

PERSONAL INFORMATION:

Pedro Henrique Muniz Lima, BSc, MSc

Nationality: Brazilian

Date of birth: 09/01/1988

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Education

- 2015 – **PhD candidate, Natural Sciences, Geography - University of Vienna**
Dept. of Geography and Regional Research, Geomorphological Systems and Risk Research Group (ENGAGE).
PhD. Thesis title: "Landslide susceptibility mapping at varied scales. Methodological designs adaptations to cope with common input data related challenges".
Advisor: Univ.-Prof. Dipl.-Geogr. Dr. Thomas Glade
- 2013 – 2015 **MSc, Geography - Federal University of Rio de Janeiro, UFRJ, Brazil**
Dept. of Geography, Institute of Geosciences.
MSc. Thesis title: "The Drainage Efficiency Index (DEI) as a subsidy for a spatial analysis of areas susceptible to mass-movements occurrence". (Title translated from Portuguese)
Advisor: Univ.-Prof. Dr. Manoel do Couto Fernandes and Univ.-Prof. Dr. Ana Luiza Coelho Netto
- 2007 – 2012 **BSc, Biology, with a minor in environmental Sciences - Fluminense Federal University, UFF, Brazil**
Dept. of Biology, Institute of Biology.
BSc. Monography title: "Extreme rainfall events and sediment production in two different forested catchments in the Tijuca Massif - RJ: influences of recovering landslide, roads, and trails on rates of sediment yield and transport". (Title translated from Portuguese)
Advisor: Univ.-Prof. Dr. Ana Luiza Coelho Netto


Relevant work experience








- 2021 – **Researcher** in MoNEW and NoeMOTION Research projects.
Project leader: Univ.-Prof. Dipl.-Geogr. Dr. Thomas Glade
Department of Geography and Regional Research; ENGAGE - Geomorphological Systems and Risk Research
- 2019 – 2021 **Data Scientist** at Ubiq.ai www.ubiq.ai/
- 2019 – 2019 **Visiting researcher**, EURAC, Inst. for Earth Observation. www.eurac.edu/
- 2015 – 2019 **External PhD** at the ENGAGE working group.
Scholarship holder from the *Conselho Nacional de Desenvolvimento Científico e Tecnológico*, CNPq, Brazil.
- 2013 – 2013 **Environmental Analyst** at Terra Nova Escritório de Projetos Sociais e Ambientais.
- 2012 – 2012 **Project employee; GIS specialist** at "Geological-Geotechnical mapping update and evaluation of slope stability of the CNAEA nuclear power plant, Angra Dos Reis, RJ, Brazil". (Title translated from Portuguese)

Relevant work experience (continued)


2011 – 2012  **Project employee; GIS specialist** at "*Landslide susceptibility and risk mapping of the Angra dos Reis municipality, RJ, Brazil*" (Title translated from Portuguese)



Skills


Languages  Portuguese - Mother language.
English - Fluent in spoken and written.
German - Good comprehension skills, while lower communication ability.


Computer skills   -R;  -Python;  -SQL;  -Git;  -L^AT_EX; Microsoft Office; E-Learning;  -GIS (ArcGIS, ArcPRO, QGIS); numerical modeling (e.g., *r.avaflow*) ...

Teaching contributions

2019 & 2022  University of Vienna: Basics in Earth Surface Dynamics and Management (290023 VU)

2020  University of Vienna: Current research spectrum in geomorphology
 University of Vienna: Scientific Progress in Geomorphology (290212 VU)

2019  University of Vienna: Modelling in Physical Geography (290131 UE)


2014  Federal University of Rio de Janeiro: Hidrologia aplicada (*Applied hydrology*) (IGG-603)

Research Publications

Journal Articles

- 1 **Lima, P.**, Steger, S., Mergili, M. & Glade, T. Conventional statistical based landslide susceptibility models may only tell us half of the story: potential underestimation of landslide impact areas depending on the modelling design. *Geomorphology* (**submitted manuscript**) (2022).
- 2 **Lima, P.**, Steger, S., Murillo-García, F. & Glade, T. Literature review and bibliometric analysis on data-driven assessment of landslide susceptibility. *Journal of Mountain Sciences*. **19**, 1670–1698. ISSN: 1612-5118 (2022).
- 3 **Lima, P.**, Steger, S. & Glade, T. Counteracting flawed landslide data in statistically based landslide susceptibility modelling for very large areas: a national-scale assessment for Austria. *Landslides*. ISSN: 1612-5118. (2021) (2021).
- 4 Lin, Q., **Lima, P.**, Steger, S., Glade, T., Jiang, T., Zhang, J., Liu, T. & Wang, Y. National-scale data-driven rainfall induced landslide susceptibility mapping for China by accounting for incomplete landslide data. *Geoscience Frontiers* **12**, 101248. ISSN: 1674-9871 (2021).
- 5 Fernandes, M. C., Oliveira, L. F. B., Colares, I. V. V., Araújo, R. S. & **Lima, P.** Comportamento de análises em superfície planimétrica e modelada frente a representações cartográficas e índices geomorfológicos - bacia do Rio Cuiabá - Petrópolis (RJ). *Revista Brasileira de Geomorfologia* **18** (out. 2017).

Conference Proceedings, including oral, or poster presentations

- 1 **Lima, P.**, Steger, S. & Glade, T. *Comparison of non-landslide sampling strategies to counteract inventory-based biases within national-scale statistical landslide susceptibility models* in. **Vol. 19 (EGU2017-13523)** (2017b).  <https://meetingorganizer.copernicus.org/EGU2017/EGU2017-13523.pdf>.

- 2 **Lima, P.**, Steger, S., Glade, T. & Mergili, M. *Combining landslide susceptibility with potential runout: an integrative approach combining data-driven methods* in. **So6. Geomorphological hazards and risks** (University of Athens, Greece, 2019b). http://www.geomorph.org/wp-content/uploads/2020/01/RCG2019_Abstract-book_20200108.pdf.
- 3 Arango Carmona, M. I., **Lima, P.**, Mergili, M. & Glade, T. *Mobility and hazard analysis of selected landslides in Lower Austria* in. **Vol. 22 (EGU22-8646)** (2022). <https://doi.org/10.5194/egusphere-egu22-8646>.
- 4 Jiménez Donato, Y. A., **Lima, P.**, Arango Carmona, M. I. & Glade, T. *Risk assessment of earth mass movements in Lower Austria. Case study: NoeMOTION Project* in. **ICG2022-616** (University of Coimbra, Portugal, 2022). <https://doi.org/10.5194/icg2022-616>.
- 5 **Lima, P.**, Steger, S., Petschko, H., Goetz, J., Schweigl, J., Bertagnoli, M. & Glade, T. *Exploiting newly available landslide data to verify existing landslide susceptibility maps a decade after their implementation* in. **Vol. 22 (EGU22-7351)** (2022). <https://meetingorganizer.copernicus.org/EGU22/EGU22-7351.html>.
- 6 **Lima, P.**, Steger, S., Petschko, H., Goetz, J., Schweigl, J., Bertagnoli, M. & Glade, T. *How well do landslide susceptibility maps hold up over time? Reviewing the accuracy of maps implemented for spatial planning in Lower Austria* in. **ICG2022-154** (University of Coimbra, Portugal, 2022). <https://doi.org/10.5194/icg2022-154>.
- 7 **Lima, P.**, Steger, S., Glade, T. & Mergili, M. *Enhancing the completeness of statistical landslide susceptibility modeling by integration of release and propagation zones* in. **Vol. 20 (2020-8630)** (2020). <https://meetingorganizer.copernicus.org/EGU2020/EGU2020-8630.pdf>.
- 8 **Lima, P.**, Steger, S. & Glade, T. *Evaluation of statistical and machine learning based landslide susceptibility models for very large areas – coping with error prone input data* in. **Vol. 21 (EGU2019-11314)** (2019). <https://meetingorganizer.copernicus.org/EGU2019/EGU2019-11314.pdf>.
- 9 **Lima, P.**, Steger, S. & Glade, T. *Landslide susceptibility mapping at national scale for Austria. Scientific challenges within applicable solutions* in (2018).
- 10 **Lima, P.**, Steger, S. & Glade, T. *Modelling strategies to cope with limitations of statistical landslide susceptibility models applied for large areas. A national scale study for the Austrian territory* in. **Vol. 20 (EGU2018-9067)** (2018). <https://meetingorganizer.copernicus.org/EGU2018/EGU2018-9067.pdf>.
- 11 Coelho Netto, A. L., Facadio, A. C., Silva, R. & **Lima, P.** *Bioclimatic changes and landslide recurrence in the mountainous region of Rio de Janeiro: are we ready to face the next landslide disaster?* in. **Vol. 19 (EGU2017-17718)** (2017). <https://meetingorganizer.copernicus.org/EGU2017/EGU2017-17718.pdf>.
- 12 **Lima, P.**, Coelho Netto, A. L. & Fernandes, M. C. *The drainage efficiency index (DEI) as a morphological indicator of landslide spatial occurrence in mountainous catchments. A case of study applied in the mountainous region of Brazilian Southeastern* in. **Vol. 18, EGU2016-7750** (2016). <https://meetingorganizer.copernicus.org/EGU2016/EGU2016-7750.pdf>.
- 13 **Lima, P.**, Coutinho, B. H., Gomes, G. B. & Coelho Netto, A. L. *Topographic Parameters related to translational landslide occurrence and susceptibility mapping at Córrego Dantas, Nova Friburgo, RJ.* in (2015).
- 14 Borges, G. F., **Lima, P.** & Avelar, A. S. *Geomorfologia, solos e movimentos de massa ocorridos em janeiro de 2011 na bacia do Córrego Dantas, Nova Friburgo (RJ)* in. **5** (Universidade Federal do Amazonas, out. 2014), 141–144. <https://www.periodicos.ufam.edu.br/index.php/revista-geonorte/article/view/1291>.
- 15 Borges, G. F., **Lima, P.** & Avelar, A. S. *Geomorfologia, solos e movimentos de massa ocorridos em janeiro de 2011 na bacia do Córrego Dantas, Nova Friburgo (RJ)* in (out. 2014).
- 16 **Lima, P.**, Coutinho, B. H., Gomes, G. B., Fernandes, M. C. & Coelho Netto, A. L. *Parâmetros morfométricos relacionados às bacias de 1ª ordem e a ocorrência de deslizamentos rasos na bacia do Córrego Dantas: Nova Friburgo - RJ* in. **5** (Universidade Federal do Amazonas, out. 2014), 218–223. <https://www.periodicos.ufam.edu.br/index.php/revista-geonorte/article/view/1305>.

- 17 Araujo, I. S., Barbosa, L. S., **Lima, P.**, Avelar, A. S. & Rotunno Filho, O. C. *Modelagem Hidrológica das interações de uso urbano e cobertura vegetal na bacia do Rio Cachoeira, Maciço da Tijuca - RJ*. in. **Anais do 9 Sinageo: Geomorfologia de encostas** (2012). <http://www.sinageo.org.br/2012/trabalhos/2/2-506-633.html>.
- 18 Barbosa, L. S., **Lima, P.**, Araújo, I. S., Sato, A. M. & Avelar, A. S. *Carta geomorfológica em base funcional como subsidio a carta de suscetibilidade aos movimentos de massa: estudo de caso no município de Angra dos Reis, RJ*. in (2012).
- 19 Barbosa, L. S., **Lima, P.**, Negreiros, A. B. & Coelho Netto, A. L. *Respostas hidrológicas e produção de sedimentos em uma clareira de deslizamento em ambiente montanhoso florestal, Maciço da Tijuca, Rio de Janeiro, Brasil* in (2012).
- 20 **Lima, P.**, Barbosa, L. S., Negreiros, A. B. & Coelho Netto, A. L. *Impulsos Variáveis de Chuvas e Descarga de Sedimentos em duas Diferentes Bacias no Maciço da Tijuca (Rio de Janeiro, Brasil): influências de clareiras de deslizamentos, estradas pavimentadas e trilhas*. in (2012).
- 21 Negreiros, A. B., **Lima, P.**, Barbosa, L. S. & Coelho Netto, A. L. *Avaliação da Recuperação vegetal e respostas hidro-erosivas em cicatrizes de deslizamentos em área montanhosa de floresta Atlântica, Maciço da Tijuca, RJ*. in. **Anais do 9 Sinageo: Geomorfologia de encostas** (2012). <http://www.sinageo.org.br/2012/trabalhos/1/1-678-670.html>.
- 22 Negreiros, A. B., **Lima, P.**, Barbosa, L. S. & Coelho Netto, A. L. *Recuperation of Atlantic Forest and Hydro-Erosive Responses in Landslides Scars on Steep Slopes, Rio de Janeiro, Brasil* in (2012).
- 23 Barbosa, L. S., Silva, R. P., **Lima, P.** & Coelho Netto, A. C. *Respostas hidrológicas e produção de sedimentos numa clareira de deslizamento em ambiente montanhoso*. in (2011).
- 24 **Lima, P.**, Silva, R. P., Barbosa, L. S. & Coelho Netto, A. C. *Impulsos variáveis de chuvas e descarga de sedimentos em pequenas bacias florestadas no Maciço da Tijuca: influências de clareiras de deslizamentos, estradas pavimentadas e trilhas*. in (2011).
- 25 Silva, R. P., Barbosa, L. S., **Lima, P.** & Coelho Netto, A. C. *Mapeamento de fontes de produção de sedimentos em encostas montanhosas sob Floresta Atlântica: Parque Nacional da Tijuca (PNT), Maciço da Tijuca, Rio de Janeiro* in (2011).
- 26 **Lima, P.**, Faria, F. H. C. & Coelho Netto, A. C. *Reabilitação funcional em clareiras de deslizamentos na floresta atlântica e efeitos na produção de sedimentos em períodos chuvosos*. in (2010).









Books and Chapters

- 1 **Lima, P.**, Steger, S., Glade, T., Tilch, N., Schwarz, L. & Kociu, A. en. in *Advancing Culture of Living with Landslides*. WLF 2017 (eds Mikos, M., Tiwari, B., Yin, Y. & Sassa, K.) 943–951 (Springer International Publishing, Cham, 2017). ISBN: 978-3-319-53498-5.
- 2 Coelho Netto, A. L., Silva, R., Facadio, A. C. & **Lima, P.** in *Willy Lacerda: doutor no saber e na arte de viver*. (eds Silva Nunes, A. L. L., Mahler, C. F., Danziger, F. A. B., de Oliveira e Castro, F. J. C., Lopes, F. R., Aragão, F. T. S., Martins, I. S. M. & Goretti da Motta, L. M.) 235–241 (Outras Letras, 2016).
- 3 Coelho Netto, A. L., Avelar, A. D. S., Sato, A. M., Fernandes, M. D. C., Oliveira, R. R., Costa, R. V., Barbosa, L. S., **Lima, P.** & Lacerda, W. A. in *Extreme Rainfall Induced Landslides an International Perspective* (eds Lacerda, W. A., Palmeira, E. M., Coelho Netto, A. L. & Ehrlich, M.) 263–296 (Oficina de Textos, São Paulo, SP, Brazil, 2014). ISBN: 978-85-7975-150-9. https://s3-sa-east-1.amazonaws.com/ofitexto/arquivos/sumarios/Extreme-rainfall-induced-landslides_sum.pdf.
- 4 Coelho Netto, A. L., Sato, A. M., de Souza Avelar, A., Vianna, L. G. G., Araújo, I. S., Ferreira, D. L. C., **Lima, P.**, Silva, A. P. A. & Silva, R. P. in *Landslide Science and Practice: Volume 6: Risk Assessment, Management and Mitigation* (eds Margottini, C., Canuti, P. & Sassa, K.) 377–384 (Springer Berlin Heidelberg, Berlin, Heidelberg, 2013). ISBN: 978-3-642-31319-6.







Thesis and monographs

- 1 **Lima, P.** *O índice de eficiência de drenagem como subsídio à análise espacial de áreas suscetíveis a ocorrência de movimentos de massa.* Master Thesis. 2015. <http://objdig.ufrj.br/16/teses/831103.pdf>.
- 2 **Lima, P.** *Eventos extremos de chuva e produção de sedimentos em duas diferentes bacias florestadas no Maciço da Tijuca - RJ: influências de clareiras de deslizamentos, estradas pavimentadas e trilhas na taxa de produção e transporte de sedimentos.* Monography; Bachelor. 2012.






Further relevant education

- 2019  Introduction to Working on the VSC-3 Cluster. (Workload: 8h). Vienna Scientific Cluster Research Center, VSC, Austria.
-  Linux and First Steps on the VSC-3 Cluster. (Workload: 8h). Vienna Scientific Cluster Research Center, VSC, Austria.
-  Professional Presentation of Research Results (Winterterm 2018). (Workload: 20h). Universität Wien, UNIVIE, Austria.
-  International Summer School on Geospatial Data Science Using R. (Workload: 38h). Friedrich-Schiller-Universität Jena, UNI/Jena, Germany.
- 2018  How to Approach Proposal Writing for Postdoc Funding Applications. (Workload: 20h). Universität Wien, UNIVIE, Austria.
- 2016  R - Advanced. (Workload: 20h). Universität Wien, UNIVIE, Austria.
-  Introduction to R. (Workload: 20h). Universität Wien, UNIVIE, Austria.
-  Laram School - International school on landslide risk assessment and mitigation. (Workload: 80h). Università degli Studi di Salerno, UniSa, Italy.

Services to the discipline - Reviewer of scientific publications

- 2016  4th World Landslide Forum
- 2018-2019  Environmental Modeling & Assessment
- 2019  5th World Landslide Forum
- 2021  Scientific Reports. Nature
- 2018-2022  Natural Hazards (NHAZ)
- 2022  Geoenvironmental Disasters

Grants & awards

- 2015 - 2019  Grants: *Conselho Nacional de Desenvolvimento Científico e Tecnológico*, CNPq, Brazil.
- 2013 - 2015  Grants: *Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do RJ*, FAPERJ, Brazil.
- 2010-2011  Grants: *Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do RJ*, FAPERJ, Brazil.
- 2014  Award: BOLSA NOTA 10, *Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do RJ*, FAPERJ, Brazil.
- 2013  Award: COBRAE 2013. Best contributions of COBRAE 2013 - Parallel Session (Field Investigations), Brazilian Association of Soil Mechanics.