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Website: www.leouieda.com

Research Group: www.compgeolab.org

Professional Appointments

- 2023–on **Professor Doutor**, Universidade de São Paulo, Brazil
- 2019–2023 **Lecturer**, University of Liverpool, UK
- 2017–2019 **Visiting Researcher**, University of Hawai'i at Mānoa, USA
- 2014–2018 **Professor Assistente**, Universidade do Estado do Rio de Janeiro, Brazil

Education

- 2011–2016 **PhD in Geophysics**, Observatório Nacional, Brazil. doi:[10.6084/m9.figshare.16883689](https://doi.org/10.6084/m9.figshare.16883689)
- 2010–2011 **MSc in Geophysics**, Observatório Nacional, Brazil. doi:[10.6084/m9.figshare.16882300](https://doi.org/10.6084/m9.figshare.16882300)
- 2004–2009 **BSc in Geophysics**, Universidade de São Paulo, Brazil. doi:[10.6084/m9.figshare.963547](https://doi.org/10.6084/m9.figshare.963547)

Community Service

- 2022–on **Advisory Committee Member**, pyOpenSci, www.pyopensci.org
- 2022–on **Board Member**, Software Underground, softwareunderground.org
- 2019–2022 **Topic Editor**, Journal of Open Source Software, joss.theoj.org
- 2019–2022 **Advisory Council Member**, EarthArXiv, eartharxiv.org

Open Research Software

- 2010–on **Fatiando a Terra** | www.fatiando.org
Python tools for geophysical data processing, forward modeling, and inversion
Role: Project founder, core developer, Steering Council Member
- 2017–on **PyGMT** | www.pygmt.org
A Python interface for the Generic Mapping Tools
Role: Project founder, developer, advisor
- 2017–on **The Generic Mapping Tools (GMT)** | www.generic-mapping-tools.org
A data processing and mapping toolbox for the Earth, Ocean, and Planetary Science
Role: Community stewardship advisor, set up the website + forum + GitHub workflow
- 2022–on **xlandsat** | compgeolab.org/xlandsat
Load Landsat remote sensing scenes in Python and xarray
Role: Creator and sole developer
- 2009–2016 **Tesseroids** | tesseroids.leouieda.com
Forward modeling of gravitational fields in spherical coordinates
Role: Creator and sole developer






Open Educational Resources

- 2021–on **A Quick Introduction to Machine Learning.**  GitHub: [leouieda/ml-intro](https://github.com/leouieda/ml-intro)
- 2020–on **Remote Sensing with Python.**  GitHub: [leouieda/remote-sensing](https://github.com/leouieda/remote-sensing)
- 2020–on **Lithosphere Dynamics with Python.**  GitHub: [leouieda/lithosphere](https://github.com/leouieda/lithosphere)










Grants and Fellowships

- 2022–2024 “Towards individual-grain paleomagnetism: Translating regional-scale geophysics to the nascent field of magnetic microscopy”. **Royal Society**. **Uieda, L** (PI), Trindade, RIF (co-PI). Award: IES\R3\213141
- 2020 Fellowship from the **Software Sustainability Institute**. Award: software.ac.uk/about/fellows
- 2020–2023 “A Sustainable Plan for the Future of the Generic Mapping Tools”. **NSF-EAR**. Wessel, P (PI), **Uieda, L** (co-PI). Award: [1948602](#).
- 2018–2020 “The EarthScope/GMT Analysis and Visualization Toolbox”. **NSF-EAR**. Wessel, P (PI), **Uieda, L** (co-PI), Smith-Konter, B (co-PI). Award: [1829371](#).

Selected Invited Presentations

- 2021 **Uieda, L**, Li, L, Soler, SR, Pesce, A. Design useful tools that do one thing well and work together: rediscovering the UNIX philosophy while building the Fatiando a Terra project. *AGU 2021*.  GitHub: [fatiando/agu2021](https://github.com/fatiando/agu2021)
- 2021 **Uieda, L**, Soler, SR. Python-based workflows for small-to-medium sized data: what works, what doesn't, and what can be improved. *AGU 2021*.  GitHub: [compgeolab/agu2021](https://github.com/compgeolab/agu2021)
- 2021 **Uieda, L**, Soler, SR, Pesce, A. Open-science for gravimetry: tools, challenges, and opportunities. *GFZ Helmholtz Centre Potsdam*.  GitHub: [leouieda/2021-06-22-gfz](https://github.com/leouieda/2021-06-22-gfz)
- 2021 **Uieda, L**, Soler, SR, Pesce, A. Fatiando a Terra: Open-source tools for geophysics. *Geophysical Society of Houston*.  GitHub: [fatiando/2021-gsh](https://github.com/fatiando/2021-gsh)
- 2020 **Uieda, L**. Geophysical research powered by open-source. *Christian Albrechts Universität zu Kiel*.  GitHub: [leouieda/2020-07-01-kiel](https://github.com/leouieda/2020-07-01-kiel)

Publication Highlights

- 2023 Full vector inversion of magnetic microscopy images using Euler deconvolution as a priori information. Souza Junior, GF, **Uieda, L**, Trindade, RIF, Carmo, J, Fu, R.  EarthArXiv: [10.31223/X5QD5Z](https://doi.org/10.31223/X5QD5Z) |  GitHub: [compgeolab/micromag-euler-dipole](https://github.com/compgeolab/micromag-euler-dipole)
- 2021 Gradient-boosted equivalent sources. Soler, SR, **Uieda, L**. doi:[10.1093/gji/ggab297](https://doi.org/10.1093/gji/ggab297).  EarthArXiv: [10.31223/X58G7C](https://doi.org/10.31223/X58G7C) |  GitHub: [compgeolab/eql-gradient-boosted](https://github.com/compgeolab/eql-gradient-boosted)
- 2020 @ Pooch: A friend to fetch your data files. **Uieda, L**, Soler, SR, Rampin, R, van Kemenade, H, Turk, M, Shapero, D, Banihirwe, A, Leeman, J. doi:[10.21105/joss.01943](https://doi.org/10.21105/joss.01943).  GitHub: [fatiando/pooch](https://github.com/fatiando/pooch)
- 2019 @ The Generic Mapping Tools, Version 6. Wessel, P, Luis, J, **Uieda, L**, Scharroo, R, Wobbe, F, Smith, WHF, Tian, D. doi:[10.1029/2019GC008515](https://doi.org/10.1029/2019GC008515).
- 2018 @ Verde: Processing and gridding spatial data using Green's functions. **Uieda, L**. doi:[10.21105/joss.00957](https://doi.org/10.21105/joss.00957).  GitHub: [fatiando/verde](https://github.com/fatiando/verde)
- 2017 Fast non-linear gravity inversion in spherical coordinates with application to the South American Moho. **Uieda, L**, Barbosa, VCF. doi:[10.1093/gji/ggw390](https://doi.org/10.1093/gji/ggw390).  EarthArXiv: [10.31223/osf.io/9ba4m](https://doi.org/10.31223/osf.io/9ba4m)  GitHub: [pinga-lab/paper-moho-inversion-tesseroids](https://github.com/pinga-lab/paper-moho-inversion-tesseroids)
- 2016 Tesseroids: forward modeling gravitational fields in spherical coordinates. **Uieda, L**, Barbosa, VCF, Braitenberg, C. doi:[10.1190/geo2015-0204.1](https://doi.org/10.1190/geo2015-0204.1).  GitHub: [pinga-lab/paper-tesseroids](https://github.com/pinga-lab/paper-tesseroids)