités spatiales
Talk at "Master Geographies Numériques" master course – University of Lyon 2, France.

08/11/2018 - The use of RPAs (Remotely Piloted Aircraft Systems) in the context of struggles for housing and heritage preservation
Workshop taught at 2018 Iberoamerican Symposium in Digital Graphics.

10. REVIEWING FOR JOURNALS
1. Revista Brasileira de Cartografia [2021, 2022]

2. Journal of the Royal Society Interface [2021]

3. Revista de Geografia e Ordenamento do Território (Journal of Geography and Spatial Planning) CEGOT [2020, 2021]

4. Revista do Departamento de Geografia (USP) [2020, 2021, 2022]

5. GEOUSP: espaço e tempo [2020, 2021]

6. BOLETIM PAULISTA DE GEOGRAFIA [2020, 2021]

11. MENTORING

Current:
Master Thesis
1.   Rivaldo Vieira santos. "Digital terrain model analysis". 2021 - ongoing. Graduate program in civil engineering - PPEC - Federal University of Bahia.
2.   Wendell Santana Fagundes. "Multitemporal analysis with satellite images". 2021 – ongoing. Graduate program in civil engineering - PPEC - Federal University of Bahia.

Ph.D.
1.   Paula Cristina Pedroso Moi. "Sustainability development index and Brazilian agricultural specialization: a spatial analysis". 2019 - ongoing. Thesis (Doctorate in Management). Federal University of Bahia.
2.   Rossana Alcântara Santos. "Urban environmental policy and urbanistic indices: implication in the construction of parameters for vegetation cover indicators in the city of Salvador". 2019 - ongoing. Thesis (Doctorate in Management). Federal University of Bahia.

Finished:
Master Thesis
Thaís Góes de Souza. "Spatial analysis of land cost from data obtained from the Application Programming Interface (API) of advertisement web pages". 2022. Graduate program in civil engineering - PPEC - Federal University of Bahia.

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12. GRADUATE COMMITTES (AS REGULAR MEMBER OR EXTERNAL EXAMINER)

1. Candidate: Ruhi Begum – Master's Geo-Information Science and Earth Observation - University of Twente
Year: 2022
Degree: Master Thesis
Role: external examiner
Title: Assessing multi-hazards exposure and risk perception - A case of Rhingya refugees in Cox`s Bhazar and Bhashan Char.

2. Candidate: Liniker de Jesus Barbosa – Master's program in civil engineering - PPEC - Federal University of Bahia
Year: 2022
Degree: Master Thesis
Role: regular member
Title: TOD Strategies and the City Statute Instruments: Evaluation of the Transportation and Land Use Relationship in the Surroundings of Metro Stations in the Metropolitan Region of Salvador

3. Candidate: Thais Goes de Sousa – Master's program in civil engineering - PPEC - Federal University of Bahia
Year: 2022
Degree: Master Thesis
Role: regular member

Title: Mapping real estate market prices obtained from web scraping of ad pages: spatial analysis of concentration and turnover of properties in the city.

4. Candidate: Sharvi Samir Khawte – Master's Geo-Information Science and Earth Observation - University of Twente
Year: 2022
Degree: Master Thesis
Role: external examiner
Title: 3D Modelling of Slums based on UAV data.

5. Candidate: Fabricio Ribeiro Garcia – Master's program in civil engineering - PPEC - Federal University of Bahia
Year: 2021
Degree: Master Thesis
Role: regular member
Title: Comparison of digital terrain models from hydrodynamic modeling applied to the identification of flooding areas.

6. Candidate: Lorraine Trento Oliveira – Master's Geo-Information Science and Earth Observation - University of Twente
Year: 2021
Degree: Master Thesis
Role: external examiner
Title: The diversity of deprived areas: applications of unsupervised machine learning and open geodata.

7. Candidate: Milena de Araújo Limoeiro – Master's program in civil engineering - PPEC - Federal University of Bahia
Year: 2020
Degree: Master Thesis
Role: regular member
Title: Using Geospatial Big Data to analyze the favorability of forest recovery in regions degraded by onshore oil and gas exploration.

8. Candidate: Arthur Rolim Marques – Master's program Physical geography - PPGF – University of São Paulo
Year: 2019
Degree: Master Thesis
Role: external examiner
Title: Spatial distribution of impervious surfaces (SIs) in the city of Belém, Pará.

9. Candidate: Rossana Alcântara – Master's program Environment, Water and Sanitation – Fderal university of Bahia
Year: 2018
Degree: Master Thesis
Role: external examiner
Title: Vegetation cover and surface temperature in the urban environment: a study in Salvador.

10. Candidate: Alexandre Aquino da Cunha – Master's program in civil engineering - PPEC - Federal University of Bahia
Year: 2018
Degree: Master Thesis
Role: regular member

Title: Erosion monitoring by close-range photogrammetry.

11. Candidate Lucimary Moreira Gomes Cardoso – Master's program in civil engineering - PPEC - Federal University of Bahia
Year: 2017
Degree: Master Thesis
Role: regular member
Title: Effects of Urbanization on the Climate of Salvador. Case Study: Southeast Façade.

Julio Cesar Pedrassoli   November, 2022