Curriculum Vitae

Vinicius Louro

(Vinicius Hector Abud Louro)

vilouro@hotmail.com / vilouro@usp.br
Skype Name: hectorlouro
ORCID: 0000-0003-3430-4507
ResearcherID: I-4681-2013

Research Overview

My research is interdisciplinary, letting me navigate from geophysical exploration, environmental, and geohazard monitoring to hardware development, all at the same time. This is a wide thematic range that, however, has ESG guidelines and requirements as common grounds, directly or indirectly. As an assistant professor and leader of the GEOLIT group, I work from collecting geophysical and remote sensing data in the field to publishing it, securing funds and support for projects from agencies and industry, and establishing policies with government offices.

Education

04/2013 – 04/2017	**PhD, Sciences – Geophysics (Double-Degree).** Institute of Astronomy, Geophysics and Atmospheric Sciences, University of São Paulo (IAG-USP), Brazil. **PhD, Earth and Environmental Sciences (Double-Degree).** University of St. Andrews, UK. **Thesis:** "*Geophysical, Geochemical and Isotopic Analysis of the Figueira Branca Intrusive Suite, Mato Grosso, Brazil*"
03/2012 – 03/2013	**MSc, Geophysics.** IAG-USP, Brazil. Dissertation: "Indirect Detection of Remanent Magnetization: A Procedure for Composing Initial Models for Inversion."
02/2007 – 02/2012	**BSc, Geophysics**. IAG-USP, Brazil. Dissertation: "Gravity and Magnetic Study of the Geophysical Anomaly of Pratinha I (MG)".

Professional Experience

11/2022 – Present	**Consulting Geophysicist.** Fundamento Geophysics
04/2018 – Present	**PhD. Professor (Assistant Professor).** Geosciences Institute, University of São Paulo (IGc-USP), Brazil
04/2011 – 04/2012	**Undergrad Researcher, Exploration Geophysics.** IAG-USP, Brazil.
04/2009 – 04/2011	**Intern, Geophysics.** Institute of Technological Research of São Paulo State, Brazil
04/2007 – 04/2009	**Undergrad Researcher, Nuclear Geophysics.** IAG-USP, Brazil.
04/2006 – 12/2006	**Assistant Librarian,** Associação Pela Família, Brazil

Languages

Portuguese	Native	*English*	Fluent
Spanish	Basic	*Italian*	Basic

Work Experience / Project Participations

2023 - Ongoing	Geodynamics, magmatism and epithermal and porphyry type base and precious metal mineralizations of the Paleoproterozoic (2.1 to 1.87 Ga) in the southern portion of the Amazonian Craton (IGc-USP and Federal University of Pará). *About the project*: Exploration of polymetallic occurrences hosted by porphyry intrusions in the southern Amazon Craton. *Key Responsibilities*: Defining targets for the exploration phase and evaluating them during the follow up phase with airborne geophysical data and petrophysics.
2023 - Ongoing	Prospective modeling of LCT-type pegmatites: integrated multidisciplinary approach in Brazilian examples (Universities-Mining Companies Initiative). *About the project:* This project is performing a systematic study on granitic pegmatites and proposing metallogenesis models to support a more realistic evaluation of exploration potential of Brazilian Pegmatites. *Key Responsibilities:* Managing the geophysical exploration, integrating its results and interpretations with the geology, geochemistry and isotope teams.
2022 - Ongoing	Multidisciplinary study of the Rio Grande Rise: Sustainable exploitation of e-tech mineral resources (Universities, Brazilian Navy, Brazilian Geol. Service). *About the project:* This is an oceanographic, geological and geophysical effort to investigate the Rio Grande Rise exploratory potential for 'critical' raw materials (E-tech element), as Co, Te, Nd, Ga and the HREE in FeMn crusts. *Key Responsibilities:* Coordination of the potential field methods logistics, acquisitions, interpretation, management and integration with other methodologies.
2021 - Ongoing	Granitic magmatism and hydrothermal gold mineralization formation environments in the Alta Floresta Mineral Province (MT): tectonic setting, petrogenesis, fluid regime, and magnetic anisotropies (IGc-USP). *About the project:* Continuation of the successful “Geological-geophysical investigation of the Alta Floresta Gold Province” project ended in 2021. *Key Responsibilities:* Geophysical exploration as one of the principal investigators.
2020 - Ongoing	The Paraná Magmatic Province: petrogenesis, chronology and environmental impact of Cretaceous tholeiitic, alkaline and silicic magmatism in the Brazilian Platform (Multiple universities). *About the project:* This project focuses on the characterization of both the volcanic and plutonic features of the event that formed the province. *Key Responsibilities:* My participation has been on coordinating all geophysical acquisitions of magnetic (drone-borne), gamma-ray and gravity field data, integration with open-source data, processing and interpretation.
2019 - Ongoing	Sea level changes and the Global Monsoon System: evaluation through marine records in Brazil (Multiple Universities, Brazilian Navy, Brazilian Geol. Service). *About the project:* A comprehensive assessment of the shallow structure of western Atlantic Ocean’s floor near volcanic chains, their role in controlling ocean currents and their part the climate change during the last 200 Ma. *Key Responsibilities:* Coordinating the potential field methods logistics, acquisitions and interpretation; Managing and integrating this data with other methodologies.

2018 - 2021	Geological-geophysical investigation of the Alta Floresta Gold Province (IGc-USP). *About the project:* A large-scale integration of geological and geophysical data of the Alta Floresta Gold Province (now Juruena Mineral Province). More than 20 deposits in the province were submitted to geological, geochemical, isotope and petrophysical analyses, so as the magnetic and gravity fields, remote sensing imagery and gamma-ray spectroscopy. The results trained Machine Learning models, resulting in the, so far, most accurate large-scale Mineral Prospectivity Mapping (MPM) of the province. *Key Responsibilities:* Lead Investigator, from acquiring resources and logistics to final interpretation and publishing.
2014 - 2014	Buraco da Velha Copper Deposit (IAG-USP). *About the project:* A geophysical investigation of a known copper deposit in Rondônia state, north Brazil. We suggested that a mafic intrusion generated the necessary thermal energy to mix an already oxidized brine and sulphide bearing fluids at the border of the Parecis Basin, leading to Cu deposition and providing a reference for similar environments in other spots of the border of the basin. *Key Responsibilities:* Lead Investigator, from acquiring resources and logistics to final interpretation and publishing.
2014-2017	Geophysical and Geochemical Characterization of the Jauru Terrain, Rondonian-San Ignacio Province, Brazil (IAG-USP, University of St. Andrews). *About the project:* This project assessed geophysically delimit the Jauru Terrain, locating, analyzing, and correlating mineral targets (with economic potential) and geochemical characteristics, for the reconstruction of its geotectonic history. *Key Responsibilities:* Lead Investigator soon after the resources application, from acquiring resources and logistics to final interpretation and publishing.
2012-2013	Indirect Detection of Remanent Magnetization (IAG-USP). *About the project:* This was my Master's project, aiming to comprehend the effects of remanent magnetization in magnetic field data and how to deal with it, especially in areas of low-amplitude geomagnetic fields (as in the South Atlantic Magnetic Anomaly, where the field intensity is roughly 1/3 of the field in Australia, for example). *Key Responsibilities:* Lead Investigator, from acquiring resources and logistics to final interpretation and publishing.
2012-2012	Morro do Leme Nickel Deposit (IAG-USP). *About the project:* The Morro do Leme laterite nickel deposit (about 1.8% Ni) lies inside the western border of the Parecis Basin (Brazil). The results indicated that to explore for laterite Ni, the best locations are the southern part of the main anomaly and in the cover above the two smaller anomalies, whereas to explore for Pd, Au, Cu, Na, Co, Zn, and/or Pt, in the central portion of the main anomaly. *Key Responsibilities:* Lead Investigator, from acquiring resources and logistics to final interpretation and publishing.

Professional Activities

Research Groups	Geosciences of the Lithosphere (GEOLIT | USP; Group Leader) Artificial Intelligence in Geosciences (Intelli+Geo; Co-founder) Oceanographic Center for Stratigraphic Records (CORE; Researcher) Groundwater Research Center (CEPAS | USP; Researcher)	
Affiliations	Society of Exploration Geophysics (SEG) American Geophysical Union (AGU) Intl. Association of Volcanology and Chem. of the Earth's Interior (IAVCEI)	
Reviewer	Geophysics, Precambrian Research, Journal of South American Earth Sciences, Journal of Applied Geophysics, Brazilian Journal of Geophysics, Brazilian Journal of Geology, Geologia USP – Série Científica, Annals of the Brazilian Academy of Sciences, Mathematics, Remote Sensing	
Administrative Assignments	2022 – Present 2021 – Present 2020 – Present 2019 – Present 2021 – 2023 2020 – 2021 2020 – 2021 2018 – 2020	IGc-USP Teaching Committee Member IGc-USP International Office President IGc-USP Library Coordination Committee Member IGc-USP Research Committee Member IGc-USP Assistant Prof. Representative at the Congregation IGc-USP Postgraduation Committee Member IGc-USP Min. Res. & Hydrogeology Postgrad Committee IGc-USP Course Coordination – BSc. Geology
Leading Positions	2020 – Present 2012 – 2020	Research Group Leader / Coordinator *Geoscience of the Lithosphere (GEOLIT| IGc – USP)* Research Group Leader *Geophysics of the Lithosphere (GEOLIT| IAG – USP)*

Teaching

Postgrad Courses	2019 – Present 2019 – Present	*"Special Topics in Applied Geophysics"*, USP, Brazil (60h). *"Processing and Interpreting Airborne Geophysical Data",* USP, Brazil (60h).
Undergrad Courses	2019 – Present 2018 – Present 2018 – Present 2018 – 2019 2018 – 2019 2018 – 2019 2018 – 2019	*"Airborne Magnetics and Airborne Gamma-Ray Spectrometry"*, USP, Brazil (60h). *"Applied Geophysics"*, USP, Brazil (60h). *"Remote Sensing"*, USP, Brazil (60h). *"Structural Geology and Field Practices "*, USP, Brazil (120h). *"Geomorphology and Photogeology"*, USP, Brazil (60h). *"Introduction to Geotechnologies"*, USP, Brazil (60h). *"Geoprocessing"*, USP, Brazil (60h).
Short Courses	2023 2021 2016 2015	*"Security Enforcement Remote Sensing"*, Brazilian Federal Police (8h). *"InSAR applied to Geohazards"*, Braz. Geol. Service (40h); *"Field Excursion 5 – The JMU Highland Fling – A Terrific Tour of Tectonic Terranes"*, School of Earth and Environmental Sciences, University of St. Andrews, UK (24h); *"SC 13 – Magnetic Method: Theory, Processing and Interpretation"*, 14th Int. Congress SBGf (7h);

	2014	*"Processing and Interpreting Airborne Magnetic, Gamma-ray Spectrometry and Gravity Data"*, Federal University of the Pampas (30h);
	2014	*"Processing and Interpreting Airborne Magnetic and Gamma-ray Spectrometry"*, USP (15h);
	2013	*"Processing and Interpreting Magnetic, Gamma-ray Spectrometry and Gravity Data"*, USP, (10h).
Lecturer Trainee	2016	*"Advanced Geological Mapping"*, Univ. of St. Andrews, UK.
	2016	*"Dynamic Earth: Earth Surface Processes"*, Univ. of St. Andrews, UK.
	2016	*"Dynamic Earth: Magma, Minerals and Metamorphism"*, Univ. of St. Andrews, UK.
	2016	*"Earth Resources and Environment"*, Univ. of St. Andrews, UK.
	2014	*"Gravimetry and Geomagnetism"*, USP, Brazil.
	2013-2014	*"Nuclear Geophysics"*, USP, Brazil.

Supervision

PhD Supervision

1. Isabella N. Nishimura, 2023 – Present. "Magnetic and gravity modelling of the Rio Grande Rise", USP, Brazil.
2. Gabriela S. de Oliveira, 2021 – Present. "Geophysical-geological model of the Cu-Au AQW2 deposit, in the Aquiri region, NW portion of the Carajás Province", USP, Brazil.
3. Tiago Antonelli, 2020 – Present. "Use of geotechnologies applied to the study and analysis of gullies", USP, Brazil.

PhD Co-Supervision

1. Gabriel Nogueira, 2022 – Present. "Geophysical characterization of Brazilian pegmatites", Supervisor: Prof. Sérgio Fontes, Observatório Nacional, Brazil.

MSc Supervision

1. Luiz Eduardo F. Coura Filho, 2023 – Present. , USP, Brazil, Scholarship: CAPES.
2. Felipe C. Rodrigues, 2019 – 2023. "Tectonics, Seismostratigraphy and Paleogeography of the Santos Continental Shelf", USP, Brazil.
3. Renata M. R. Nobrega, 2020 – 2021. "Geoscientific Dissemination, Communication and Risk Management in Areas Affected by Disasters such as the Mariana Dam - MG", USP, Brazil.
4. Marina F. S. Barros, 2018 – 2021. "Use of geophysical methods in the analysis of groundwater contamination in Urânia - SP", USP, Brazil, Scholarship: CAPES.

MSc Co-Supervision

1. Victor A. F. Villagrán, 2022 – Present. " Geophysical survey using the electroresistivity method to determine the layer of mining tailings mud for the assessment of environmental impacts", Supervisor: Prof. Giulliana Mondelli, Universidade Federal do ABC, São Paulo, Brazil.
2. Divanir Conego Júnior, 2016 – 2018. " Geophysical characterization of polymetallic occurrences in the region of the Jaguaretama Complex, CE, Brazil: possible new exploratory targets", Supervisor: Prof. Vanessa B. Ribeiro, Universidade Federal de Pernambuco, Brazil.

Undergrad Supervision

1. Maithe F. Alvim, 2023 – Present. “Risk mapping for mass flows of the Nevado de Ruiz volcano, Colombia”, USP, Brazil.
2. Tiago S. Obara, 2022 – Present. “Geohazard assessment of slopes at Fernando de Noronha, Brazil”, USP, Brazil.
3. Milena G. Correa, 2022 – 2022. “Investigation of flood areas of Rio Negro (AM) by time series of SAR images”, USP, Brazil.
4. Carlos H. Sobral, 2021 – 2022. “Geophysical investigation of the AQW2 Cu-Au deposit, Carajás Province”, USP, Brazil.
5. Eduardo A. Ferrari, 2021 – 2022. “Historic Morphologic Change from Mt. Erebus (Antarctica) via InSAR”, USP, Brazil.
6. Nayara A. C. Silva, 2021 – 2022. “Characterization of Hydrocarbon Seepages in the Tucano Norte Sub-basin through Spectral Images”, USP, Brazil.
7. Larissa Garbelini, 2020 – 2021. "Application of geotechnologies in the characterization of erosion processes: a study of gullies in Anhembi-SP”, USP, Brazil.
8. Victor S. Santos, 2019 – 2021. “Machine Learning techniques applied to the exploration of the Alta Floresta Gold Province”, USP, Brazil / Institut National de la Recherche Scientifique, Canada. Scholarship: Bolsa de Intercâmbio Internacional – Modalidade Empreendedorismo.
9. Phillipe Lima, 2019 – 2021. “Development of a Deep Learning algorithm with airborne geophysical data for the investigation of gold exploratory targets”, USP, Brazil. Scholarship: CNPq-PIBIC.
10. André V. S. Eigenmann, 2020 – 2020. " Geophysical Signature of the Luizão deposit – East Alta Floresta Gold Province, Brazil”, USP, Brazil.
11. Thais R. Bottas, 2019 – 2020. “Geophysical investigation of the region of Nova Guarita, Gold Province of Alta Floresta (MT)”, USP, Brazil. Scholarship: CNPq.
12. Leonardo M. Sani, 2018 – 2019. “Investigation of gold zones in the region of Colíder (MT) by airborne geophysics”, USP, Brazil. Scholarship: CNPq.

Undergrad Co-Supervision

1. Pedro G. Bauli, 2019 – 2021. "Neotectonics and fault reactivation in the central sector of Serra do Mar (states of São Paulo and Rio de Janeiro)”. Supervisor: André P. Negrão, USP, Brazil.

   Bruna L. Cenatti, 2019 – 2019. "Geological Context of the Agnaldo Gold Mine: A Structurally Controlled System in the Alta Floresta Province (MT)”. Supervisor: Prof. Rafael Assis, USP, Brazil.
2. Felipe C. Rodrigues, 2018 – 2019. "Structural analysis and seismostratigraphy of the southern sector of the Santos Inner Continental Shelf: integration of seismic, magnetic and well data”. Supervisor: André P. Negrão, USP, Brazil.
3. Danilo de Paula, 2017 – 2018. "Application development and graphical interface for gravimetric data reduction”. Supervisor: Prof. Marta S. M. Mantovani, USP, Brazil.
4. Matheus R. Lino, 2015 – 2017. "Computation and implementation of the self-demagnetization effect using the Slicing the Earth library”. Supervisor: Prof. Marta S. M. Mantovani, USP, Brazil.
5. Hyana M. Labanca, 2015 – 2016. "Geophysical study of the Gold Deposits of the Aguapeí Group in the Lavrinha Region, SW of the Amazonian Craton”. Supervisor: Prof. Marta S. M. Mantovani, USP, Brazil.
6. Vinícius K. F. Machado, 2014 – 2016. "Geophysical characterization of the Jauru anomaly (MT)”. Supervisor: Prof. Marta S. M. Mantovani, USP, Brazil.
7. Cauã S. Drigo, 2013 – 2014. "Analysis of Euler Deconvolution in Magnetic Data Models”. Supervisor: Prof. Marta S. M. Mantovani, USP, Brazil.
8. Tairo R. P. Santos, 2012 – 2013. " Geopotential Study of the Magnetic Anomaly of Comodoro (MT)”. Supervisor: Prof. Marta S. M. Mantovani, USP, Brazil.

Student/Voluntary Work

Teaching Assistant	1. Freshmen Reception Week (IAG-USP – 2008) 2. III USP Profission Fair (Universidade de São Paulo, Brazil – 2008) 3. III IAG-USP Professions Fair (IAG-USP – 2008) 4. V Science and Technology National Week (SNCT – 2008)
Director of Geophysics	Junior Enterprise of the Instituto de Astronomia, Geofísica e Ciências Atmosféricas (IAG-Jr., 2008 – 2010)

Technical Skills

Programming	C/C++, MATLAB, Javascript, Python, Arduino	
Data Processing	*Geophysics*:	Oasis, Maxwell, Modelvision, ENVI, SNAP, Geosc. Analyst
	GIS:	ArcGIS, Pix4DMapper, Leica GeoOffice
	Editing:	Corel Draw, Photoshop, Premiere, After Effects
Equipments	*Magnetometer:*	GEMSystems GSM19, SENSYS R3
	Gravimeter:	Scintrex CG-5, LaCoste&Romberg Gravimeter
	Diff. GPS:	Trimble L1/L2 GPS
	UAV:	DJI Matrice (300 RTK, 600 Pro), Phantom, Mavic
	Spectral Sensor:	Sentera Double4K Multispectral Camera, Fieldspec

Additional Training

2023	Impact Measurement & Management for the SDGs – Duke University / Coursera (9h/online).
2023	How to build and destroy a stratovolcano – Mts. Ruapehu and Taranaki. IAVCEI General Assembly Field Trip (110h).
2022	II Volcanology International Course: Processes, Hazards and Mitigation in Crisis Context Online Edition – 2022. Universidad de Chile (21h).
2022	Introduction to the IoT and Embedded Systems. University of California / Coursera (online)
2021	Condução 4x4 Off-Road Técnica. Curso Técnica 4x4 EAD (online).
2021	Piloting DJI Matrice 600 Pro - Theory and Practice. IATEC Plant Solutions (8h).
2021	Using Google Earth Engine for Land Monitoring Applications. NASA ARSET (online).
2020	Python Data Structures. edX / MichiganX (online).
2020	Programming for Everybody (Getting Started with Python). edX / MichiganX (online).
2019	Monitoring Volcanoes and Magma Movements. edX (online).
2016	Winning research funding (Sciences). University of St. Andrews (7h30min).
2015	Getting your science research published: increasing your chances of success. University of St. Andrews (3h).
2015	Assessment & Academic Misconduct (Science): Introduction. University of St. Andrews (4h).
2015	Seismic Reflection Interpretation, Universidade de São Paulo (35h).
2012	Topics in Geophysical Inversion, Universidade de São Paulo (30h).
2011	Processing and Inversion of Airborne Gravimetric Gradiometric Data. SBGf (8h).
2006	Digital Filmmaking Workshop. New York Film Academy (108h).
2004	Adobe Photoshop – Advanced Techniques. Impacta Tecnologias (40h).
2004	3D Studio MAX - Module 3. Impacta Tecnologias (40h).
2003	3D Studio MAX - Module 2. Impacta Tecnologias (40h).
2002	3D Studio MAX - Module 1. Impacta Tecnologias (40h).

Scholarships and Awards

2023	**CAD$ 10.000,00**	(Co-Author) APPEL À PROJETS - Québec-Brésil 2023-2025 *Coordinators: Vinicius Louro and Erwan Gloaguen (INRS - Canada)*
2023	**R$ 280.000,00**	(Co-Author) FAPESP/FAPESPA Mineral Exploration Call (24 months) *Coordinator: Caetano Juliani (IGc-USP)*
2023	**€ 600,00**	IAVCEI Grant for the IAVCEI Scientific Assembly 2023
2022	**R$ 500.000,00**	(Co-Author) CNPq Strategic Mineral Exploration Call (24 months) *Coordinator: Caetano Juliani (IGc-USP)*
2022	**R$ 180.000,00**	(Co-Author) CNPq Strategic Mineral Exploration Call (24 months) *Coordinator: Maria Helena B. M. de Hollanda (IGc-USP)*
2022	---	International Course Scholarship - II Volcanology International Course: Processes, Hazards and Mitigation in Crisis Context - Online Edition
2022	**R$ 12.600,00**	1552 / 2022 – Incentivo à Promoção da Internacionalização no Ambiente USP – Professor International Mobility Grant
2022	**---**	Teodoro Isnard Ribeiro de Almeida Prize; IGc-USP
2021	**R$ 97.000,00**	(Co-Author) Universal Project CNPq (36 months) *Coordinator: Rafael R. de Assis (IGc-USP)*
2021	**R$ 45.000,00**	Programa de Estímulo à Modernização e Reformulação das Estruturas Curriculares dos Cursos de Graduação da USP
2021	**R$ 48.800,00**	(Co-Author) Consórcios Acadêmicos para a Excelência do Ensino de Graduação (CAEG) *Coordinators: Cleyton C. Carneiro / Caetano Juliani (IGc-USP)*
2019	**---**	João Batista Moreschi Prize; IGc-USP
2018	**R$ 50.000,00**	Universal Project CNPq (36 months)
2018	**---**	Best PhD Thesis of 2017; IAG-USP
2016	**£ 2.500,00**	Short Courses in Field Geology - Geology of the western European Alps; CNPq/University of St. Andrews (2 weeks)
2015	**£ 39.690,04**	Sandwich PhD Scholarship (SWE); CNPq (12 months)
2015	**R$ 90.000,00**	(Co-Author) Universal Project CNPq (36 months) *Coordinator: Marta M. S. Mantovani (IAG-USP)*
2014	**R$ 5.691,40**	Professor Trainee Scholarship; IAG-USP (10 months)
2014	**---**	Best MSc. Dissertation of 2013; IAG-USP
2013	**R$ 96.984,00**	PhD Scholarship; CNPq (36 months)
2012	**R$ 14.600,00**	MSc. Scholarship; CAPES (12 months)
2012	**R$ 4.500,00**	Travel Grant to AGU Fall Meeting 2012; USP
2012	**R$ 3.840,00**	Undergraduate Project Scholarship (PIBIC); CNPq (12 months)
2009	**R$ 2.560,00**	Ensinar com Pesquisa Scholarship; USP (8 months)

Scientific Outreach

1. Vilardaga, V., 2021. “Ameaça vulcânica: Erupção do Cumbre Vieja, nas Ilhas Canárias, faz renascer a velha história de que um tsunami poderia atingir o continente americano, algo quase impossível”. IstoÉ Independente – Comportamento. (https://istoe.com.br/ameaca-vulcanica/)
2. “EP 14 – Geofísica Aplicada à Exploração Mineral”. Podcast Spotify, SEGCAST UERJ, 48min10s (https://open.spotify.com/episode/6hCVNvqE0akjQIoN4S0t9D)
3. “Tecnologia da Geosoft integrada nas pesquisas do Instituto de Astronomia, Geofísica e Ciências Atmosféricas da Universidade de São Paulo”. News feature, Geosoft website (http://www.geosoft.com/pt/tecnologia-da-geosoft-integrada-nas-pesquisas-do-instituto-de-as).

Policy Making

1. Brazillian Ministry of Cities, 2023. “FOCAL GROUP WORKSHOP: Applicability, limitations, challenges and paths for disaster risk mapping”. Online Meetings.

Talks

1. **Louro, V.H.A.**, 2023. Magnetic and spectral multiscale assessment of Garopaba and Taió (SC) plumbing system and shallow structures. 11th Santa Catarina Geological Studies Week. Federal University of Santa Cararina, Brazil.
2. **Louro, V.H.A.**, 2022. Hephaestus: A low-cost IoT-embedded system for monitoring volcanic activity. University of Hawaii at Manoa, United States of America.
3. **Louro, V.H.A.**, 2020. “MAGREC - A test for supercontinent reconstructions using present magnetic field data - Case 1: Variations for the SAMBA model”. Aerogeofísica e Geotecnologias, Universidade Federal de Uberlândia. *In*: https://www.youtube.com/watch?v=u0agXZAC3JI&t=3110s, accessed in 29/10/2020.
4. **Louro, V.H.A.**, Santos, V.S., 2020. “Técnicas de Machine Learning aplicadas a exploração da Província Aurífera de Alta Floresta”. Avançando para o Futuro: Inteligência Artificial em Geociências – Fundamentos, Importância, Aplicações e Exemplos, Intelli+Geo, IGc-USP, Brazil. *In*: https://www.youtube.com/watch?v=Hie4huGq_Lw&t=3s, accessed in 29/10/2020.
5. **Louro, V.H.A.**, 2020. “Staged-Inversion-Based Remanent Estimation (SIRE): A Possible Way to Estimate Apparent Remanent Magnetization Using Magnetic Field Data”. UNESP SEG Student Chapter, UNESP, Brazil.
6. **Louro, V.H.A.**, 2020. Geofísica na Província Aurífera de Alta Floresta: Aspectos regionais e suas implicações na exploração mineral. Café Geofísico em Casa, Sociedade de Geofísica Aplicada (SGA), Escola de Minas, UFOP, Brazil. *In*: https://www.youtube.com/watch?v=lLB0FAnKScA&t=609s, accessed in 29/10/2020.
7. **Louro, V.H.A.**, 2019. Geofísica de Exploração na Província Aurífera de Alta Floresta. I Workshop de Geologia Econômica da USP - Depósitos Minerais do Cráton Amazônico e Inovações Tecnológicas, Society of Economic Geologists - Student Chapter - Universidade de São Paulo, Brazil.
8. **Louro, V.H.A.**, 2017. Tectonic insights of the Southwest Amazon Craton from geophysical, geochemical and mineralogical data of Figueira Branca Mafic-Ultramafic Suite, Brazil. Ciclo de Palestras 2017, IAG-USP, Brazil.

Publication List

Major Articles

1. Vasconcelos, T.Q.F., Janasi, V.A, Mello, J.T., **Louro, V.**, 2023. The Campinas-Jaguariúna sill, NE Paraná magmatic province, Brazil: Insights on the mechanisms of emplacement and differentiation from geochemical and magnetic data. Journal of South American Earth Sciences, In press, 104370, doi: 10.1016/j.jsames.2023.104370.
2. Dutra, L.F., **Louro, V.H.A.**, Monteiro, L.V.S., 2023. The southern IOCG and hydrothermal nickel mineralization trend of the Carajás Mineral Province: Airborne geophysical and remote sensing evidences for structural controls and hydrothermal signature. Journal of Applied Geophysics, 213, 105016, doi: 10.1016/j.jappgeo.2023.105016.
3. Sergipe, P.P., **Louro, V.**, Marangoni, Y.R., Moura, D.S., Jovane, L., 2023. A study of volcanic rocks and ferromanganese crusts through marine geophysical methods integration in the north portion of Cruzeiro do Sul Rift in the Rio Grande Rise. Frontiers Marine Sciences, 10, doi: 10.3389/fmars.2023.1093108.
4. Barros, M.F.S., **Louro, V.H.A.**, Terada, R., Marques, C.H.G., Saraiva, F.A., Almeida, E.R., Hirata, R., 2022. Geoelectrical anomalies associated to groundwater contamination in Urânia (SP, Brazil). Journal of Applied Geophysics, 2026, 104807, doi: 10.1016/j.jappgeo.2022.104807.
5. Santos, V.S., Gloaguen, E., **Louro, V.H.A.**, Blouin, M., 2022. Machine Learning Methods for Quantifying Uncertainty in Prospectivity Mapping of Magmatic-Hydrothermal Gold Deposits: A Case Study from Juruena Mineral Province, Northern Mato Grosso, Brazil. Minerals 2022, 12, 941, doi: 10.3390/min12080941.
6. Souza Junior, G.F., Trindade, R.I.F., Temporim F.A., Bellon, U.D., Gouvêa, L.P., Soares, C.C., Amaral, C.A.D., **Louro, V.**, 2021. Imaging the roots of a post-collisional pluton: Implications for the voluminous Cambrian magmatism in the Araçuaí orogen (Brazil). Tectonophysics, 821, 229146, doi: 10.1016/j.tecto.2021.229146.
7. Lino, L.M., Quiroz-Valle, F.R., **Louro, V**., Basei, M.A.S., Vlach, S.R.F., Munõz, P.M., 2021. Synorogenic and post-collisional volcano-sedimentary sequences from Campo Alegre - SC, Southern Brazil. Journal of South American Earth Sciences, 107, 103147, 1 – 22, doi: 10.1016/j.jsames.2020.103147.
8. Barros, M.F.S., **Louro, V.H.A.**, Terada, R.K., Marques, C.H.G., Saraiva, F.A., Hirata, R., 2021. Vertical Electrical Soundings in the mapping of vulnerability to contamination of the Adamantina aquifer in Urânia (SP). Geologia USP – Série Científica, doi: 10.11606/issn.2316-9095.v21-173647.
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